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REPORT FOR PODLASKIE

A report prepared by the Local Economic and Employment Development (LEED) Programme of the Organisation for Economic Co-operation and Development in collaboration with the ESF CoNet and the Region of Podlaskie, Poland

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ABSTRACT

A team of OECD and Italian experts visited Bialystok in the Podlaskie region of Poland in July 2009 for a short study visit, looking specifically at provincial and regional methods for improving the participation of women in the labour market, by introducing training vouchers and other measures to reform and improve childcare and general working practices. The study was undertaken as a peer review as part of a broader study investigating the design and effects of social policy funded through the European Union's Social Fund and the CoNET network. The study visit timetable and a list of participants can be found in Annexes 1 and 2. This report is based significantly on the available statistics and on material gathered from the study visit.

AUTHORS AND PROJECT TEAM

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The support of the team from the region of Podlaskie who contributed to the project, including Jaroslaw Sadowski, Dorota Iwanowska and Hubert Ostapowicz, was invaluable, as was the contribution of the representatives of regional and local authorities and representatives of other institutions and agencies who participated in meetings and provided documentation.

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Introduction

> "Some people say there is no crisis in Podlaskie..."
>
> We're the only country in the whole European Union that has such good growth, and we've come here to brag. Poland is the E.U.'s undisputed growth leader. – Prime Minister Donald Tusk[1]

Poland's recent economic and social history has been characterised by rapid change. In the last thirty years the country has witnessed the end of communism and the collapse of the neighbouring Soviet Union, the birth of a new democracy born out of protest and in 2004, entry into the enlarged European Union. Economic growth has been strong since that time, but social and economic upheavals have continued at a pace with rapid changes in the economy, population and society.

Since Poland joined the European Union in 2004, GDP per capita has risen rapidly from 44% to 48% of the pre-2004 enlargement EU average. This has been driven by decreasing unemployment and increasing output per employee (see Figure 1 below). Employment has been rising by some 3% per year – at least until the economic and financial crisis began to take an effect in late 2008 – and there has been a spectacular decline in the unemployment rate, from nearly 18% in 2005 to 8.5% at the end of 2007. Despite this there has been a decline in labour force participation rates, to especially low levels for older workers and the least skilled.

Poland has been catching up to the rest of the OECD more quickly in the past two years, thanks to strong growth performance. Substantial job creation has followed years of stagnation. Nonetheless, the economic boom has failed to draw inactive people into the labour market, and unemployment has plunged to below sustainable levels. The short-term outlook is clouded mainly by strong excess demand pressures and rising inflation, despite weakening activity abroad. In the medium term, the sustainability of the expansion is also threatened by adverse demographics and persistently low labour-force participation. (OECD, 2008)

But elsewhere there is a greater confidence that Poland is proving to be more insulated from the effects of the global recession than the majority of its eastern and western European neighbours. Poland has the advantage of a large domestic market exporting far less to the rest of the world than neighbouring EU accession countries. Because of this, Poland is partly shielded from some of the more extreme fluctuations of the global economy, but still reaping the benefits of successive waves of foreign investment. That, in turn, has also helped to keep the labour market more stable (if not necessarily strong by wider European standards) at a time when many Europeans fear for their jobs.

The Polish government has recently reported that Poland's economy has expanded at an annual rate of 1.1% in the second quarter of 2009, bolstered by exports, construction and services.

Growth in gross domestic product has also continued at 0.5% on top of the first quarter's reported 0.8% annual rate of growth. This performance has come on the back of an overall revision of growth forecasts for 2009 of 3.7% (down from initial forecasts of 4.8%) and alongside the delivery of the Polish government's anti crisis package worth some PLN (Polish Zloty) 91.3 billion (USD 31.40 billion). Anti-crisis measures have included boosting liquidity on the inter-bank market worth PLN 60 billion, and some PLN 20 billion dedicated to speed up investments co-financed by the European Union. Earlier in 2009, the social partners in Poland were commissioned by the Government to construct and agree a package of anti-crisis measures, which eventually comprised the following 13 proposals:

- social support for poorer families and increasing welfare benefits for redundant employees;
- introducing tax exemption on trade unions allowances and on company social funds;

- making vouchers convertible to goods or services exempt from personal income tax;
- repealing the Act fixing average pay growth in corporations and revoking Act on remuneration of management executives in state-owned companies ("salary cap");
- gradually increasing the national minimum wage to 50% of the national average wage;
- introducing a 12-month working hour settlement period;
- establishing enterprise training funds;
- rationalising a 24-hour work cycle in the context of the working hour settlement period;
- recognising social benefit packages as a source of labour law;
- introducing flexible working hours as a way of reconciling family and work responsibilities;
- stabilising employment with constraints on fixed-term employment contracts;
- introducing accelerated amortisation;
- subsidising employment as an alternative to group dismissals.

The package combined long term labour market and economic reform – combining minimum standards and support with more flexibility with short term measures to ameliorate the effects of the recession. The Polish government accepted each of these recommendations and in early June, it approved two draft laws proposed by the Ministry of Labour and Social Policy (*Ministerstwo Pracy i Polityki Społecznej* – MPiPS) and the Ministry of Finance (*Ministerstwo Finansów*). The draft law prepared by the Ministry of Finance MF relates to personal income tax exemptions of allowances paid by trade unions and of vouchers convertible to goods or services. The draft law concluded by MPiPS deals with the negative effects of the economic crisis on employers. This law covers such issues as: a 12-month working hours' settlement period, enterprise training funds, a 24-hour work cycle of flexible working hours, constraints on fixed-term employment contracts, as well as subsidised employment.

Introduction to Podlaskie Region and Bialystok

Podlaskie Voivodship is a voivodship (province) in north-eastern Poland near the borders with Belarus and Lithuania. It lies at the trade crossroads between Berlin and Moscow and from Northern Europe and the Baltic to Southern Europe – locally described as at the heart of the European continent. It was created on January 1, 1999, out of the former Białystok and Łomża Voivodships and the eastern half of the former Suwałki Voivodship, following Polish local government reforms in 1998. Its administrative capital and largest city is Białystok.

Podlaskie has the lowest population density of all sixteen Polish voivodships, with dispersed low density agricultural communities and a large proportion of protected national park land. Around 30% of the voivodship is legally protected, including the Białowieża Forest World Heritage Site. In total, there are four National Parks and 88 nature reserves in Podlaskie. Agricultural land constitutes around 60% of the total area of the region – most of which is plough land (around 40%), forests, meadows and pastures. There are over 120 000 farms in Podlaskie, half of which are small farms of between one and ten hectares.

Podlaskie Voivodship is divided into 17 counties (powiats), 3 city counties and 14 land counties. The voivodship contains 38 cities and towns; Bialystok with 295,210 inhabitants (the second most densely populated city in Poland), then Suwalki with 69,000, Lomza with 63,000, Augustow with 30,000 and then a series of much smaller towns with no more than 25,000 residents.

In 2002 there were around 95,000 companies registered in Podlaskie (97 % in the private sector), mainly in the following sectors; trade and services (33.2 %); land and real estate services (11.8 %); construction (10.5%); manufacturing and processing (9.7 %); transport (8.3%); agriculture (especially dairy farming), hunting and forestry (4.5%). Bialystok is an important centre of alcohol production - Zubr beer and Absolwent and Zubrowka (bison grass vodka) Polish vodka. Bialystok used to be a primary centre of garment and carpet factories. However, after the fall of communism in 1989 many of those faced severe problems and subsequently closed down. Currently in Bialystok there is only one major Polish producer of carpets and similar products, Agnella.

There are major demographic challenges in Podlaskie's population: with a declining number of people under 17 (a drop of nearly 60,000 people - 19.7% between 2001 and 2007), and an increase in those above working age (by 7000 people - 3.4% (see Table 1 below).

Table 1. Population of Podlaskie Voivodship by age groups 2001-2007

Year	Population number in thousands (on December 31)			
	Total	Pre-productive age	Productive age	Post-productive age
2001	1219.9	301.7	722.4	195.8
2002	1207.7	291.6	719.0	197.0
2003	1205.1	279.7	727.3	198.1
2004	1202.4	269.1	734.6	199.0
2005	1199.7	259.8	740.4	199.5
2006	1196.1	250.6	744.7	200.8
2007	1192.7	242.3	747.7	202.6

Source: Statistical Yearbook Podlaskie Voivodship 2003-2008, Statistical Office in Bialystok, Bialystok.

In 2008 the number of citizens in Podlaskie was still falling. At the end of 2008 in Podlaskie Voivodship there were 1,1927,000 people slightly down by 7000 on the end of 2007. The numbers of births and deaths continue to fall and migration away from the region continued. In the last nine months of 2008 a net total of 1,353 had left Podlaskie compared with a net total in 2007 of 1,901. The migration phenomenon still has an impact on lowering the population in the region, although the Podlaskie Voivodship background report prepared prior to the OECD study visit suggests that labour migration is now is more likely to take place within Poland rather than to countries in the rest of the European Union and beyond.[2] Migration in itself is not necessarily damaging. As explored later in this report, many migrants are only leaving for limited periods and returning with capital to invest in a variety of economic possibilities. However, in this context the demographic and economic consequences of losing skilled young people in the early stages of their productive lives poses a risk and a challenge to Podlaskie and to other voivodships in Poland.

Long-term Structural Challenges in Poland

Unsurprisingly, despite positive recent performance, there are significant structural challenges – the boom prior to the slowdown has fuelled inflation – including wage inflation (especially among public sector); migration is a major issue (but still difficult to understand) – but internal labour mobility is a problem (poor transport and housing issues) and unemployment is unevenly spread though all regions which have high inactivity rates; productivity is improving and foreign investment is strong.

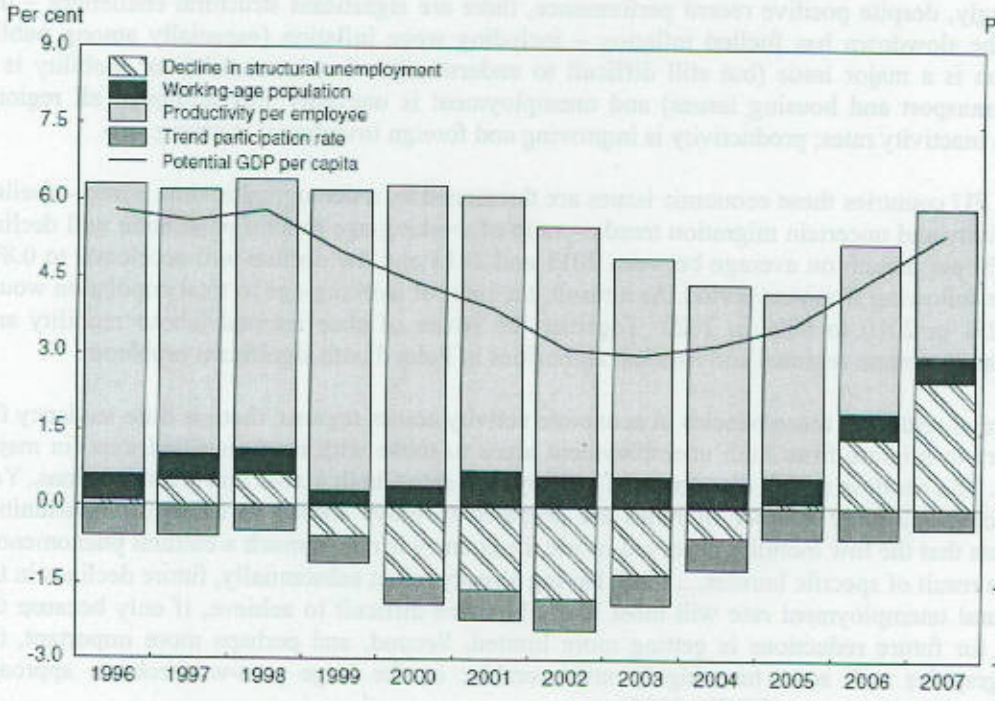
As in most EU countries these economic issues are threatened by a demographic time bomb – fuelled by ageing, inactivity and uncertain migration trends – ratio of working-age to total population will decline at a pace of 0.4% per annum on average between 2011 and 2015 and the decline will accelerate to 0.8% per year over the following five-year period. As a result, the ratio of working-age to total population would decline from 72% in 2010 to 68% in 2020. Together the issues of poor internal labour mobility and demographic change present regional and national authorities in Poland with significant problems.

> In spite of widening discrepancies in economic activity across regions, there is little tendency for workers to migrate from high unemployment areas to those with many unfilled jobs (in major cities). The result is a high dispersion of employment rates, both across and within regions. Yet, the fact that a large number of Poles are prepared to move abroad to take job opportunities suggests that the low mobility observed inside the country is not so much a cultural phenomenon, but the result of specific hurdles.... First, having already fallen substantially, future declines in the structural unemployment rate will most likely be more difficult to achieve, if only because the scope for future reductions is getting more limited. Second, and perhaps more important, the demographics will soon turn highly unfavourable, as the large post-war cohorts approach statutory retirement age. (OECD, 2008)

In the period covered in Figure 1 (below), the contribution of skills to productivity improvements is unlikely to be significant even though in other countries this is estimated to drive up to 20% of GDP improvements.[3] Poland fares comparatively badly to other OECD countries with a high proportion of low skilled adults – those who have not completed secondary education.

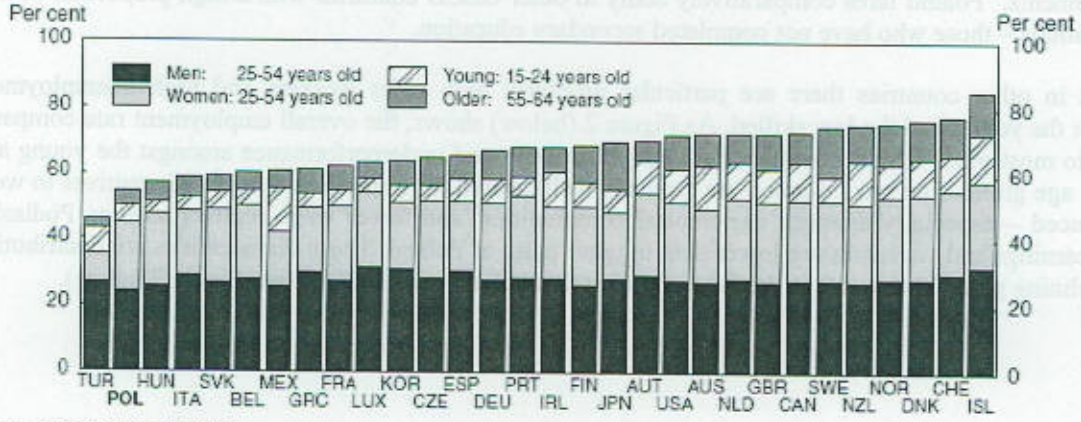
As in other countries there are particular problems with older workers and high unemployment amongst the young and the low skilled. As Figure 2 (below) shows, the overall employment rate compares poorly to most other OECD countries but there is concentrated underperformance amongst the young and the 55+ age group. The second group are typically well catered for in pension terms[4] so incentives to work are reduced – especially amongst agricultural communities[5] and lower wage regions such as Podlaskie where earnings and vacancies are lower than in other parts of Poland. These disincentives are contributing to a declining participation rate in the labour market that Poland can ill afford (see Figure 3 below).

Figure 1. Contributions to Growth in GDP per capita 1996-2007 (OECD 2008)



Source: OECD, *Economic Outlook No. 83 database.*

Figure 2. Contributions to overall employment rates in OECD countries (OECD 2008)



1. 2005 for Luxembourg.

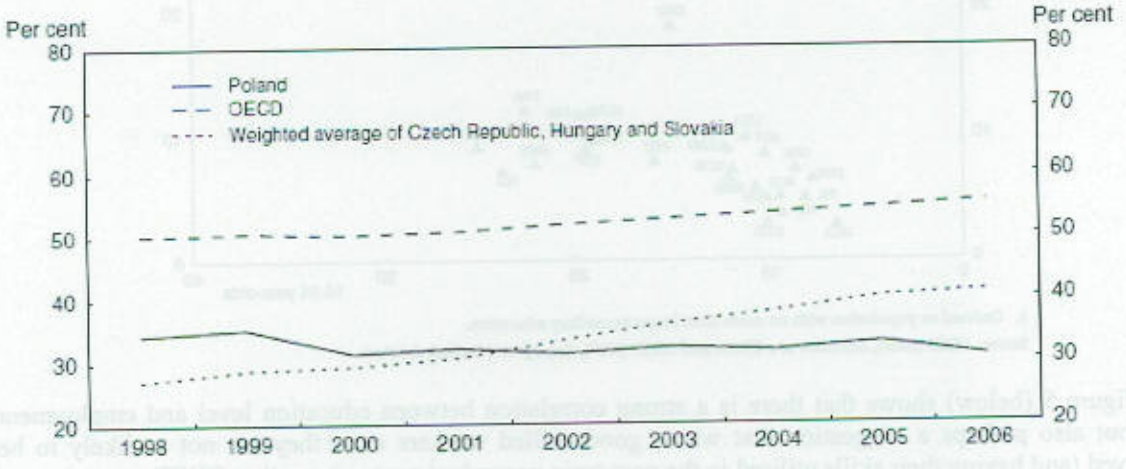
Source: OECD, *Employment Outlook database.*

As stated by the OECD in its recent Economic Survey for Poland (2008), the incidence of low participation is also characterised by low or obsolete skill levels and low labour mobility. Not surprisingly then the policy incentives are to combine various "push" and "pull" levers with significant upskilling of the adult population. But this can be a double edged sword in terms of take up and effectiveness:

> For those who have already left the school system many years ago, some form of specialised training is basically the only option for improving skills. In this regard, Poland faces challenges

that are common across OECD countries. One is that the returns to training investment are generally lowest for those who need it most, notably older unskilled people and the long-term unemployed. And this raises a dilemma as to where to concentrate scarce public resources. In fact, data from a few years back (2002) showed that in Poland, even more than most other OECD countries, the largest group of participants in adult learning were employed individuals from 25 to 34 years old with above-average education. (OECD, 2008)

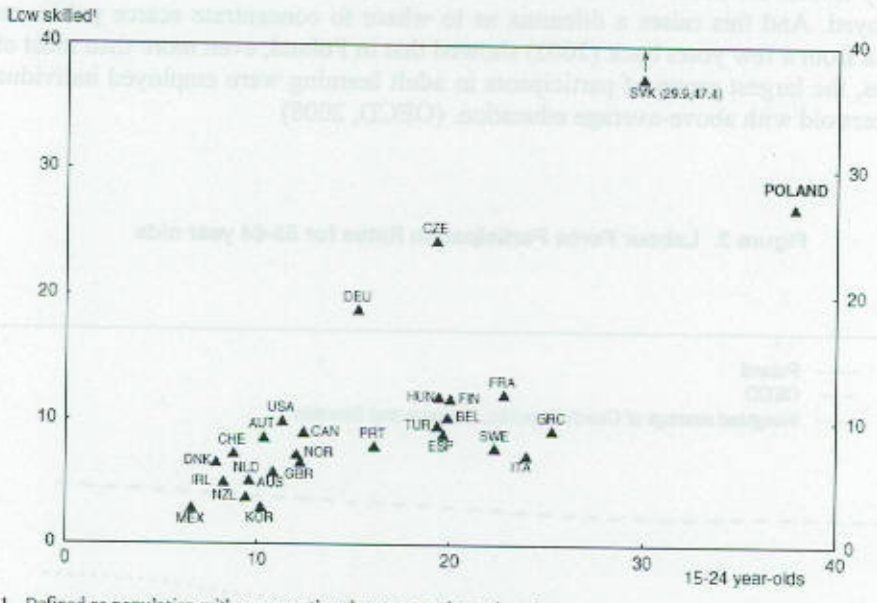
Figure 3. Labour Force Participation Rates for 55-64 year olds



Source: OECD, Employment Outlook database.

This is a feature amongst many workforces where the most informed and the most motivated are always likely to be at the front of the queue for resources and opportunities. Whilst this carries obvious risks around deadweight and rationing, it is not necessarily inconsistent with Poland (and Podlaskie's) ambitions to use human capital investment as a principle driver of economic development. But there are concerns with both older and younger members of the workforce and their lack of skills and/or participation and this is likely to be an impediment to a range of economic and social ambitions in the country. Figure 4 (below) shows that Poland is suffering from an acute problem of both unemployment and low skills amongst its 15-24 age group – relative to other OECD countries (OECD, 2007).

Figure 4. Employment rates for young people of working age, by skill levels OECD

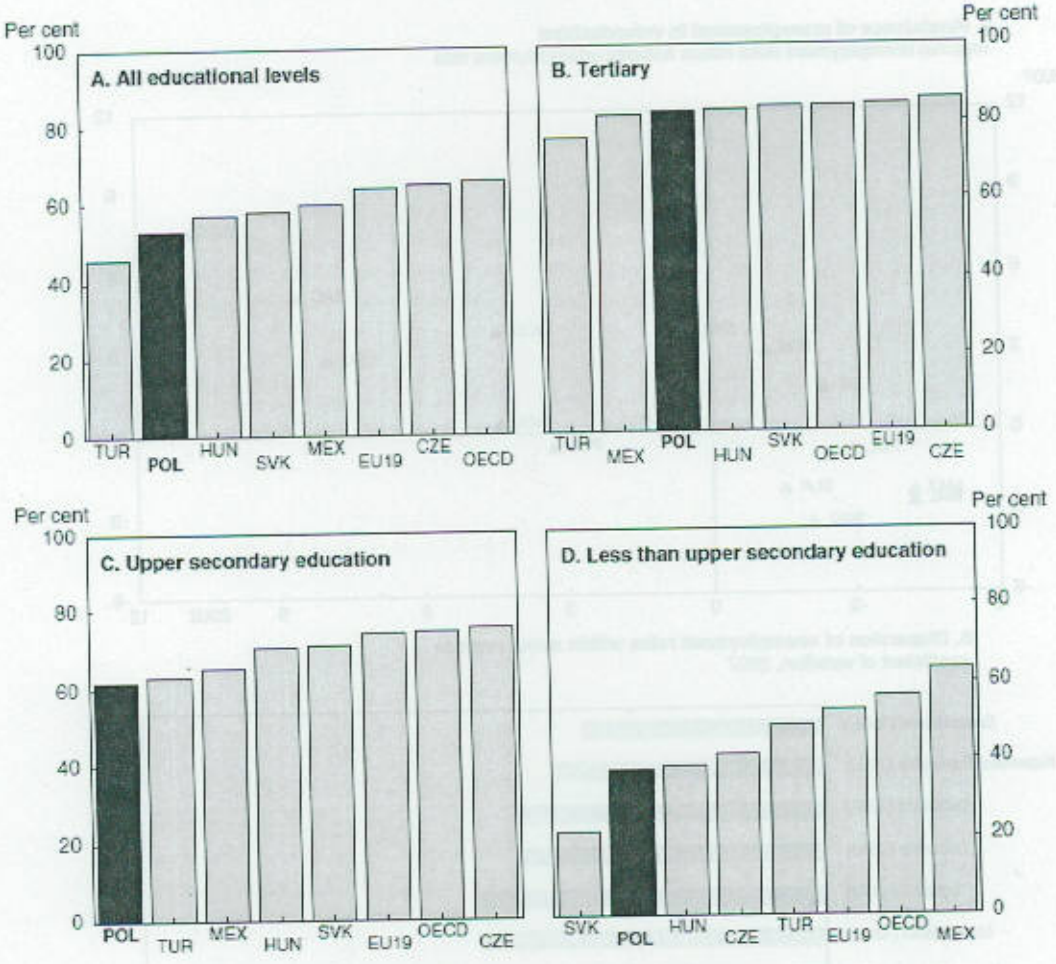


1. Defined as population with no more than lower secondary education.

Source: OECD (2007), Education at a Glance and OECD (2007), Employment Outlook database.

Figure 5 (below) shows that there is a strong correlation between education level and employment rates but also perhaps a suggestion that where good skilled workers exist they are not as likely to be employed (and having their skills utilised in the economic or product process) as other OECD countries.

Figure 5. Employment Rates by Education Level in 2005

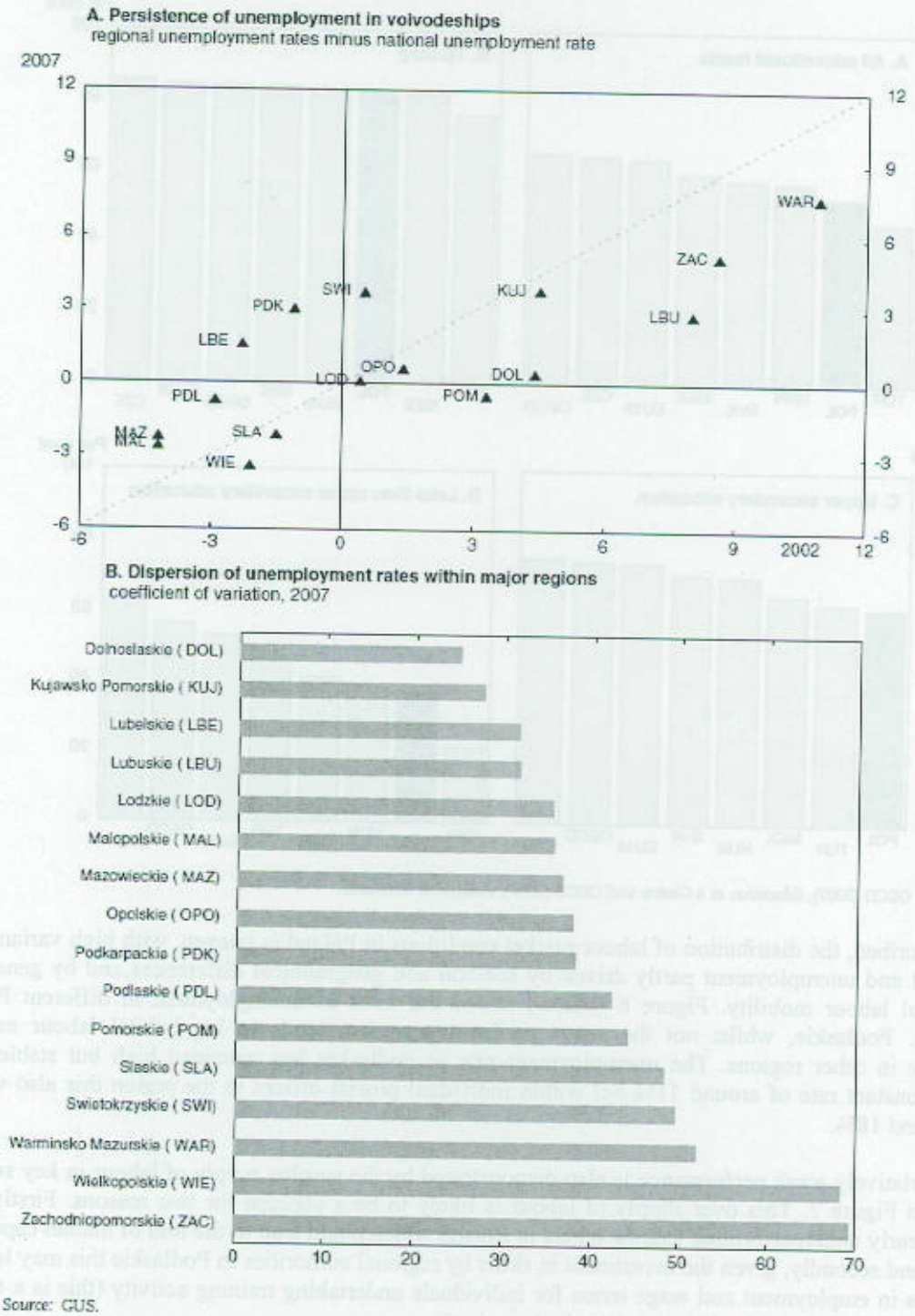


Source: OECD (2007), *Education at a Glance* and OECD (2007), *Analytical Database*.

As described, the distribution of labour market conditions in Poland is uneven, with high variance in employment and unemployment partly driven by sectoral and geographical differences and by generally poor internal labour mobility. Figure 6 (below) shows the rates of unemployment in different Polish voivodships. Podlaskie, whilst not the worst performing region, tends to lag behind labour market performance in other regions. The unemployment rate in Podlaskie has remained high but stable at a relatively constant rate of around 11% but within individual powiat offices in the region this also varies between 6 and 18%.

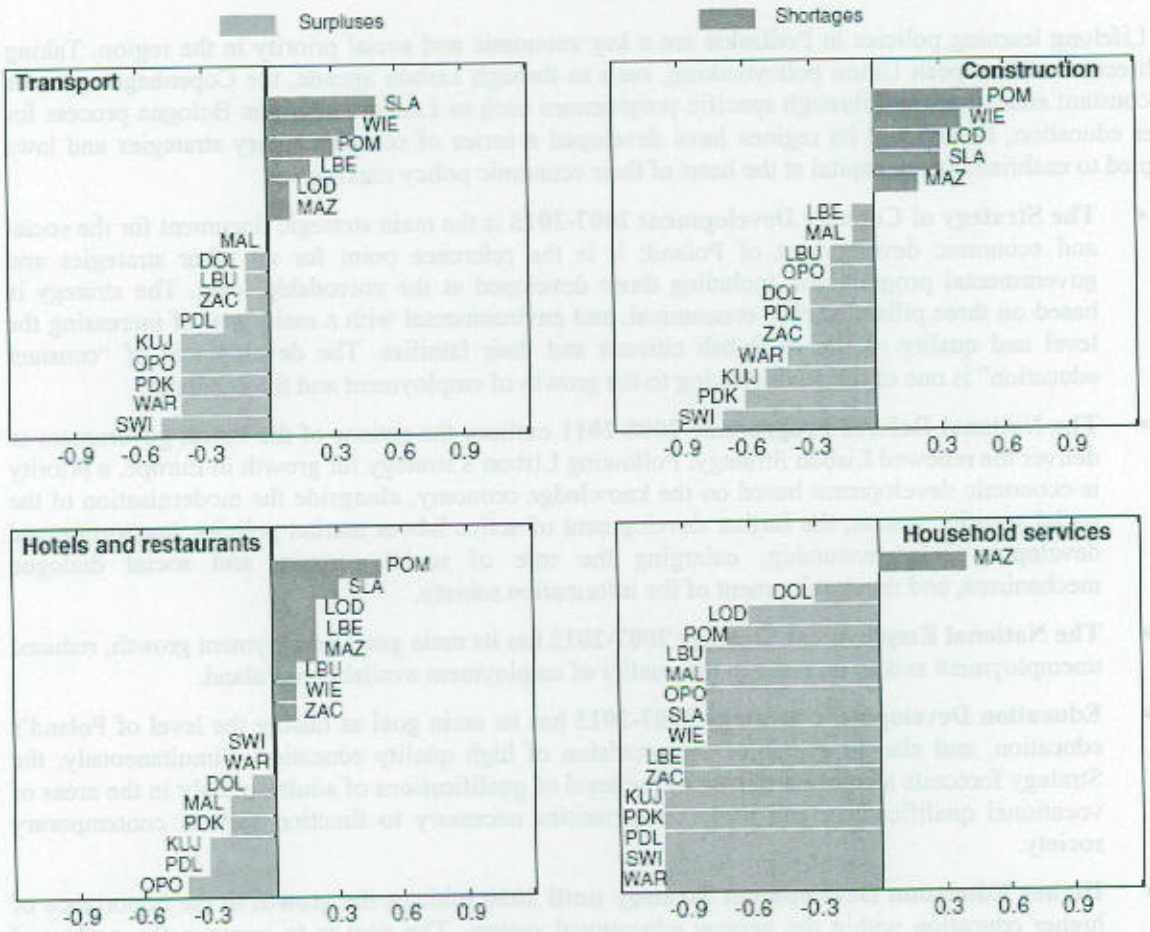
This relatively weak performance is also demonstrated by the surplus supply of labour in key sectors as shown in Figure 7. This over supply of labour is likely to be a concern for two reasons. Firstly, the region is clearly underperforming against others in Poland which could lead to the loss of human capital in the region and secondly, given the investment in skills by regional authorities in Podlaskie this may lead to poor returns in employment and wage terms for individuals undertaking training activity (this is a theme and a challenge to which we will return later in the report).

Figure 6. Regional Disparities in Unemployment Rates, OECD 2008



Source: GUS.

Figure 7. Labour Surpluses and shortages by region OECD 2008



1. DOL: Dolnoslaskie, KUJ: Kujawsko Pomorskie, LOD: Lodzkie, LBE: Lubelskie, LBU: Lubuskie, MAL: Malopolskie, MAZ: Mazowieckie, OPO: Opolskie, PDK: Podkarpackie, PDL: Podlaskie, POM: Pomorskie, SLA: Slaskie, SWI: Swietokrzyskie, WAR: Warminsko Mazurskie, WIE: Wielkopolskie, ZAC: Zachodniopomorskie.

Source: OECD calculations based on GUS series.

Lifelong Learning Policies and Educational Performance in Podlaskie Voivodship

The European Union defines lifelong learning in the following way:

> Lifelong learning must cover learning from the pre-school age to that of post-retirement, including the entire spectrum of formal, non-formal and informal learning. Furthermore, lifelong learning must be understood as all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective. Finally, the principles in this context should be: the individual as the subject of learning, highlighting the importance of an authentic equality of opportunities, and quality in learning.[6]

In Poland, lifelong learning or "constant education" is defined as: "Education which takes place in the schools for adults, also gaining and supplementing the general knowledge, skills and vocational

qualifications in the non-school forms, undertaken by people who fulfilled school obligation." (The Educational System Act, September 7th, 1991, Article 3, Section 17).

Lifelong learning policies in Podlaskie are a key economic and social priority in the region. Taking the direction of European Union policymaking, such as through Lisbon agenda, the Copenhagen process for "constant education" and through specific programmes such as Leonardo and the Bologna process for higher education, Poland and its regions have developed a series of complementary strategies and laws designed to enshrine human capital at the heart of their economic policy making.

- **The Strategy of Country Development 2007-2015** is the main strategic document for the social and economic development of Poland; it is the reference point for all other strategies and governmental programmes, including those developed at the voivodship level. The strategy is based on three pillars: social, economical, and environmental with a main goal of increasing the level and quality of life of Polish citizens and their families. The development of "constant education" is one of the goals relating to the growth of employment and the economy.
- **The National Reform Programme 2008-2011** outlines the actions of the Polish government to deliver the renewed Lisbon Strategy. Following Lisbon's strategy for growth in Europe, a priority is economic development based on the knowledge economy, alongside the modernisation of the social security system, the further development of active labour market policies, supporting and developing entrepreneurship, enlarging the role of social partners and social dialogue mechanisms, and the development of the information society.
- **The National Employment Strategy 2007-2013** has its main goals employment growth, reduced unemployment and an increase in the quality of employment available in Poland.
- **Education Development Strategy 2007-2013** has its main goal as raising the level of Poland's education, and also to guarantee the provision of high quality education. Simultaneously, the Strategy forecasts a constant raising of the level of qualifications of adults, mainly in the areas of vocational qualifications and basic competencies necessary to function well in contemporary society.
- **Higher Education Development Strategy until 2010** initiates the growth in the importance of higher education within the general educational system. The goal is to improve the quality of higher education, to adapt teaching to the labour markets' requirements, and to harmonise it within the framework of the European Area of Higher Education.
- **Constant Education Development Strategy until 2010** shows the direction of development of constant education in the context of the idea of lifelong learning and building a knowledge society. The strategic goal of the development of a constant education process and lifelong learning is to help and direct the development of the personality of the individual and stimulate innovativeness and creativity. The strategic goal will be realised through: better access to constant education, raising the quality of constant education, cooperation and partnership, the growth of the investments in human resources, being aware of the role and meaning of constant education, facilitating the access to information, counselling and guidance.

Within the region itself there are also a range of key strategies and processes that provide the strategic and operational context for "constant education" policies.

- **The Podlaskie Voivodship Development Strategy 2020** is one of the main components and aims to provide labour market training market alongside some social objectives. The Strategy also aims to create jobs in new businesses and industries and to help support existing employment. Overall its objective is to support the growth and integration of the region's economy into the European Union and to follow objectives such as Lisbon and Copenhagen.

- **The Regional Operational Programme of Podlaskie Voivodship 2007-2013** operationalises the Development Strategy. The main goal of the programme is to enlarge the rate of economic growth and to create new jobs and businesses. There are also objectives to improve the social and environmental wellbeing of people and communities in the region.
- **The Programme of Education Development of Podlaskie Voivodship (to 2013)** has "constant education" as of its strategic goals, which is described as "supporting constant education in accordance with the innovativeness and entrepreneurship development in the region". Its main objectives are to:
  - reinforce the constant education system integrated within the traditional education system,
  - support education and training in skill shortage sectors and occupations,
  - raise the quality of vocational education,
  - reinforce co-operation between higher education in terms of knowledge and technology transfer to support innovation in the regional economy.

Skills Stocks in Poland and Podlaskie Voivodship

Labour force surveys give us the best overall picture of recent changes in the Polish national skills profile and of the skills currently available to the Polish economy. Table 2 (below) gives data on the highest attainments of 15-64 year olds in 2000 and 2007 for a range of countries, including Poland.

Table 2. Educational Attainment of Adult Population aged 15-64, 2000, and 2007.

	2000			2007			Change between 2000 and 2007		
	Percentage of the population with low, medium and high educational attainment			Percentage of the polulation with low, medium and high educational attainment					
	Low	Medium	High	Low	Medium	High	Low	Medium	High
EU-27	38.0	45.0	17.0	32.7	46.7	20.6	-5.3	1.7	3.6
Belgium	43.0	33.2	23.8	34.8	37.1	28.1	-8.3	3.9	4.4
Bulgaria	35.4	48.4	15.2	28.7	52.8	18.5	-7.7	4.4	3.3
Czech Republic	19.6	70.9	9.5	16.2	72.2	11.5	-3.5	1.3	2.1
Denmark	27.0	51.4	21.5	31.0	41.9	27.1	4.0	-9.5	5.5
Germany	21.5	57.1	21.4	23.0	56.3	20.7	1.5	-0.8	-0.7
Estonia	22.2	54.1	23.7	20.4	52.4	27.3	-1.8	-1.7	3.6
Ireland	43.8	37.5	18.7	34.9	37.0	28.1	-8.9	-0.5	9.5
Greece	48.4	37.6	14.0	41.0	39.7	19.2	-7.4	2.1	5.2
Spain	59.1	19.9	21.0	49.3	23.7	27.0	-9.8	3.8	6.0
France	40.1	40.1	19.8	33.6	42.1	24.3	-6.5	2.1	4.4
Italy	52.2	36.7	8.1	48.6	39.3	12.0	-6.5	2.6	4.0
Cyprus	40.7	37.2	22.1	31.1	39.1	29.7	-9.6	1.9	7.6
Latvia	24.1	61.0	14.9	23.5	57.6	18.8	-0.6	-3.3	3.9
Lithuania	23.5	41.7	34.7	19.6	56.3	24.1	-4.0	14.6	-10.6
Luxembourg	38.5	44.8	16.7	38.7	38.6	22.7	0.2	-6.2	6.0
Hungary	33.3	55.2	11.5	26.2	58.5	15.4	-7.1	3.3	3.9
Malta	79.4	15.6	4.9	71.4	17.0	11.5	-8.0	1.4	6.6
Netherlands	37.4	41.9	20.7	31.6	41.7	26.7	-5.8	-0.2	6.0
Austria	28.3	59.4	12.3	25.2	60.0	14.8	-3.1	0.6	2.5
Poland	26.6	64.3	9.1	20.4	63.9	15.7	-6.2	-0.3	6.5
Portugal	79.0	13.4	7.6	71.3	16.7	12.0	-7.7	3.3	4.4
Romania	35.9	56.7	7.4	30.9	59.1	9.9	-5.0	2.4	2.6
Slovenia	29.4	57.8	12.8	22.2	59.3	18.5	-7.2	1.5	5.7
Slovakia	22.1	69.7	8.2	18.4	69.7	11.9	-3.7	0.0	3.7
Finland	30.8	41.6	27.5	25.6	44.9	29.5	-5.2	3.2	2.0
Sweden	26.8	46.8	26.8	20.6	52.4	27.0	-5.7	5.6	0.2
United Kingdom	35.5	39.2	25.3	27.8	44.1	28.2	-7.7	4.8	2.9
Iceland	50.6	30.4	19.0	43.8	32.2	24.0	-6.8	1.8	5.0
Norway	17.1	54.2	26.7	28.9	42.0	29.1	11.8	-12.3	0.4

Source: iData from 'Progress Towards the Lisbon Objectives in Education and Training: Indicators and Benchmarks.' Commission Staff Working Document DGE and C Unit 4, 2008, p. 218.

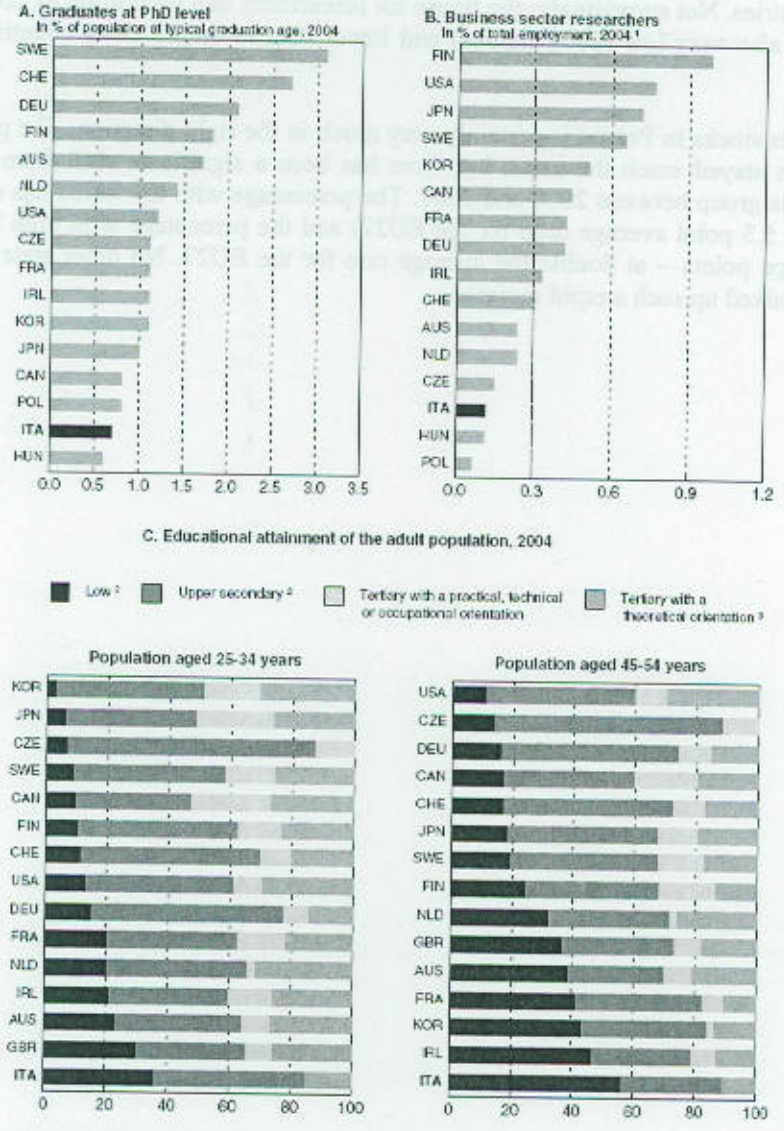
Poland had a level of workforce qualifications in 2007 which was above the average for the EU27 countries and for the other central and eastern European states. It had also improved its position more rapidly than many other countries over the previous seven years. Only 20.4% of adults had attainment at less than full upper secondary level (that is, at ISCED level 0-2 and 3C short) compared with 32.7% for the EU27 as a whole. Low skilled adults were less prevalent than in central and eastern European states such as Bulgaria, Slovenia, Romania, Hungary and Latvia, although slightly more prevalent than in the Czech Republic, Slovakia and Lithuania. Several western European states, such as France and the UK, had a higher proportion of low skilled adults than Poland. The proportion with full upper secondary qualifications and higher in Poland was 79.6% - substantially higher than the EU27 average of 67.3%.

However, Poland's skills distribution is very much weighted towards the middle level of skills and attainment. Those with higher level skills (ISCED 5 and 6) made up only 15.7% of the workforce compared with 20.6% in the EU27. At this higher end Poland does better than Slovakia, Romania,

Hungary and the Czech Republic but worse than Bulgaria, Slovenia and the Baltic states. As Figure 8 shows, the proportion of a typical age cohort graduating with PhDs is also very low compared with a sample of OECD countries. Not surprisingly, the figure for researchers as a proportion of people employed in business sectors is also very low (2004 figures) and lower than in the 15 other countries sampled in Figure 8.

The trend in skills stocks in Poland is certainly very much in the right direction. The proportion with intermediate skills has stayed much the same, but there has been a significant shift from the low skills group to the high skills group between 2000 and 2007. The percentage with low skills has dropped by 6.2 points (more than the 5.3 point average drop for the EU27) and the percentage with high level skills has risen by 6.5 percentage points – at double the average rate for the EU27. No other state in central and eastern Europe has chalked up such a rapid increase.

Figure 8. Highest Education Attainment and numbers of researchers and PhDs in Poland



1. 2003 for Netherlands and Sweden, 2002 for Canada and United States.
2. Low comprises persons having primary school, lower secondary school or ISCED 3C short programmes as their only formal qualification; upper secondary includes also post-secondary-non-tertiary programmes.
3. Includes tertiary with a practical, technical or occupational orientation for Italy.

Source: Cotis (2006).

Skills Stocks in Podlaskie Voivodship

Data presented in the Background Report for the Podlaskie Voivodship suggests that the skills profile of the workforce has improved markedly during the last 20 years. The proportion of adults over 15 with only elementary education or less dropped by over half between 1988 to 2002 from in 54.4% to 38%. At the same time those with post-elementary attainments grew from 45.5% in 1988 to 60.5% in 2002. Those with secondary education or higher grew by over one half from 26.2% to 41.6%. Improvements at the upper end were perhaps most impressive. The percentage with higher education increased from 5.3% to

9.5%. According to the Background Report, a significant growth in the percentage of people with post-elementary educations was reported from villages – from 27.9% in 1988 to about 45% in 2002. Those with higher education in villages rose from 2% to almost 4%.

Table 3. Population aged 15 and more by sex and education level in Podlaskie Voivodship

	1988		2002				
Education level	000s	%	000s	%	1988=100	% men	% women
Altogether	879,6	100,0	975,0	100,0	110,8	100,0	100,0
Higher	47,0	5,3	92,8	9,5	197,2	8,3	10,6
Intermediate and post-college	201,1	22,9	312,8	32,1	155,5	28,0	35,9
Intermediate vocational	152,4	17,3	184,2	18,9	120,9	24,9	13,3
Elementary full	357,3	40,6	313,9	32,2	87,9	33,1	31,3
Elementary unfull and without school education	121,8[a]	13,8[a]	56,8	5,8	46,7	4,2	7,3
No data	x	x	14,5	1,5	x	1,4	1,5

a - together with the education which couldn't be proved (no data)

Source: Population. Quantity and demographic and social-economic structure. Podlaskie Voivodship 2002, National Public Registration of Population and Flats. Public Agricultural Registration 2002, Statistic Office in Białystok 2003, p. 33.

Table 4 gives the most recent figures. According to this the stocks of higher level skills have risen to 16.2% (in 2008) – a long leap from the 9.5% recorded for 2002. This increase of nearly seven percentage points in six years compares with the four percentage point rise in the 14 years from 1988 and, if correct, suggests a quite exponential growth in higher education. The group with low level skills has also continued to shrink. The proportion with only lower secondary or less dropped from 35% in 2006 to 31.4% in 2008. It is difficult to compare this with the 1988 and 2002 figures which have different classification in the middle bands.

Table 4. Population of Podlaskie aged 15+ according to level of education 2006 - 2008

Education level	2006 (IV quarter)		2007 r. (IV quarter)		2008 r. (IV quarter)	
	Number in thousands	%	Number in thousands	%	Number in thousands	%
Higher	120	13,4	139	14,5	161	16,2
Post-Secondary and vocational Secondary	198	22,1	214	22,4	220	22,1
General Secondary	86	9,6	99	10,4	115	11,6
Basic Vocational	178	19,9	184	19,2	186	18,7
Lower secondary, elementary, and less	313	35,0	319	33,4	312	31,4
Altogether	895	100	956	100	995	100

Source: Statistic Office in Białystok.

The Podlaskie Voivodship has clearly improved its stocks of skills dramatically during the past 20 years, both reducing the proportions with low level qualifications and increasing the proportions with high level qualifications significantly. It is hard to say, however, how the Podlaskie Voivodship compares with the rest of Poland since the Podlaskie figures are for adults of 15 years and above whereas the Poland figures are for 16-64 year olds. The inclusion of the post-retirement cohorts in the sample for the Podlaskie Voivodship partly explains why the proportion of those with less than full upper secondary education is so high (at 50.1%) compared with the 15-65 year olds sample in Poland (20.4%). Those over 65 will

certainly be much less qualified than younger generations and will boost the proportion in the low skilled category considerably. However, it seems unlikely that this would account for the Podlaskie Voivodship's proportions at this level being more than double the size of Poland's.

On the other hand the proportion in the Podlaskie Voivodship sample qualified at the higher levels (16.2%) actually exceeds that for all Poland (at 15.7%). The inclusion of those over 65 in the Podlaskie Voivodship sample can be assumed to add about 20% to the value of the denominator (sample n.) for the higher skills proportion while adding practically nothing to the numerator, since only a small proportion of those over 65 will have degrees. In terms of the comparison with Poland this would mean than the Podlaskie Voivodship's proportion of higher skilled 15-64 year olds is probably some 20% higher than Poland's.

Participation in Lifelong Learning in Poland and the Podlaskie Voivodship.

The increase in stocks of skills in Poland and Podlaskie Voivodship reflect the increasing flow of young people with higher level skills into the labour force. Participation rates at all levels have increased in Poland in recent years and those entering the labour market consequently have higher level attainments than the predecessors. This pushes up the overall averages for workforce qualifications.

Figure 9 (below) shows that over 90% of 20 to 24 year olds in Poland had completed at least upper secondary education in 2007. Of the EU27 countries only the Czech Republic ranks higher on this measure and Poland far outstrips the EU27 country average of 78.1%. The proportion completing upper secondary was already high in 2000 (88.8%) but completion rates have continued to go up since then. Poland has a slightly lower proportion of upper secondary participants in vocational tracks (about 42%) than in the EU27 country average (about 51% of all those in upper secondary programmes). Since 2000 there has clearly been a substantial academic drift as more students opt for general or academic upper secondary programmes.

Rapid improvements in participation in schools and higher education in Poland have not, however, been matched in adult education. The proportion of adults participating in 2007 (4.4%) was up slightly from that in 2000, but still lagged a long way behind the EU27 average (9.7%). Amongst the central and eastern European countries the Czech Republic, Slovenia and the Baltic states all do substantially better, although Hungary, Slovenia, Bulgaria, Croatia and Romania do worse.

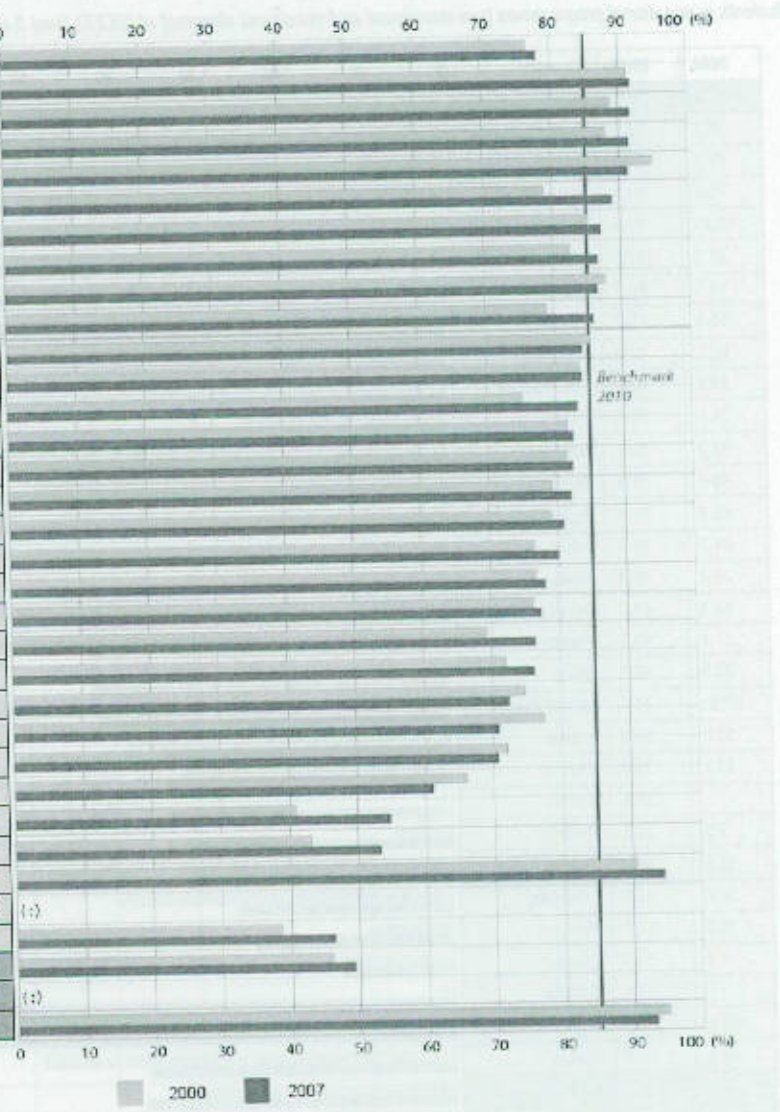
The assessment of the European Commission on Poland's overall performance (in terms of progress towards the Lisbon targets) is mainly positive. Poland classified as amongst the best performing countries in terms of:

- Reductions in the percentage of low achieving 15 year olds (by 30.3%)
- Having less than 10% of early school leavers (5%)
- Having high upper secondary attainment (91.6%)
- Increasing maths, science and technology graduates (+ 13.1%)

Relative to other Member States, Poland is classified as "moving further head" on: "early school leaving", and "upper secondary participation", but falling further behind on "lifelong learning" (meaning adult learning or "constant education").

Figure 9. % Population aged 20-24 completing at least Upper Secondary Education, 2000- 2007

2000	2007	Country
76.6	78.1	EU-27
91.2	91.6	Czech Republic
89.8	91.6	Poland
88.0	91.5	Slovenia
94.8	91.3	Slovakia
78.9	89.0	Lithuania
85.2	87.2	Sweden
82.6	86.7	Ireland
87.7	86.5	Finland
79.0	85.8	Cyprus
85.1	84.1	Austria
83.5	84.0	Hungary
75.2	83.3	Bulgaria
81.7	82.6	Belgium
81.6	82.4	France
79.2	82.1	Greece
79.0	80.9	Estonia
76.5	80.2	Latvia
76.6	76.1	United Kingdom
76.1	77.4	Romania
69.4	76.3	Italy
71.9	76.2	Netherlands
74.7	72.5	Germany
77.5	70.9	Luxembourg
72.0	70.8 (b)	Denmark
66.0	61.1	Spain
40.9	54.7	Malta
43.2	53.4	Portugal
90.6	94.6	Croatia
:	:	FYR Macedonia
38.8	46.4	Turkey
46.1	49.3	Iceland
:	:	Liechtenstein
95.0	93.3 (b)	Norway



Source: Eurostat (LFS), Croatia, Iceland, Norway: 2006 instead of 2007, HR: 2002 instead of 2000,
(p) provisional value (b) = break in series

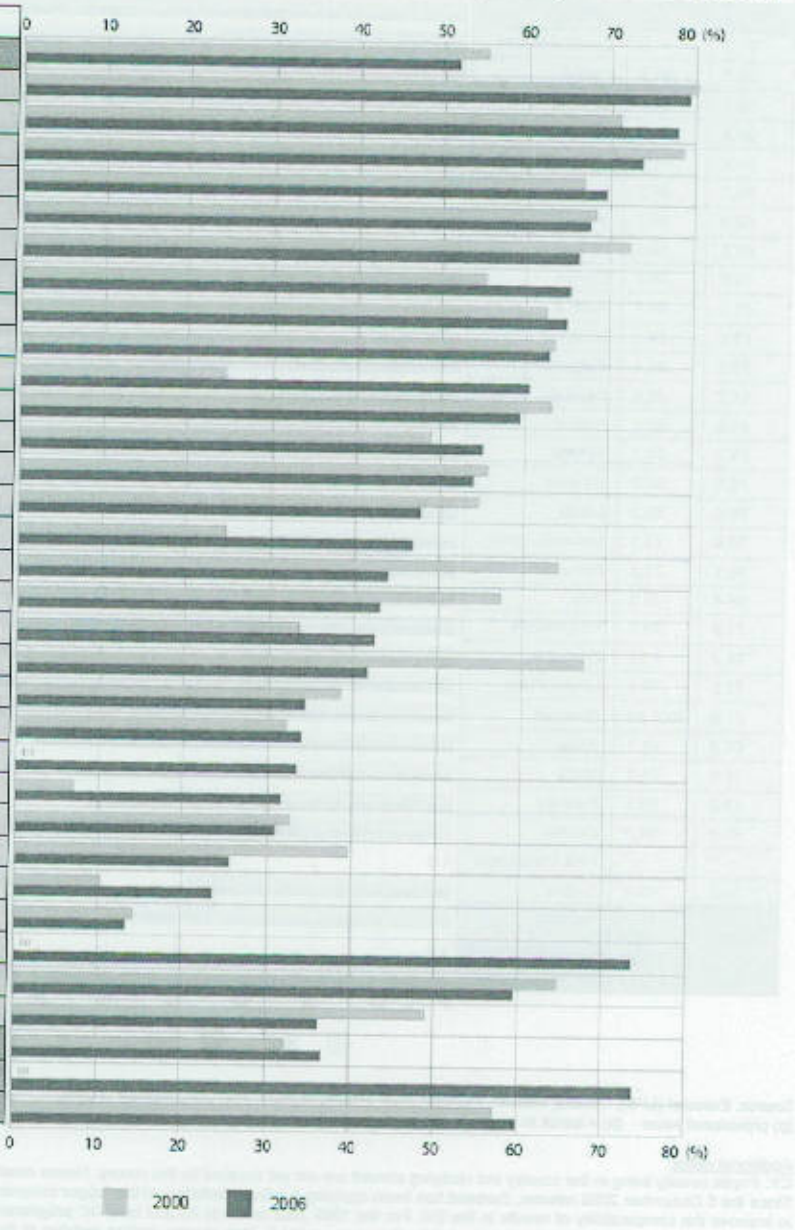
Additional notes:
CY: Pupils usually living in the country but studying abroad are not yet covered by the survey. Hence results for CY are understated.
Since the 5 December 2005 release, Eurostat has been applying a refined definition of the "upper secondary" educational attainment level in order to improve the comparability of results in the EU. For the 1998 data onwards ISCED level 3C programmes shorter than two years no longer fall under the "upper secondary" level but come under "lower secondary". This change implies revision of the results in DK (from 2001), ES, CY and IS. However, the definition cannot yet be implemented in EL, IE and AT, where all ISCED 3C levels are still included.

Source: Data from 'Progress Towards the Lisbon Objectives in Education and Training: Indicators and Benchmarks,' Commission *Staff Working Document DGE and C Unit 4, 2008*

Figure 10. Participation Patterns in Initial VET in EU Countries

Students in vocational programmes (pre-vocational and vocational streams) at ISCED level 3 as percentage of all ISCED 3 students

2000	2006p	Country
55.1	51.7	EU-27
80.2	79.3	Czech Republic
71.1	77.9	Austria
78.6	73.7	Slovakia
66.6 i	69.5	Belgium
68.3	67.5	Netherlands
72.3	66.2	Slovenia
55.3	65.4	Finland
62.5	64.9	Romania
63.5	62.9	Luxembourg
24.6	60.5	Italia
63.2	59.4	Germany
48.8	55.1	Sweden
55.7	54.0	Bulgaria
54.7	47.8	Denmark
24.8	46.9	Malta
64.3	44.0	Poland
57.4	43.1	France
33.5	42.5	Spain
67.3 i	41.7	United Kingdom
38.6	34.3	Latvia
32.1	33.9	Greece
:	33.4	Ireland
7.0	31.5	Portugal
32.5	30.9	Estonia
39.6	25.7	Lithuania
10.3	23.7	Hungary
14.2	13.3	Cyprus
:	73.6	Croatia
64.7	59.6	FYR Macedonia
49.0	36.3	Turkey
32.3	36.7	Iceland
:	73.8	Liechtenstein
57.3	60.0	Norway



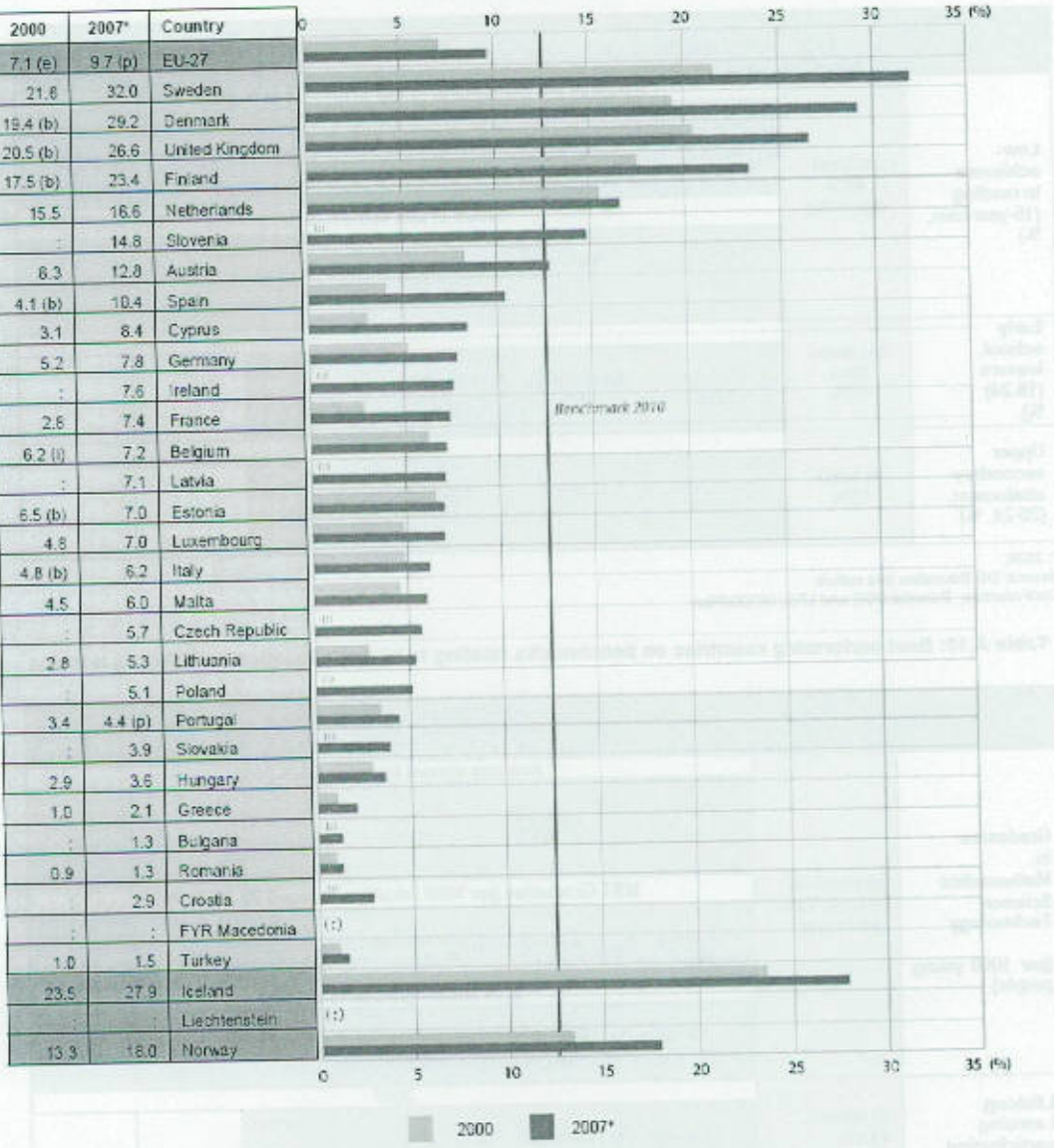
ata source: Eurostat (UOE),
) Not available, (i) See information notes, (p) Provisional data
I BE: Excluding the students of German speaking community;
K: ISCED 3 vocational programmes include ISCED 4. Pre-vocational programmes are included in vocational. Only students participating in courses equal
• or longer than a semester are included at ISCED level 3 and 4.
or additional notes see: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0,1136184,0_45572595&_dad=portal&_schema=PORTAL

Source: Data from 'Progress Towards the Lisbon Objectives in Education and Training: Indicators and Benchmarks,' Commission Staff Working Document DGE and C Unit 4, 2008, p. 56.

Figure 11. Participation of Adults in Lifelong Learning in 2000 and 2007

Percentage of the adult population aged 25 to 64 participating in education and training

2000	2007*	Country
7.1 (e)	9.7 (p)	EU-27
21.8	32.0	Sweden
19.4 (b)	29.2	Denmark
20.5 (b)	26.6	United Kingdom
17.5 (b)	23.4	Finland
15.5	16.6	Netherlands
:	14.8	Slovenia
6.3	12.8	Austria
4.1 (b)	10.4	Spain
3.1	8.4	Cyprus
5.2	7.8	Germany
:	7.6	Ireland
2.6	7.4	France
6.2 (i)	7.2	Belgium
:	7.1	Latvia
6.5 (b)	7.0	Estonia
4.8	7.0	Luxembourg
4.8 (b)	6.2	Italy
4.5	6.0	Malta
:	5.7	Czech Republic
2.8	5.3	Lithuania
:	5.1	Poland
3.4	4.4 (p)	Portugal
:	3.9	Slovakia
2.9	3.6	Hungary
1.0	2.1	Greece
:	1.3	Bulgaria
0.9	1.3	Romania
	2.9	Croatia
:	:	FYR Macedonia
1.0	1.5	Turkey
23.5	27.9	Iceland
:	:	Liechtenstein
13.3	18.0	Norway



Data source: Eurostat (EU-Labour Force Survey))

* 2006 data for SE, UK, HR, IS
(:) Missing or not available, (e) Estimated data, (b) Break in series, (p) Provisional data

(d) Lifelong learning refers to persons aged 25 to 64 who stated that they received education or training in the four weeks preceding the survey (numerator). The denominator consists of the total population of the same age group, excluding those who did not answer to the question 'participation to education and training'. Both the numerator and the denominator come from the EU Labour Force Survey. The information collected relates to all education or training whether or not relevant to the respondent's current or possible future job;

Due to the changes in the Labour Force Survey, aiming at improving relevance and comparability of data at the EU level, breaks of series were noted in nearly all countries (in particular in 2003 and 2004).

Data from 'Progress Towards the Lisbon Objectives in Education and Training: Indicators and Benchmarks,' Commission Staff Working Document DGE and C Unit 4, 2008, p.27.

Table 5. Best Performing countries relating to school education, higher education and lifelong learning

Table A.9: Best performing countries on benchmark relating to school education (2007)

	Target for 2010	Best performing countries in the EU			EU	USA	Japan
Low-achievers in reading (15-year-olds, %)	At least 20% decrease	Change in the percentage of low achievers in % (2000-2006)					
		Finland[1] -31.4%	Poland -30.2%	Latvia -29.6%	+13.1%	-	+82.2%
		Share of low achievers [2]					
		Finland 4.8%	Ireland 12.1%	Estonia 13.6%	24.1%	-	18.4%
Early school leavers (18-24) %)	No more than 10%	Poland 5.0%	Czech Rep. 5.5% [3]	Slovakia 7.2%	14.8%	-	-
Upper secondary attainment (20-24, %)	At least 85%	Czech Rep. 91.8%	Poland 91.6%	Slovenia 91.5%	78.1%	-	-

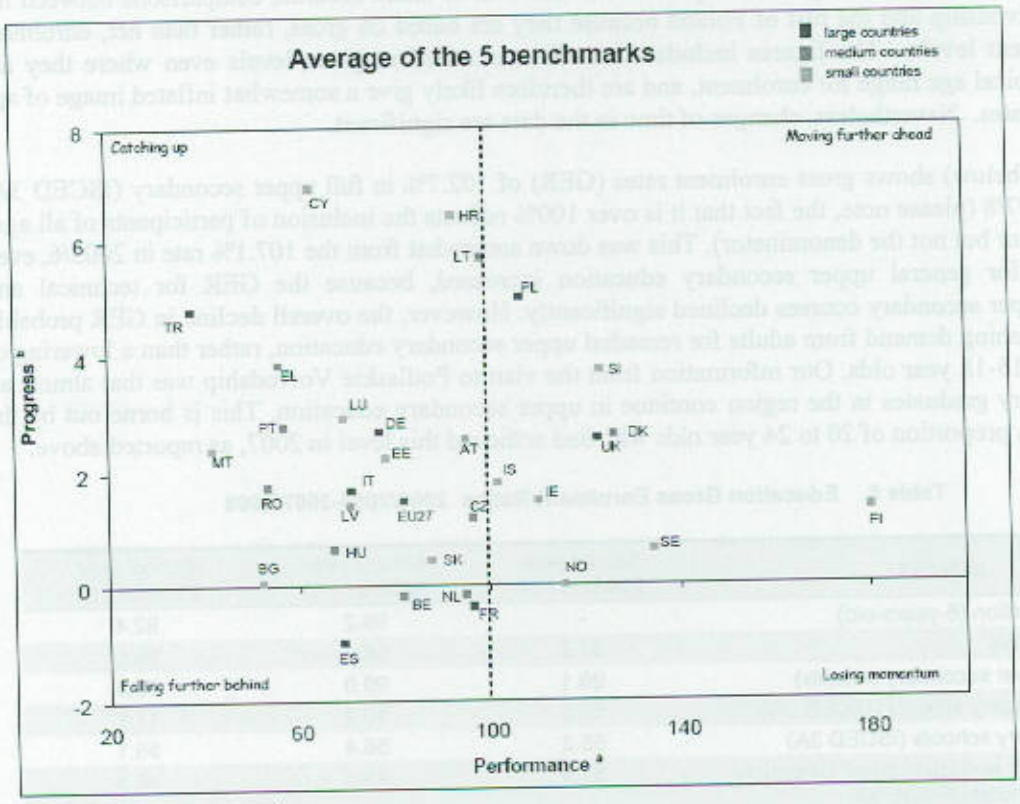
*: 2006;
Source: DG Education and culture
Data sources: Eurostat UOE and LFS; OECD/Pisa

Table A.10: Best performing countries on benchmarks relating to higher education and lifelong learning

	2010 target for EU	Best performing countries in the EU			EU	USA	Japan
Graduates in Mathematics Science Technology (per 1000 young people)	Increase of at least 15% graduates	Average annual increase 2000-2005					
		Poland +13.7%	Slovakia +12.3%	Portugal +13.1%	+4.7%	+3.1%	-1.1%
		MST Graduates per 1000 inhabitants (aged 20-29) in 2006					
		Ireland 21.4	France 20.7	Lithuania 19.5	13.0	10.3	14.4
		% of female graduates in 2006					
		Estonia 42.9 %	Bulgaria 41.2 %	Greece 40.9 %	31.3 %	31.3 %	14.6 %
Lifelong Learning participation (25-64, %)	At least 12.5%	2007					
		Sweden 32.0 (06)	Denmark 29.2%	UK 26.6% (p) [3]	9.7%(p)	-	-

*: 2006, p: provisional
Source: DG Education and Culture
Data source: Eurostat UOE and LFS

Figure 12. Average levels of country performance (2006) and progress (2000-2006) across the five benchmark areas



Source : CRELL/Joint Research Centre 2008

Benchmark for 2010= 100 (Performance)
[a] Average Performance (2006)
[b] Average annual growth (2000-06) %. (Average yearly growth across the five benchmarks)
In the case of the indicators on low achievers and Early school leavers the average growth rate is multiplied by (-1) to take into account that a negative growth rate is a plus for the country.

Average country performance and progress (2000-2006) (Chart A.2)

The quadrant: "Moving further ahead" includes countries that have performance levels in 2006 above the composite 2010 target, and have been progressing (yearly average) during the period. The quadrant: "Falling further behind" includes countries that in 2006 have performance below the 2010 composite target and have negative average levels of progress during the period.
Performance and progress of countries in each of the benchmark areas are shown in the graphics A.3-7.

The following indicators have been applied (Chart A.2-7)
Low achievers: Percentage of pupils with reading literacy proficiency level 1 and lower on the PISA reading literacy scale
Early school leavers: Share of 18-24 year-olds with only lower secondary education or less and not in education or training
Upper secondary completion: Percentage of 20-24 year-olds with at least upper secondary education
MST graduates: Total number of MST graduates / per 1000 of the population, 20 – 29 year-olds.
Life long learning participation: Percentage of population aged 25-64 year-olds participating in education and training in the four weeks prior to the survey.

Sources: Eurostat (UOE, LFS); OECD/PISA

Participation at different levels in Podlaskie Voivodship

Data provided in the Background Report do not allow us to make accurate comparisons between the Podlaskie Voivodship and the rest of Poland because they are based on gross, rather than net, enrolment rates at different levels. The figures include all students enrolled at given levels even where they are outside the typical age range for enrolment, and are therefore likely give a somewhat inflated image of age participation rates. Nevertheless, changes of time in the data are significant.

Table 6 (below) shows gross enrolment rates (GER) of 102.7% in full upper secondary (ISCED 3A) courses in 2007/8 (please note, the fact that it is over 100% reflects the inclusion of participants of all ages in the numerator but not the denominator). This was down somewhat from the 107.1% rate in 2005/6, even though rates for general upper secondary education increased, because the GER for technical and specialised upper secondary courses declined significantly. However, the overall decline in GER probably reflects diminishing demand from adults for remedial upper secondary education, rather than a lowering of demand from 15-18 year olds. Our information from the visit to Podlaskie Voivodship was that almost all lower secondary graduates in the region continue in upper secondary education. This is borne out by the extremely high proportion of 20 to 24 year olds who had achieved this level in 2007, as reported above.

Table 6. Education Gross Enrolment Ratios 2005/2006-2007/2008

Indicator	School year 2005/06 (%)	School year 2006/07 (%)	School year 2007/08 (%)
Pre-school education (6-years-old)	-	96.2	92.4
Elementary schools	97.2	96.7	96.0
Gimnazjum (Lower secondary schools)	99.1	99.0	98.5
Vocational secondary schools (ISCED 3C)	10.2	10.2	11.1
General secondary schools (ISCED 3A)	55.2	56.4	56.1
Technical schools and specialised secondary and technical schools (ISCDE 3A)	51.9	48.5	46.6
Post secondary schools (ISCED 4C)	17.8	19.6	19.0
Higher schools	41.4	41.6	41.7

Source: Statistical Yearbook of Podlaskie Voivodship 2006,2007,2008, Statistical Office in Bialystok, Bialystok

Figures supplied by the Region for higher education enrolments show only a slight increase in absolute numbers between 2005/6 and 2007/8. The number enrolled increased only slightly in universities and remained stable in higher agricultural schools. Only in higher pedagogical schools was there a sharp increase. About half of those in universities and higher technical schools were studying in the evenings. The vast majority of those in higher agricultural schools, higher economic schools and pedagogical schools were studying in the evenings.

Given that higher education participation has already reached quite high levels it should not surprising that overall enrolments are currently plateauing. Diminished opportunities for graduates to obtain graduate level employment during the recession may also be having a depressing effect on demand. What is more interesting in the figures, perhaps, is that graduation rates are up. There were 10.1% more graduates from higher education schools in 2006/7 than 2005/6. This may reflect higher enrolments in previous years, or it may reflect improvements in completion rates.

Table 7. Number of student of higher education schools in school year 2005/2006-2007/2008

Type of higher education school	2005/2006	2006/2007	2007/2008
	Number of students of higher education schools		
Total	53306	53905	53447
Universities	13248	13907	14306
Higher technical schools	13706	12623	12192
Higher agricultural schools	1675	1695	1685
Higher economic schools	10591	9730	8830
Higher pedagogical schools	952	1470	1841
Medical academies	3707	3928	4150
Higher vocational schools	3097	4514	5190
Other schools	6330	6038	5253

Source: Main Statistical Office, Teaching and education 2006, 2007, 2008.

Data on adult education and training for the Podlaskie region are unfortunately very limited. There appear to be no comprehensive figures for adult enrolments, except for the formal school-type courses, because many of those participating are enrolled in unlicensed private establishments for which there are no data. We also have no data for the region (or indeed for Poland) from the European Commission's Continuing Vocational Training Survey (CVTS) since only one Polish region (not Podlaskie) was included in the last survey. What we do have comes from the Background Report which provides numbers enrolled in adult schools and the number of training establishments.

Table 8. Adult Education. The number of students in the schools for adults, learning on a day basis, evening basis, extramural basis in the school years 2005/2006-2007/2008

School type	2005/2006	2006/2007	2007/2008
	Number of students In the schools for adults		
Total	10392	9431	8473
Lower-secondary	226	208	72
Basic vocational	29	34	33
General secondary	7123	6963	6614
Specialised secondary	235	232	153
Technical secondary	2779*	1994*	1601*

* Together with supplementary general secondary schools and supplementary technical schools.

Source: Main Statistical Office, Teaching and education 2006, 2007, 2008.

Table 9 (below) shows that the total number of adults enrolled in school-level evening classes dropped from 10392 in 2005/6 to 8473 in 2007/8. The drop in enrolments was particularly sharp in lower secondary level adult education. These declines do not necessarily suggest an overall decline in demand for learning from adults. It may be that the take-up of remedial adult learning in previous years has reduced the need for remediation at this level since fewer adults now lack lower secondary education.

Figures for adult training institutions shows a substantial increase between 2006 and 2008. Sixty-eight additional institutions are registered in the later year. We do not know if this reflects an increase in the total number of institutions providing adult education or simply an increase in the number registered.

Table 9. Providers registered in the training institutions register 2006-2008 – selected data

Range	2006	2007	2008
Number of institutions including branches	249	301	317
Including the state ones	22	28	27
Training institutions with accreditation or quality mark	53	59	63
Training institutions which are registered in by territorial self-government unit	89	96	97
Most offered educational forms:			
Courses	241	289	301
Training workshops	137	170	180
Seminars, conferences	128	153	158
Practices, internships, vocational preparation	98	119	133
Number of the unemployed and job-seekers supported in finding employment	1464	1707	1592
Total number of people trained (the unemployed and job-seekers) in the voivodship structure	14062	14916	14781
Divided into:			
On the labour offices initiative	6049	6217	6237
n the individual initiative of the unemployed	4141	4259	4188
On the initiatives of other institutions or organizations	5114	5227	5392

Source: Department of Labour Market reports for the training institutions 01.01.2006-31.12.2006, 01.01.2007-31.12.2007, 01.01.2008-31.12.2008, Training Institutions Register.

Performance of 15 year olds in Poland

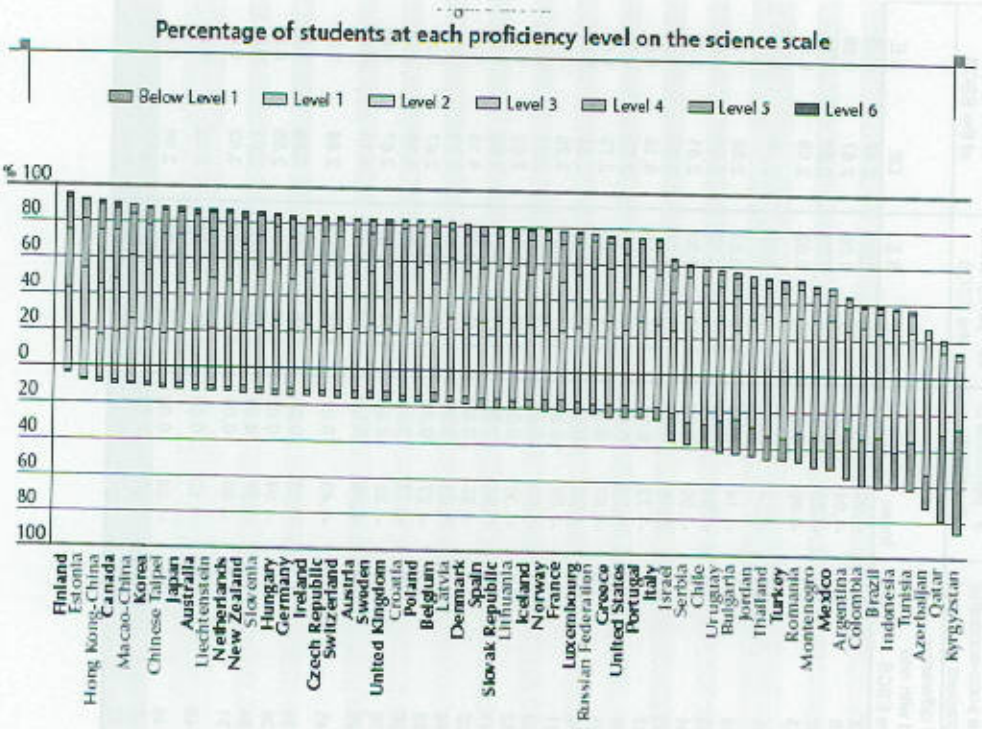
We know that participation in school education has reached high levels, but how efficient are the schools in promoting learning? We have no data on the competence of graduates from upper secondary education, but PISA 2006 sheds light on the performance of Polish 15 year olds in science. The mean score for the Polish students tested was just below the OECD average at 98 (see Table 10). This was lower than the mean score for the Czech Republic but higher than that for the Slovak Republic. When the figure is adjusted for the mean socio-economic background of the sample it rises to 510 – well about the OECD average.

Table 10 shows that a substantial proportion were scoring at level one and below in science and only a very small proportion at level 5 and 6. However, the OECD report on PISA 2006 notes that Poland showed the second largest increase in average reading performance among OECD countries, an increase of 17 score points between PISA 2000 and PISA 2003 and a further increase of 11 points between PISA 2003 and PISA 2006. In the initial periods, "most of the increase occurred at the lower end of the performance distribution: in the PISA 2000 assessment, 23.3% of students had scored at the lower end of the performance distribution. In the vocationally oriented track (comprising 23% of the student population) this proportion amount to almost three quarters." By 2006 those performing at level one or below dropped to 16.1%. (OECD, 2007)

Table 10. Science Performance of 15 year olds in 2006

	Unadjusted mean score		Mean score if the mean ESCS would be equal in all OECD countries		Strength of the relationship between student performance and the ESCS		Slope of the socio-economic gradient		Length of the projection of the gradient line					
									5th percentile of the ESCS		95th percentile of the ESCS		Difference between 95th and 5th percentile of the ESCS	
	Mean score	S.E.	Mean score	S.E.	Percentage of explained variance in student performance	S.E.	Score point difference associated with one unit of the ESCS	S.E.	Index	S.E.	Index	S.E.	Dif.	S.E.
Australia	527	2.3	519	1.7	11.3	0.78	43	1.5	-1.08	0.02	1.39	0.03	2.47	0.03
Austria	511	3.9	502	3.7	15.4	2.02	46	3.1	-1.04	0.07	1.63	0.05	2.67	0.09
Belgium	510	2.5	503	2.2	19.4	1.29	48	1.9	-1.29	0.04	1.58	0.02	2.87	0.05
Canada	534	2.0	524	1.8	8.2	0.68	33	1.4	-0.99	0.02	1.60	0.02	2.59	0.03
Czech Republic	513	3.5	512	3.2	15.6	1.35	51	2.6	-1.14	0.02	1.30	0.02	2.44	0.03
Denmark	496	3.1	485	2.5	14.1	1.43	39	2.0	-1.14	0.04	1.72	0.03	2.86	0.04
Finland	563	2.0	556	1.8	8.3	0.87	31	1.6	-1.04	0.03	1.48	0.02	2.52	0.03
France	495	3.4	502	2.7	21.2	1.77	54	2.5	-1.50	0.06	1.30	0.03	2.81	0.07
Germany	516	3.6	505	3.1	19.0	1.45	46	2.1	-1.16	0.05	1.82	0.04	2.99	0.06
Greece	473	3.2	479	2.6	15.0	1.72	37	2.2	-1.72	0.04	1.45	0.06	3.18	0.07
Hungary	504	2.7	508	2.2	21.4	1.58	44	1.8	-1.53	0.03	1.50	0.03	3.02	0.05
Iceland	491	1.6	470	2.1	6.7	0.80	29	1.8	-0.57	0.04	2.11	0.02	2.79	0.04
Ireland	508	3.2	510	2.5	12.7	1.37	39	2.2	-1.38	0.04	1.43	0.04	2.81	0.05
Italy	475	2.0	478	1.9	10.0	0.94	31	1.6	-1.59	0.03	1.67	0.04	3.25	0.05
Japan	531	3.4	533	3.1	7.4	0.95	39	2.7	-1.08	0.02	1.13	0.01	2.22	0.02
Korea	522	3.4	522	3.0	8.1	1.49	32	3.1	-1.32	0.05	1.30	0.04	2.62	0.07
Luxembourg	486	1.1	483	1.1	21.7	1.12	41	1.2	-1.96	0.02	1.72	0.02	3.68	0.03
Mexico	410	2.7	435	2.4	16.8	1.72	25	1.3	-2.95	0.06	1.21	0.06	4.16	0.08
Netherlands	525	2.7	515	2.4	16.7	1.65	44	2.2	-1.23	0.06	1.60	0.03	2.83	0.06
New Zealand	530	2.7	528	2.3	16.4	1.11	52	1.8	-1.27	0.04	1.40	0.04	2.67	0.05
Norway	487	3.1	474	2.8	8.3	1.10	36	2.5	-0.73	0.03	1.62	0.03	2.35	0.04
Poland	498	2.3	510	2.1	14.5	1.13	39	1.8	-1.56	0.03	1.31	0.07	2.87	0.07
Portugal	474	3.0	492	2.3	16.6	1.50	28	1.4	-2.46	0.03	1.70	0.03	4.16	0.04
Slovak Republic	488	2.6	495	2.2	19.2	1.96	45	2.6	-1.40	0.07	1.48	0.02	2.88	0.07
Spain	488	2.6	499	1.9	13.9	1.21	31	1.3	-1.93	0.05	1.56	0.01	3.48	0.05
Sweden	503	2.4	496	2.2	10.6	0.97	38	2.1	-1.04	0.03	1.47	0.04	2.50	0.05
Switzerland	512	3.2	508	2.6	15.7	1.20	44	1.8	-1.37	0.03	1.54	0.03	2.91	0.04
Turkey	424	3.8	463	6.4	16.5	2.96	31	3.2	-2.65	0.04	0.77	0.08	3.62	0.08
United Kingdom	515	2.3	508	1.9	13.9	1.12	48	1.9	-1.12	0.03	1.50	0.01	2.62	0.03
United States	489	4.2	483	3.0	17.9	1.63	49	2.5	-1.39	0.06	1.59	0.04	2.98	0.07
OECD total	491	1.2	496	0.9	20.2	0.57	45	0.6	-2.00	0.03	1.47	0.01	3.47	0.03
OECD average	500	0.5	500	0.5	14.4	0.26	40	0.4	-1.43	0.01	1.50	0.01	2.93	0.01

Source: OECD (2007a)



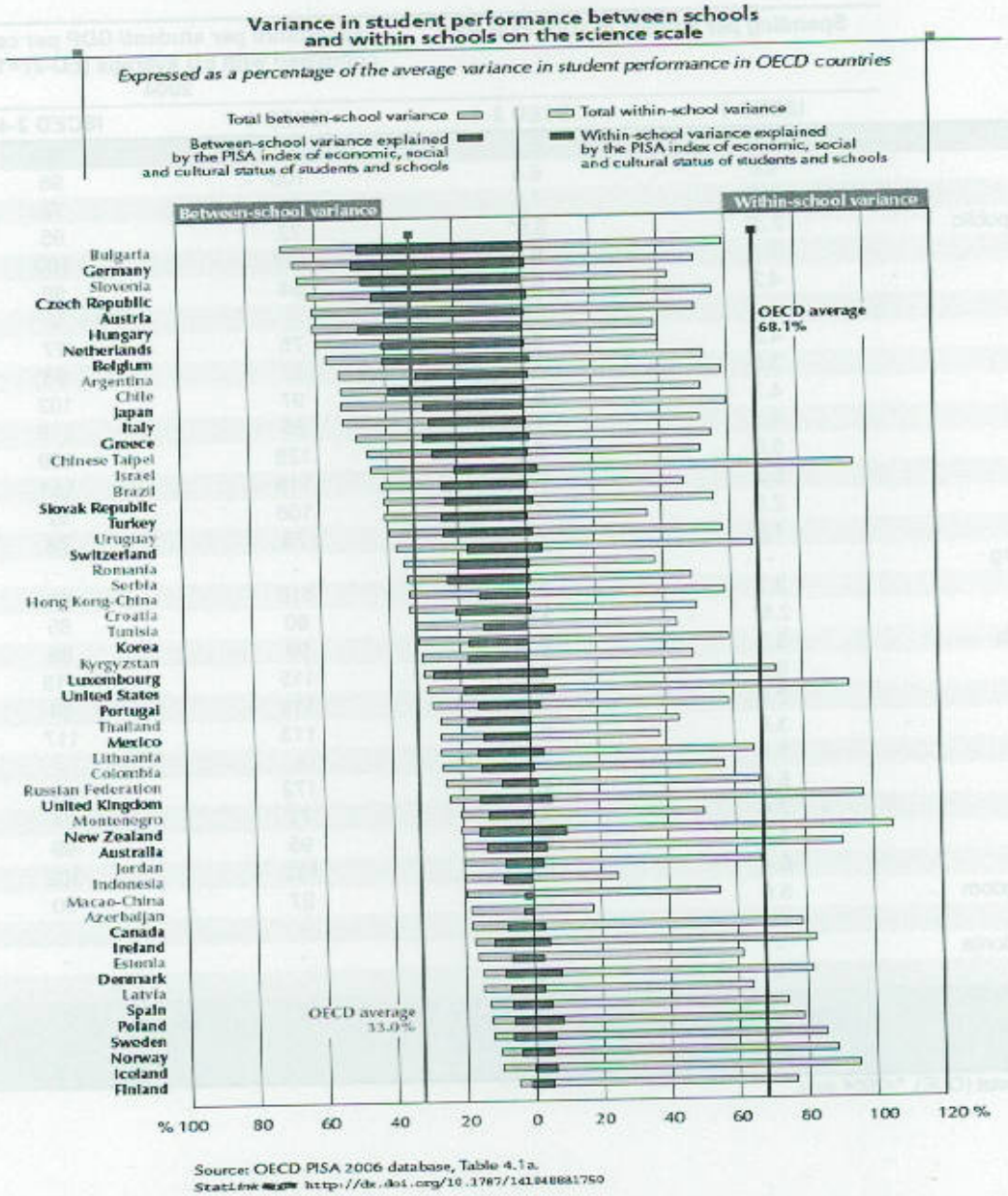
Countries are ranked in descending order of percentage of 15-year-olds at Levels 2, 3, 4, 5 and 6.
Source: OECD PISA 2006 database, Table 2.1a.
StatLink http://dx.doi.org/10.1787/141844475532

Distribution of Performance

How egalitarian is the Polish school system? The variation student scores in science is low relative to the OECD average (89.7%) (see OECD, 2007, Table 4.1a). The social gradient for scores is just below the OECD country average (39:40) and 39% of the variation is explained by social background factors – a figure which is again comparable with the average for OECD countries (40%) (See OECD, 2007, Table 4.4a). What is particularly striking in the PISA data is that the variation between schools is very low in 2006.

As Figure 13 shows variation between schools is lower than in all the OECD countries except Sweden, Norway, Iceland and Finland. The OECD analysis notes that this is related to the reforms in the early 2000s which delayed the separation of students into tracks in secondary education by two years. This occurred between the PISA 2000 and PISA 2003 assessments. It coincided with a large decrease in between-school variance in Science scores between 2000 and 2003, from 50.7% of the OECD average variation in student performance, of which the largest proportion was accounted for by the different school tracks, to 14.9%. The report comments that "Poland is now among the countries with the lowest between-school variance" a result that researchers have associated with the fact that the 15 year olds assessed by PISA were no longer separated into different school tracks.

Figure 13. Between-School and Within-School Variation in PISA 2006.



Source: OECD PISA 2006 database, Table 4.1a.
StatLink http://dx.doi.org/10.1787/141848881750

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Table 11. Spending per student relative to GDP per capita (2005)

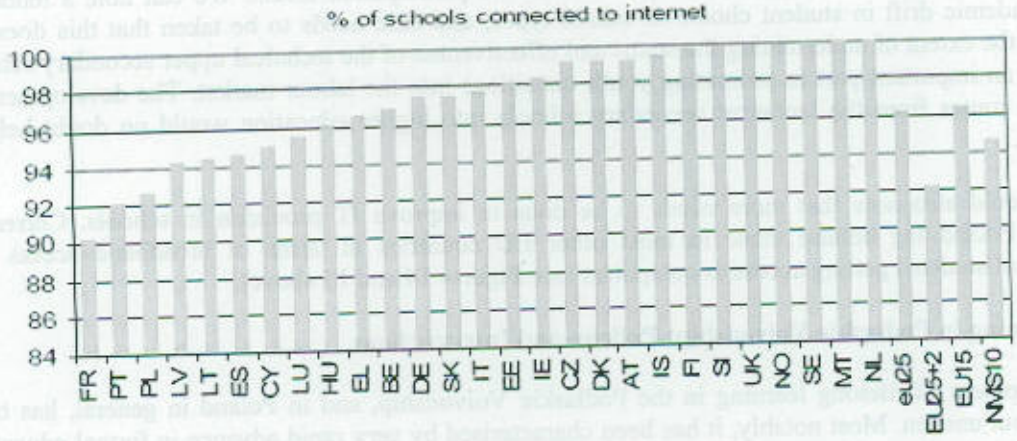
	Spending per student in 1000 EUR PPS		Expenditure per student/ GDP per capita compared with EU average (EU-27=100), 2004	
	ISCED 1	ISCED 2-4	ISCED 1	ISCED 2-4
EU-27	4.5	5.9	100	100
Belgium	5.6	6.5	105	95
Bulgaria	1.7	1.6	95	78
Czech Republic	2.3*	3.9*	72	95
Denmark	7.2	8.0	127	109
Germany	4.2	6.6	84	96
Estonia	-	-	-	-
Ireland	4.8	6.1	75	77
Greece	3.8	4.9	87	95
Spain	4.7	6.1	97	102
France	4.5	7.7	89	119
Italy	5.6	6.3	128	109
Cyprus	5.2	8.3	119	151
Latvia	2.5	2.5	108	92
Lithuania	1.8	2.2	73	78
Luxembourg	-	-	-	-
Hungary	3.7	3.2	116	91
Malta	2.5*	3.5*	80	85
Netherlands	5.3	6.6	94	89
Austria	6.9	8.3	115	115
Poland	2.8	2.4	119	83
Portugal	3.8	5.1	113	117
Romania	1.1	1.3	-	-
Slovenia	6.6	4.6	172	91
Slovakia	2.4	2.3	72	74
Finland	4.7	6.2	95	99
Sweden	6.4	6.9	122	102
United Kingdom	5.6	7.0	97	90
Croatia	-	-	-	-
FYR Macedonia	-	-	-	-
Turkey	-	-	-	-
Iceland	7.0*	7.0*	127	99
Liechtenstein	7.0	7.7	-	-
Norway	7.6	9.3	103	79

Source: Eurostat (OUE), *=2004 data

Schools

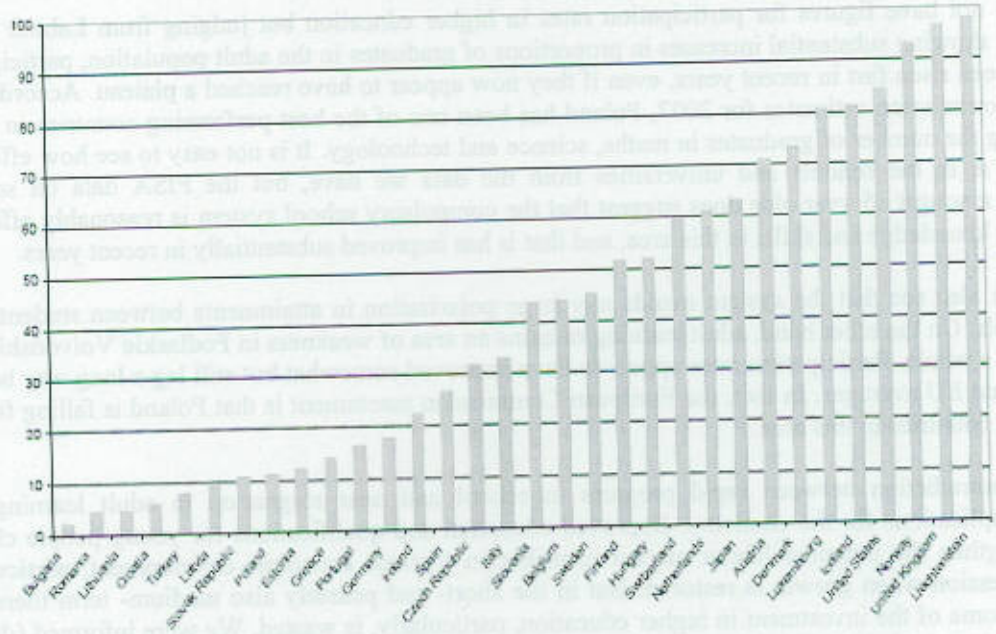
The school system, including the upper secondary system, appears to be both effective and efficient. Lower secondary school students perform reasonably well in science assessments by comparison with those in other countries, particularly when socio-economic background is taken into account.

Figure 14. % of Schools with Connection to Internet



Source: Empirica 2006

Figure 15. Share of students in schools with high proportions of computers per student (more than 16 computers per 100 students)



Source: PISA 2006, CRELL

And the schools do not produce any substantial polarisation of attainment amongst students. In fact the reforms in the early 2000s seem, as discussed above, to have reduced between-school disparities. Delaying the separation of students into different tracks by two years seems to have raised overall attainment and particularly the attainment of those at the bottom of the distribution.

The upper secondary education system provides a diverse array of general and vocational programmes for young people, which has probably helped to increase participation levels. We can note a tendency towards academic drift in student choice of school types, and care needs to be taken that this does not continue to the extent of undermining the status and effectiveness of the technical upper secondary schools which play an important part in promoting youth transitions into the labour market. The development of progression routes from the technical secondary schools into higher education would no doubt help to prevent this.

We should also note that more needs to be done to improve IT provision in schools. Currently, schools in Poland lag behind those in most other EU countries in terms of broadband access and proportions of students getting access to computers (see Figures 14 and 15 above).

Adult Learning in Podlaskie Voivodship: Policies and Interventions

Development of lifelong learning in the Podlaskie Voivodship, and in Poland in general, has been impressive but uneven. Most notably, it has been characterised by very rapid advance in formal education – in school and universities – and a continuing deficit in adult learning. Participation rates in upper secondary and higher education have surged forward. Poland now has amongst the highest levels of graduation from upper secondary schooling in the OECD, with a substantial proportion of these coming from vocational tracks. Podlaskie Voivodship mirrors this with almost all young people now continuing in upper secondary education.

We do not have figures for participation rates in higher education but judging from Labour Force Survey data showing substantial increases in proportions of graduates in the adult population, participation rates have been risen fast in recent years, even if they now appear to have reached a plateau. According to European Commission estimates for 2007, Poland has been one of the best performing countries in terms of increasing the number of graduates in maths, science and technology. It is not easy to see how effective the leaning is in the schools and universities from the data we have, but the PISA data on science competence amongst 15 year olds does suggest that the compulsory school system is reasonably effective in imparting knowledge and skills in this area, and that is has improved substantially in recent years.

We can also see that the system avoids any large polarisation in attainments between students and across schools. On the other hand, adult learning remains an area of weakness in Podlaskie Voivodship and in Poland as a whole. Participation rates appear to have improved somewhat but still lag a long way behind the OECD and EU averages. In fact, the European Commission assessment is that Poland is falling further behind other countries in this area.

This contradiction between rapid progress in school and near stagnation in adult learning has important implications for the economy. Improved education and qualifications for young people clearly should strengthen the potential labour market contribution towards economic development, particularly after the recession when growth is restored. But in the short- and possibly also medium- term there is a danger that some of the investment in higher education, particularly, is wasted. We were informed (during a visit to a private university) that some 70% of graduates do not get graduate level jobs in Poland. Many graduates will be discouraged by the lack of employment opportunities in the region at present and choose to migrate. If many of these do not to return to the region, there is the danger investments in their education may be partially lost.

On the other hand, Podlaskie Voivodship, and Poland in general, are still not engaging enough adults in learning. From the Background Report data, it would appear that the majority of those who do participate in adult learning are between 25 and 34 and already quite well qualified. The number of adults taking remedial forms of adult education is declining. This raises the question as to whether the adult

learning provision is contributing much towards alleviating a major economic problem in Poland and the region, which is the rather low rates of economic participation, particularly amongst the older generations. Qualifications and skills of adults over 45 are relatively low, and unless this can be rectified by higher rates of adult learning it seems unlikely that they can be brought back into the labour market. This uneven development in lifelong learning begs the question of whether the balance of investment in school and adult learning is optimal.

The prioritisation of "constant education" and the investment in education generally in Podlaskie has seen the development of an impressive education and training infrastructure in the region with a wide variety of general and specialist provision. In total there are some 156 "schools" for adults in Podlaskie and a further 19 "higher" schools (higher education institutions). Key among them are:

- The University of Bialystok with 14,300 students
- The Technical University of Bialystok with 12,000 students
- The Medical University of Bialystok with 4,000 students
- 20 Centres for "Constant Education" – offering a range of evening, weekend and daytime courses (general and vocational)
- 2 School centres for "Constant Education"
- 25 accredited and registered private providers (for example, ZDZ – see below)
- 37 Centres for Supplementary learning – mainly for "juveniles" but some adult learning
- 11 Centres of Practical Learning – for both young people and adults

There are also associations, co-operatives and private businesses operating and conducting training centres and courses – 17 such providers are accredited fully by the Podlaskie region – most in Bialystok (42% of Podlaskie businesses are involved in some form of training). There are also other providers such as agricultural colleges managed by the Ministry of Agriculture, including the Janow College of Agriculture and Centre for Lifelong Learning visited during OECD study.

The most popular "constant education" courses are specialist vocational programmes such as human resources, law, accountancy, financial management and the most common participants are younger well educated adults in their 20s.

Given the close working and strategic relationship between the education and employment systems in Podlaskie (as demonstrated in the strategic documents above) the Public Employment Services in Podlaskie Voivodship should be considered as a key part of the training system's infrastructure. The Labour Offices are relatively autonomous with an office for each Powiat alongside regional labour offices:

- 14 Powiat (County) Labour Offices
- 3 Voivodship Labour Offices (one Voivodship Labour Office in Bialystok with branches in Suwalki and Lomza).

All Labour Offices offer employment advice, training, labour market information and information on vacancies. Each also helps to keep the training register – where currently there are 317 institutions registered to provide training for unemployed jobseekers in Podlaskie. Training programmes and active labour market programmes are mainly financed through Poland's Labour Fund and through the ESF programme. The ESF Grant to all Polish Voivodship Labour Offices – EUR 11.4 billion – the largest single EU Grant for 2007-2013 period – also covers enterprise support (new business start ups, SMEs, etc.) and regional economic development – building on the 2004-2006 Programme.

Over 12,458 unemployed jobseekers were referred to vocational training through the labour offices in 2008. The employment focused training prescribed by Powiat Labour offices tend to be of the following types:

- 12-24 month training in vocational areas such as security, construction, transport, administration, finance, IT, sales, etc.
- 3-6 month (for the majority) and 3-12 month internships (for graduates and people under 25) paid for by Powiat offices – sometimes described as apprenticeships for the unemployed.
- Vocational Preparation for Adults (introduced in February 2009) – organised by Powiat and training providers – providing specific vocational training for a particular type of job or existing vacancy in the local labour market – lasts for 12-18 months
- Adult Training for Work – for people with obsolete skills – 3-6 months
- Enterprise support allowances (available to unemployed and to wider applicants in projects financed by European Social Fund) of up to PLN 40,000

Table 12. Participation of unemployed in internships and vocational preparation 2006-2008

Specification		People who in the reported time:			Employment effectiveness in %
		Started the programme	Finished the programme	Found a job during or up to 3 months after finishing the programme	
People participating in the internship programme	2006	5246	4606	2502	54.3
	2007	5147	4704	2622	55.7
	2008	5946	5025	2911	57.9
People participating in vocational preparation in the workplace programme	2006	1188	980	543	55.4
	2007	1537	1377	757	55.0
	2008	2193	1751	921	52.6

Source: Appendix 6 to The Report on the Labour Market MPiPS-01, "Active programmes of the labour market" 2006-2008.

Increasing numbers of the young unemployed in Podlaskie are being directed to the popular and apparently successful internship programme. Between 2006 and 2008 14,335 people attended internships. Employers providing places for internships (as part of vocational preparation for adults) get financial incentives – equivalent to 2% of the average salary for each full month or PLN 400 for each full month of participation and/or achievement of linked training/qualifications.[7]

The effectiveness of the internships also grew: from 54.3% in 2006 to 57.9% obtaining permanent jobs as a result in 2008. This compares very well to other active labour market policies such as the New Deal for Young People in the UK (with an average success rate of around 30%). There is also an increasing number of people taking part in the vocational preparation option. However, this option is taken by less people (4108 in same period), but with a similar reported success rate of 54.1%.

Box 1. Examples of Education and Training Providers in Podlaskie Voivodship

ZDZ is private organisation providing training which has 15 Vocational Training centres in Podlaskie. It has existed for 60 years and is the biggest provider of employment training through powiat labour offices in the region. It is also funded through private tuition fees – and through business sponsorship. There is excellent infrastructure and ZDZ very useful for region's education and employment offices to be able to use.

CKU Centre for Lifelong Learning in Bialystok (one of 20 Centre for Constant Education described above) – has 700 adults registered on a mix of free and paid for programmes. It provides technical courses as well as basic skills and general certificates based on lower and upper secondary provision in school gymnasium system. It is clearly popular, and has well qualified staff and plentiful ICT facilities. It is open seven days a week and provides: EU programmes such as ECDL, Leonardo; short and long vocation and general study; vocational/career guidance and has labour market research capability.

University of Finance and Management

It is one of oldest private universities in Poland with over 6,000 students in six faculties (mainly professional and vocational studies). Supported predominantly through private tuition fees and some state and EU grants, it has over 200 professors and doctors on teaching staff with links to international institutions, including in Italy and France. The University offers undergraduate and postgraduate courses and also undertakes research and conference activities.

Janow of Agriculture and Centre for Lifelong Learning

Situated in an agricultural community in the eastern part of the region, near to the border with Belarus, the College was founded in 1957 and has a working 2000 ha. farm. It offers agricultural courses and also general "constant education" programmes, and provides training towards various 'licence to practise' agricultural occupations, including machinery use, dairy farming and animal husbandry. With nearly 380 adults on general courses, it also feed into national Agricultural Institutes (Higher Education levels) in Poland.

Enterprise training grants are also proving to be an increasingly popular option for jobseekers and also for people in work. Up to PLN 40,000 (nearly six times the average salary in the region) is available for these programmes.[8] It is particularly popular with young graduates and those returning with accumulated capital from working abroad.

The current economic crisis has seen some modifications to the region's offer and use of ESF funds, with a broader focus on people threatened with unemployment and mobility, relocation allowances (a good idea in a region and country with such labour market variance), firm assistance and fast track project selection and approval process (30 days).

All of these programmes look to be very successful active labour market policies – although there is no data available on their success rates during more recent – and difficult – economic conditions. Nevertheless the programmes compare very well in outcomes to similar programmes in Europe during healthier labour market conditions.

Migration issues in Podlaskie Voivodship

According to the data of Poland's Main Statistical Office (referenced in the Podlaskie Voivodship background report) at the end of 2007 there were some 2.2 million Poles working outside of the country. This number had doubled in the immediate period after Poland became a member of the EU (with 1 million in 2004 and 1.9 million in 2006). Of the 2.2 million in 2007, 1.9 million[9] Polish citizens were working within the European Union (compared to 770,000 in 2004 and 1.6 million in 2006). Although the scale of emigration was growing later on, the dynamics of it was falling dramatically.[10]

The Polish population in the UK expanded by roughly six times[11] over a four year period, moving from the thirteenth to the first largest foreign-born national group. The 2001 Census recorded 58,000 people born in Poland but by time of final quarter 2007 that number was thought to be approximately 458,000 (Sumption, 2009). But since the peak in 2007/08 the effects of the recession on the UK economy has seen the rate of migration to the UK drop and anecdotal and media evidence of many Polish workers returning home.

The Times (UK newspaper) has established that, for the first time since they began arriving en masse four years ago, more UK-based Poles are returning to their homeland than are entering Britain. Statistics show that only 38,680 Poles signed up to the Government's register of migrant workers in the third quarter of 2007, a slump of 18 per cent from the previous year. Polish officials say that Poles leaving the country outnumber those coming in.[12]

Half of the estimated one million British-based Poles are expected to return home, said the Centre for International Relations, a Warsaw-based think-tank. The numbers of east European immigrants approved to work in Britain dropped from 227,875 in 2006 to 206,905 last year, a fall of nearly 10%, and the trend is expected to accelerate over the next decade. According to *The Independent* (UK newspaper), Poles, who make up two-thirds of the newcomers, are understood to be returning home in greater numbers, drawn by higher salaries, job shortages and the fall in the value of the pound. [13]

Generally there is very little reliable information or long term data about the significance of this very high level of migration. Long term trends are difficult to predict and as yet there is little formal data relating to the return of migrants to Poland. We also know little about the attributes and precise motivations of those Poles who do leave to work abroad.

We know that globally, the higher skilled tend to be more mobile (this is backed up by low internal mobility of lower skilled workers within Poland – nationally and even within regions such as Podlaskie). Clark and Drinkwater (2008) estimated that Polish immigrants in the UK had an average of 13.6 years of full-time education, compared to 11.9 years for other EU Accession country (A8) nationals.

Table 13. Change in characteristics over time, by year of arrival, for Polish working-age immigrants in UK (IPPR 2008)

Year of arrival	2004	2005	2006	2007
Median age	27	27	26	25
Median education leaving age	20	20	20	19

Source UK Labour Force Survey (Quoted in IPPR 2008)

Anecdotal evidence heard during the OECD study visit suggests that outward migration is continuing at a strong rate (Powiat Labour Office in Sokolka estimated one in four young people are still leaving to work abroad) to western European destinations such as UK, Belgium, Ireland and Germany. But the Sokolka Powiat Labour office estimates that twice as many migrants are returning than are currently leaving placing extra pressure on the local labour market (and their services for the unemployed).

Losing high numbers of young skilled workers for extended periods of time – if not permanently – poses some significant challenges to Poland and to the Podlaskie region. But migrants working abroad and returning to Poland are also bringing finance and investment back to the region. People go and work abroad but send money home or they purposely bring back a lump sum with which they start a business or buy a home.

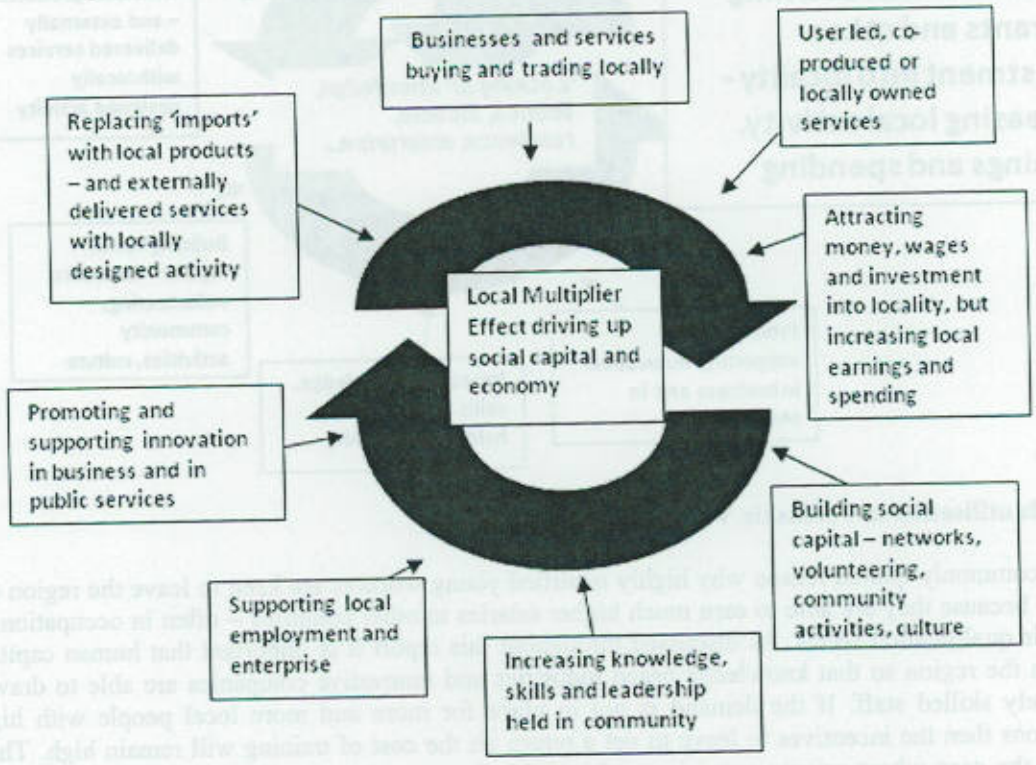
Making the best out of migration?

There are major challenges posed by migration in Podlaskie Voivodship. Since EU accession, there is very little that the region can do about the movement of labour in such significant quantities. However it is important that Podlaskie is able to more precisely understand what is happening and what longer term trends are emerging.

The main challenges are threefold. Firstly, it is problematic that given the demographic pressures in the region, so many younger workers are opting to leave the country for sustained periods. This may adversely affect population data by increasing the proportion of older residents while potentially slowing the birth rate further. The second challenge is that those most likely to go abroad are the young people with good levels of qualifications – so in both age and skills, these are the most valuable workers in the region. Thirdly, with so much investment in human capital by the region and the national government in human capital, it is likely that some may be wasted. Furthermore, if the development of the knowledge economy and new enterprises are ambitions for the region (as laid down in the strategies described above), then high outward migration is likely to threaten the region's economic ambitions. This "brain drain" effect is therefore likely to be damaging on three very important levels.

However, if there are incentives for young skilled workers to stay in the region or if they do leave, to eventually return, then high levels of migration may also present Podlaskie with some opportunities too. Migration could boost investment in the region as well as to help open it up to new networks that otherwise may not have existed. Basic models of local economic growth where new enterprises and jobs in a locality begin to lock in economic growth via a local multiplier effect are shown below in Figure 16.

Figure 16. The Local Multiplier Effect (combining social and economic factors)



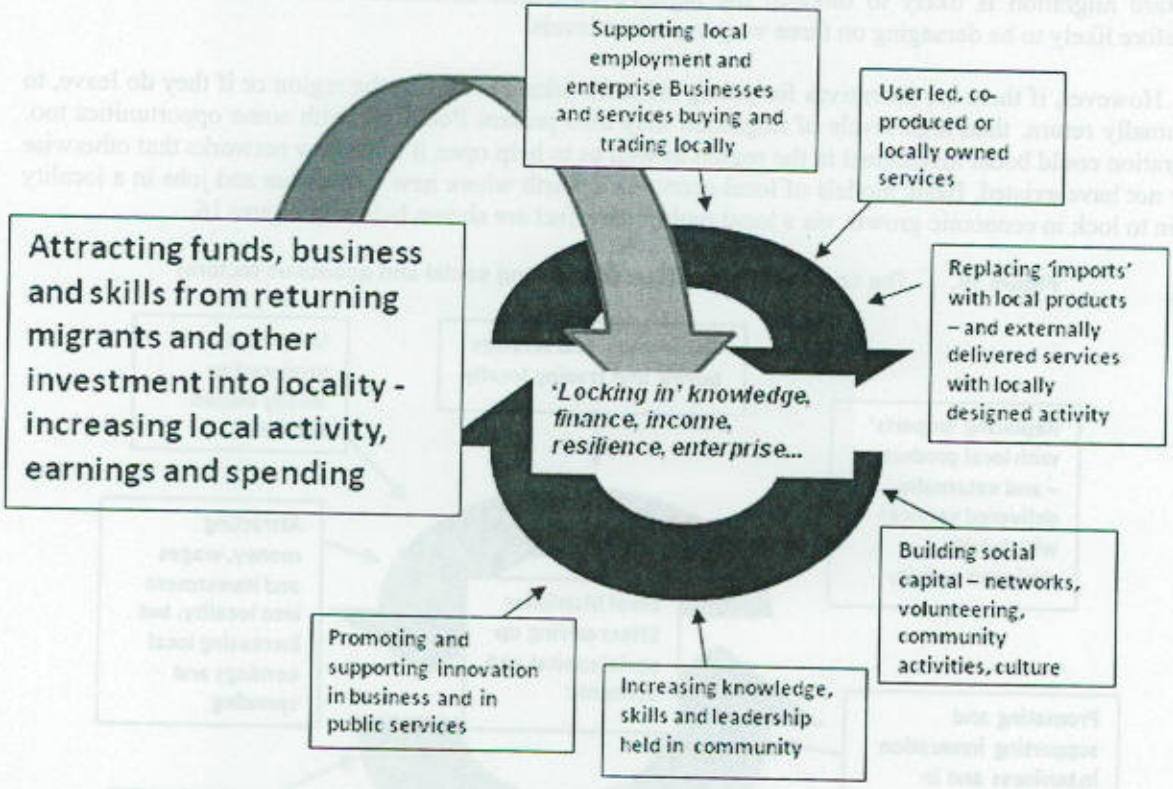
Source: Reproduced with permission from Westall, Ramsden and Foley (2000).

Making jobs and broad economic activity stay in, or close to, local areas starts to boost the local economy through a standard economic multiplier effect whereby what one person earns is spent in turn on another service. This enables economic gain to "stick" to local areas and in turn to communities and individuals.

This is a highly desirable outcome, given that research from the Brookings Institute in the US suggests that poor areas lose up to 70% of local expenditure as they lack the employment structure to "keep the money in" (Finegold and Soskice, 1998). The same of course might be said of keeping human as well as physical capital circulating around a community.

But if there are desires and incentives to bring extra financial capital (alongside high skills and new networks) into a region then migration may bring a positive effect and actually help to stimulate the flow and locking in of investment in a region such as Podlaskie.

Figure 17. The Local Multiplier Effect (supported by investment from migration)



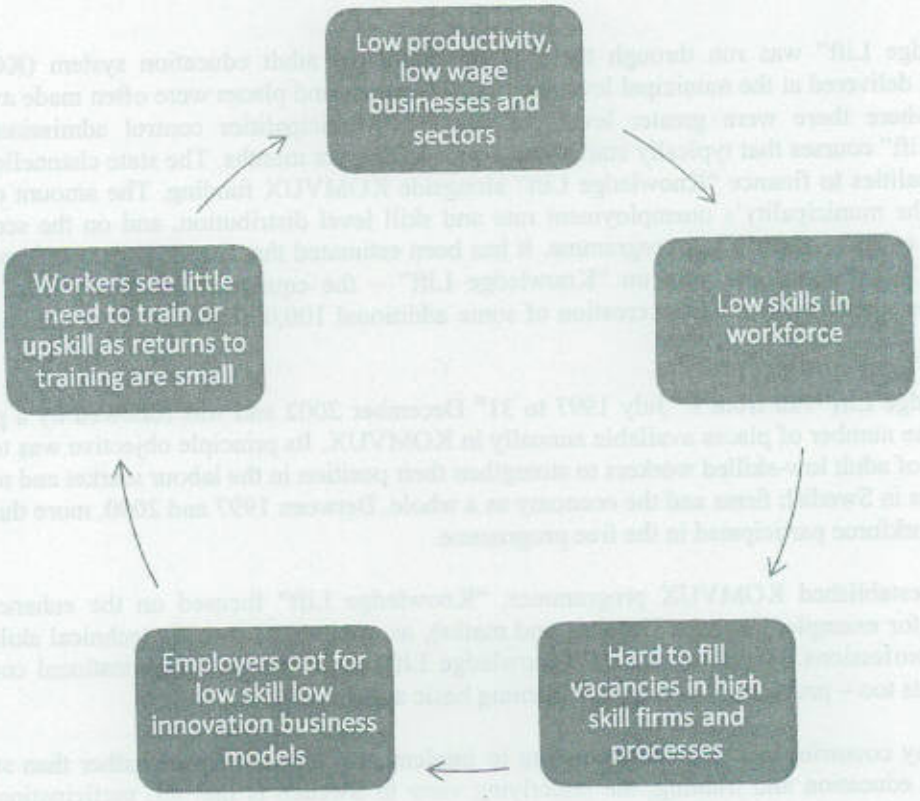
Poor Skills utilisation in Podlaskie Voivodship?

One commonly quoted reason why highly qualified young workers are keen to leave the region (and Poland) is because they are able to earn much higher salaries in other countries – often in occupations far below their qualification levels. As discussed throughout this report it is important that human capital is retained in the region so that knowledge based industries and innovative companies are able to draw on appropriately skilled staff. If the demand is not in place for more and more local people with higher qualifications then the incentives to leave to get a return on the cost of training will remain high. This is especially the case where private provision and individual payment or contributions are common as in Podlaskie.

The need to develop the private sector economy at a similar rate to the increase in overall skill levels is therefore an important issue in the region and a reason to strongly integrate demand side industrial policy with those aimed at increasing human capital amongst the population. Whilst productivity is increasing rapidly the OECD has observed that this is not necessarily linked to increases in the amounts (employment rate or increasing qualifications) or the deployment of new skills in the workforce.

Partly this is because existing firms and sectors in the region are persisting with low productivity, low innovation production processes or services. In this sense, Podlaskie could be said to be experiencing the effects of a "low skills equilibrium". In many advanced economies there are countries, cities and regions with problems of low skills and low productivity. It has been observed that some such locations are stuck in a "low skills equilibrium" (Finegold and Soskice 1988; Keep and Mayhew, 1998) and that the incidence of low skills in workforces has, at least in part, caused organisations to opt for low skill business models in resulting product or service specifications.

Figure 18. Low Skill Equilibrium



If applied in the Podlaskie context, this situation could reinforce existing businesses and employers to perpetuate low skill, low innovation models and processes because there is little available human capital to do otherwise. The subsequent combination of both low skills and low employer demand for skills results in a system that may prove difficult to change. Where employers have jobs that suit low skilled people – an increased supply of more highly skilled individuals might upset this equilibrium. Similarly, a rise in the number of employers offering jobs needing high skills – the move to a more knowledge driven economy – and the lack of ability in our workforce will lead to more and more skill shortages.

Improving levels of skills, skills utilisation (that is the deployment of skills to improve organisational performance), research and development and innovation in the economy is therefore a crucial part of the solution and a major challenge for the Podlaskie Voivodship. In some cases there has been significant improvement in the proportion of residents with higher level skills – including older workers – but thus far the deployment of new skills has yet to have a discernible impact on working practices, wages or productivity.

International Learning Examples

1. The "Knowledge Lift": The Swedish Adult Education Programme

Sweden is relatively well prepared for a policy intervention to accommodate these adjustments, given its long tradition of training of adult unemployed workers (see *e.g.* Ministry of Education, 1998, Friberg, 2000, and Ministry of Industry, 2001). In 1997, Sweden implemented a new major adult education program called the "Adult Education Initiative" or "Knowledge Lift" - one of the largest and most ambitious skill-raising programme in Europe. It aims to raise the skill level of all low-skilled workers to at least intermediary skill level[14], focusing on those workers with a low level of education and/or no formal qualifications.

"Knowledge Lift" was run through the existing municipal adult education system (KOMVUX). Organised and delivered at the municipal level, additional courses and places were often made available in those areas where there were greater levels of demand. Municipalities control admission into the "Knowledge Lift" courses that typically start twice a year lasting six months. The state channelled funding to the municipalities to finance "Knowledge Lift" alongside KOMVUX funding. The amount of funding depended on the municipality's unemployment rate and skill level distribution, and on the scope of the municipality's existing KOMVUX programme. It has been estimated that Sweden spent at least SEK 3.5 billion (USD 350 million) per year on "Knowledge Lift" – the equivalent of nearly SEK 1000 per participant. The spending covered the creation of some additional 100,000 places in the lifelong learning system.

"Knowledge Lift" ran from 1st July 1997 to 31st December 2002 and was followed by a permanent expansion of the number of places available annually in KOMVUX. Its principle objective was to increase the skill levels of adult low-skilled workers to strengthen their position in the labour market and to improve competitiveness in Swedish firms and the economy as a whole. Between 1997 and 2000, more than 10% of the Swedish workforce participated in the free programme.

Like the established KOMVUX programmes, "Knowledge Lift" focused on the enhancement of general skills (for example, English, Swedish, and maths), as opposed to specific technical skills needed for particular professions. However, part of "Knowledge Lift" could be spent in vocational courses and work placements too – providing a context for learning basic and generic skills.

As in many countries and regions attempting to implement a demand driven rather than supply led model of adult education and training, the underlying view in Sweden is that KL participation must be driven by the user/learner. As in Tuscany (see example below) the Swedish authorities believed that the participant should have ample scope for personal choice regarding the type of study and its timing and location. Recruitment of participants for "Knowledge Lift" programmes was also carried out in co-operation with trade unions and local employment offices – both of which referred members/users to the programme.

- "Knowledge Lift" and KOMVUX participants were/are eligible for a range of income grants and financial support. Some receive "special education support" (UBS) equivalent to unemployment insurance (UI).
- Sometimes, special adult study assistance and funding are available as a combination of a grant and a loan.
- At the end of 1997, 538,004 individuals (out of a population of 8 million) were aged between 25 and 55 and participating either in training or active job search whilst unemployed. About 220,000 of these participated in "Knowledge Lift" and/or KOMVUX, and of these about 56,000 received UBS.
- About 35,000 "Knowledge Lift"/KOMVUX participants were registered as unemployed, and another 5,000 participated both in "Knowledge Lift"/KOMVUX and in employment training.

The relevance of "Knowledge Lift" to Podlaskie and Poland is twofold. One is that the Swedish Government have clearly been trying to do the same mass exercise in "constant education" as in Podlaskie (and more broadly in Poland). Second, there has been a common need to push hard on the under-qualified older population in both countries because this is where the skills base appears weakest but also because the demographic trends have clear similarities.

2. "New Industries, New Jobs" (and the role of Regional Development Agencies) in England

In England[15], the Labour Government has begun to turn away from the previously dominant free market economic orthodoxies to a considerably more "activist" approach to industry and the economy as a whole. After several decades without an industrial policy of any significance, the UK Government published "New Industries, New Jobs" in April 2009 marking out a conscious and deliberate targeting of key industries and sectors within England.

The guiding principles behind these changes came with a desire to see the economy and labour market to emerge from the worldwide downturn faster and stronger. Supported by UK business organisations, the Government wished to set out a clear industrial strategy for the future, describing key sectors and the key policies which could support their growth today and in the future.[16]

The architect of the new approach to industrial policy is the former EU trade commissioner and now Secretary of State for Business, Innovation and Skills, Lord Mandelson. In a speech, late in 2008 he set out the principles and definition behind the new approach:

> First, industrial activism does not mean propping up failed companies or running industries from Whitehall. No protection of industry from international competition – because we believe that competition is in our long term interests. Second, industrial activism means being pragmatic about the ability of markets to enable companies and people to succeed in a rapidly changing global economy. Policy should be activist in the sense that it recognises that government can and must complement market dynamics to get the best outcomes for our society and economy. Third, industrial activism is shaped not just by what we conventionally label industrial policy but by all government policies –regulation, planning policy, migration policy, transport policy and a range of others – as well as the way government spends money and encourages innovation and entrepreneurship. The central point about industrial policy is how successfully it aligns all these relevant policies to target and deliver industrial outcomes. (Speech to the Royal Society for the encouragement of Arts, Manufactures and Commerce, London, 17 December 2008)

British science and technology is seen as being a crucial part of the infrastructure and at the heart of the revolutions in industrial production that will define the 21st century, especially in areas like advanced engineering, electronics and biosciences. Equally important in the delivery of this new "industrial activism" are agencies such as the Technology Strategy Board[17], UK universities and, especially relevant to Podlaskie and to other regions in Europe, the English Regional Development Agencies.

The Regional Development Agencies (RDAs) have traditionally had a key role in driving sustainable economic growth within the English regions since being established in 1997. This new responsibility for RDAs for developing regional strategies that support specific sectors and infrastructure is backed by their own existing resources but also complemented by national level funds to support such activities.

The UK Government's assessment of the specific sectors that will benefit from this new approach is set out below. Each has an accompanying strategy describing the research, innovation, skills and investment policies over the medium and longer terms:

- **Low Carbon Industrial Strategy** – has set out challenges presented by rising demand for low carbon products and services, tackling key barriers to growth in the UK's low carbon sector, aiming at a coherent approach at both national and regional levels and across the economy. Includes support for ultra low carbon vehicle manufacturing with GBP 250 million of funding.

- **Digital Britain** – drives upgrading of digital networks, a dynamic investment climate for UK digital content, access and near-universal participation, and enable widespread delivery of public services online. This will represent a comprehensive plan of action to ensure the UK is a global leader in the digital economy and society.

- **Life sciences and pharmaceuticals** – a new Life Sciences Industrial Strategy prepared by the new Office for Life Sciences has been published, setting out the steps to be taken to stimulate investment and address how the National Health Service can be more effective as a champion of innovation, how to get medicines to market faster, etc..

- **Advanced manufacturing** - the 2008 Manufacturing Strategy sets out how increase skills and technology support. Specific sub-sectors include aerospace, (engine and wing design), composite materials manufacturing, industrial biotechnology and plastic electronics technology.

- **Professional and financial services** – still seen as a core strength in the UK and a strong desire to maintain London and the UK's position as a key global financial centre in the future.

- **Engineering construction** – with many significant engineering challenges in the near future such as new nuclear power stations, crossrail and high speed rail links.

- **Industrial opportunities in an ageing society** – opportunities for health, pharmaceuticals and other industries as opportunities caused by demographic shifts in UK and wider global population.

These are just examples that are seen as strengths in the UK. It is however the process that is relevant to Podlaskie – the assessment of key strengths and opportunities and the orientation of policies and processes to support their growth through the current economic crisis and beyond. This will include preferential access to financial support in research and technology, skills and capital investment as well as a conscious attempt to make sure that any labour market or economic regulation, local or national government procurement takes account of these key sectors.

What might Podlaskie do to mirror such an approach? Firstly, it could assess its key industrial and economic strengths. Secondly, it should engage in some analysis of global trends and technological change and how it may influence key sectors in the region. Thirdly it should assess its current interventions (and wider activities such as procurement and regulation) and consider how they can best prioritise and/or benefit the most important sectors in the future.

3. City and Regional "Knowledge Economy" Strategies: North Carolina, Barcelona, Stockholm, Trieste

North Carolina

The story of North Carolina's economic success as a research and knowledge centre and economy of international significance has taken place over fifty years. The Research Triangle Park (RTP) was founded in January 1959 by a committee of government, university, and business leaders as a model for research, innovation, and economic development. By establishing a place where education institutions, researchers, and businesses could come together, they hoped to change the economic composition of the region and state and increase the opportunities for the citizens of North Carolina and the state's overall economic health.

The late 1950's was a time of widespread prosperity for the US and the developed world, as the economy finally emerged from the post war austerity. Globalisation and technological change were taking root and cities, regions and countries were competing to be a part of the rising industrial and commercial opportunities available.

But North Carolina and its cities were well adrift of such opportunity, continuing to suffer the economic consequences of the 1930s and the Second World War as well as the decline in both its tobacco and dairy industries. It was not well placed to exploit any new economic opportunities and socially was fragmented, segregated and often in severe poverty. Nevertheless, in this adversity partners came together to set out an economic and social vision for the state based on a physical infrastructure that would attract research oriented companies. The advantage of locating in RTP would be that companies could employ the highly-educated local work force and be proximate to the research being conducted by the state's research universities. The original parcel of land that made up RTP in 1959 consisted of 4,400 acres. Through the years, the Foundation acquired more land, surpassing 5,500 acres by 1979 and totalling nearly 7,000 acres presently. This is on top of the significant expansion undertaken by firms around RTP and the education institutions across the state.

Since it was established, the Park witnessed a steady and stable increase in the number of companies and workers. Today, there are more than 170 research and development related organisations in RTP – specialising in pharmaceuticals, bioscience, medical and environmental sciences and other research and development (R&D) specialisms. More than 42,000 full-time employees work in RTP and an estimated 10,000 contract workers. These employees have combined annual salaries of over USD 2.7 billion.

The Research Triangle Region boasts one of the largest concentrations of college graduates and post-graduate degree holders in the US. Within the region, the three flagship universities totalled USD 1.4 billion in R&D expenditures in 2006. Currently, there are 113,769 students enrolled in eleven Research Triangle universities and colleges including:

- Duke University
- East Carolina University

- NC Chapel Hill
- UNC Charlotte
- UNC Greenboro
- University of North Carolina State University

Additionally, North Carolina is home to five other top-ranked research universities. The cumulative effect of these various knowledge resources is a diverse workforce with the skills needed to drive the region's knowledge based economy.

Barcelona

In the 1980s and 1990s the local authorities in Barcelona adopted a series of ambitious projects and initiatives to regenerate deprived areas within the city. For more than a century, Poblenou and the surrounding San Martin area had been the main economic and industrial centre of Barcelona and the Catalan regional economy. But from the 1960s, de-industrialisation and decline set in and the area began to lose industries, businesses and residents. Between 1963 and 1990, the area lost more than 1300 factories.

The city council rebranded the area as 22@Barcelona[18], changing the planning rules for the area enabling new and different types of development. 22@Barcelona covers the whole south-eastern part of the city, from Gran Via to the beltway and from the Olympic Village to Rambla de Prim, allowing more construction, more public spaces or green areas and subsidized housing as long as previous industrial space is replaced by offices or other business services and equipment related to new technology and knowledge.

22@Barcelona was a government-driven approach to create new forms of economic activity and enterprise rather than to import businesses or business models from elsewhere. It was symptomatic of an approach common across the developed and developing world over many years – that of a "centrally" or "government" planned approach to specific economic development in a place or sector. Similar approaches existed in the US in the 1950s with the investment in new sector and industry growth in places like North Carolina's Research Triangle[19] (see above) with its focus on pharmaceutical and bioscience industries after the decline of agriculture and tobacco in the region. More recent approaches similar to Barcelona's prioritisation of IT and communications industries have included the establishment of the Kista Science City in Stockholm and Berlin.

Barcelona's objective was to create an area rich in both social capital and economic potential – attractive to the kinds of individual entrepreneurs that could establish high value IT and technology businesses in the city. 22@Barcelona is described as a "new compact city", where the most innovative companies co-exist with research, training and technology transfer centres, as well as housing (4,000 new subsidised residences), social and community facilities (145,000 m^2 of land) and green areas (114,000 m^2). As in Stockholm and North Carolina the linking of formal education and research facilities is seen as key to success, with the creation of new institutions and research facilities as conscious "anchors" to promote economic growth.

Since its start up, the 22@Barcelona project has seen the establishment of more than 1,100 new firms and institutions, of which more than half work in one of the four priority areas: the Media, ICT, MedTech and Energy. In total, there are currently more than 32,000 new workers in the area. According to the city authorities, the elements that contribute to the 22@Barcelona success are:

- The presence of companies at the forefront of the sector

- The existence of space for SMEs working in the field
- The establishment and operation of universities, continuing training and vocational training and technology centres
- The establishment of specific business incubators or "nurseries"
- The construction of housing for employees in growth companies and industries
- The provision of key support services such as grants, access to venture capital, networking, etc.

Stockholm

The Kista Science City is based in an area on the edge of Stockholm, near the international airport, which previously housed both industry and major military facilities. In the 1970s and 80s major ICT an Electronics employers began to relocate to Kista such as Ericsson and IBM. The Swedish Government hoped to catalyse new emerging industries around these anchor institutions by investing heavily in new education and research facilities. The Institute for Systems and the SICS, Swedish Institute of Computer Science, alongside an Engineering School and a part of the Electronics Department of the Royal Institute of Technology were sited in Kista. Eventually these were incorporated into a new university – the Swedish IT Institute in 1998.[20]

By the early 1990s, Kista was being described as Sweden's Silicon Valley. Leading international IT and telecom companies - such as Nokia, Microsoft, Apple and DCM had also established themselves there alongside smaller companies and start-ups. By the early years of this century, the desire to create a living city rather than just a business and education facility had developed, with plans for houses, schools, community centres and services incorporated into the area.

> Today Kista Science City extends across four municipal districts around Järvafältet, all of which have agreed on a joint vision for the future. Not only does this involve working together to encourage business growth and higher education, but also to improve housing, traffic networks, local traffic services and other infrastructures. The business community, the universities and the local authorities have worked together to produce and promote a strong vision for the future, with the focus on the development of Kista into a Science City. (Johannson et al. 2004)

In Stockholm's Kista Science City there are now some 1400 companies with over 30,000 employees. Of this community, 20,000 are working in the cluster of over 500 ICT companies, anchored by the relocation to Kista of Sweden's leading ICT company, Ericsson. There are also over 1,000 scientists and 5,000 students teaching, researching or training in ICT related areas. Kista, like Poblenou is also a living district – or according to the Swedish Government – a "living science city". Some 120,000 people also live in the Kista development area.

Trieste

Driven by European, Italian and regional investment, Trieste is in the process of reinventing itself as a region of science – very much on the same model as that in North Carolina. The scientific ambitions are matched with the region's economic desire to create a vibrant future for its cities (especially Trieste) and its people from a history of long term economic decline. Scientific excellence is now well established in the Trieste area with major science parks and facilities such as ELETTRA, AREA, ICTP (International Centre for Theoretical Physics), SISA (School of Information Studies for Africa), the National

Oceanographic Institute, a Postgraduate Science School, and the University of Trieste all based in the region.

> Trieste is reinventing itself as a centre of science. It is up on the Karst, says one of the splendidly glossy promotional brochures that are the literature of the new Trieste, "on these hills for which the most ancient of inhabitants of these lands used to look at to sea, that the Trieste of the third millennium is being constructed." It is true that up there startling things have been happening. There is AREA a great science park... There is ELETTRA, the light machine... (Morris, 2001)

Trieste is now a regular destination for the worldwide scientific and research community, required to work in the expanding opportunities offered by the region's investment in scientific facilities and technology centres. The community of visiting scientists is estimated to account for some 8 000 people. The International Centre for Theoretical Physics hosts 5 000 researchers[21] from over 150 different countries including India, China, Brazil, Argentina and Egypt. To date, the scientific community in Trieste has amassed some 50 Nobel Prizes.

In Italy spending on research and development is generally well below the OECD and EU average, and in 2005, R&D intensity (gross domestic expenditure on R&D as a percentage of GDP) was 1.1%, compared to 2.25% for the OECD area and over 1.7% for the EU. The private sector financed only 40% of R&D and performed 50%, compared to OECD averages of 63% and 68%, respectively. According to the recent OECD Economic Survey of Italy:

> In most countries, a significant amount of R&D effort occurs in universities or research institutions that are part of the tertiary education sector. In Italy this sector is underdeveloped; indeed, it has been a concern for some time that Italy suffers a net loss of young graduates through emigration and that few foreign researchers appear interested in working in Italy. (OECD, 2009)

Trieste is still a long way behind North Carolina – especially in terms of the private sector presence and investment and in knowledge transfer between its scientific facilities and businesses in the region. However, as RTP shows, this comes over a lengthy period with sustained investment and a shared vision across government, education and the private sector. But key to the approach of Trieste and the regional authorities of Friuli Venezia Giulia is the understanding that this is a long term endeavour and one that is the essential foundation of its ambition to establish and sustain a world class knowledge economy to drive the region.

Bialystok obviously possesses significant infrastructure in higher education and in research. In common with North Carolina, Barcelona, Stockholm and Trieste there are medical and technological centres of excellence which could form a vital anchor for industrial and enterprise strategies. These are major assets in the region and the opportunities for knowledge and technology transfer as well as spin out businesses should be captured.

There are also clear synergies with the national and regional strategies taking leads from the EU's Lisbon and Copenhagen processes. Beyond these opportunities the North Carolina model in particular shows how broader economic opportunities such as employment growth in intermediate skilled occupations (laboratory technicians, engineers, etc.) can also help to drive employment growth. Also striking in the North Carolina example is the sectoral and university profile common to that found in Podlaskie. From a history in agriculture and dairy farming, the state authorities have built a flourishing biotechnology and pharmaceutical sector – capitalising on industrial experience, skills and the knowledge of nearby medical universities.

4. Tuscany (Italy): Individual Learning Account (ILA)

Tuscany's learning account programme, like much "constant education" policy in Podlaskie, is also funded by ESF and has been studied as part of the OECD/ESF CoNET project. The major lesson for Podlaskie is the breadth of the voucher entitlement (across any learning, self-employment, entrepreneurship) in Tuscany. This should provide useful lessons as the authorities in Bialystok develop their thinking for learning accounts in the future. Looking at the need to develop new forms of entrepreneurship, to incentivise sectoral diversification and to provide more incentives for returning migrants, the broad leaning account model appears to be relevant.

In Tuscany, the Individual Learning Account (ILA) provides a pre-paid credit card to eligible recipients for approved training up to EUR 2,500. The intention is to enable users in part time, temporary work or those seeking work to commission the most relevant training courses for their needs whilst simultaneously incentivising suppliers of training to become more flexible and adaptable to individual learning needs.[22] In this sense it can be used to purchase an extremely wide range of training programmes (provided it is approved by regional assessors) including formal and bespoke training at virtually any level of learning.

This is quite different to the limited and predominantly lower level opportunities in language and IT available through other learning account examples in Europe (see for example the Autonomous Province of Trento and the UK). It allows the user to undertake a much wider range of learning and to be truly "demand-led" in nature. Whilst there are risks of deadweight and waste, this approach really does turn decisions and knowledge over to the citizen.

Beneficiaries of the ILA are adult residents in the participating provinces who can provide evidence of their unemployed status or their "non-conventional" employment status and who wish to undertake a specific learning programme, assessed and approved by the Employment Office.

The pre-paid credit card is valid for two years and is initially charged with EUR 500 with up to four further payments of EUR 500 on the submission of eligible expenses.

This experimental project has been introduced in the Provinces of Arezzo, Grosseto, Livorno and Pistoia, and will soon be extended to all provinces in the Region. Up to the end of 2007, 2418 ILA cards were issued mainly to the unemployed, 78% of the total recipients were women.

One recipient of the ILA had used the funds to start a business in balloon art called "Palloncinando" and based in Montecatini. The woman in her mid 30s wanted to start a business and had initially considered a franchise but after a period of test trading and market research opted to start a small business from scratch. There were no specific courses in balloon art as it is a very specialist area but she did undertake a range of general business and self employment training including sales, business techniques, administration and retail management. The ILA was also used to commission bespoke training from a balloon artist as a one to one process. The shop opened in September 2008 – and had been trading for eight months by the time of the OECD visit in June 2009.

Another recipient also demonstrated the links between specialist training and self employment. A veterinary student from Pisa had graduated four years ago and had now opened a surgery with the help of training and self employment support delivered through the ILA programme. Prior to the ILA she had found it difficult to get a job in this area as it was very specialist (whereas the degree was very broad) and she had little practical experience. She needed the ILA to do further specialist vocational and educational training, including laboratory analysis and toxicology and other pharmaceutical and treatment/diagnosis courses.

Linking learning account funds to graduate (and other) forms of entrepreneurship seems a useful direction to consider in Podlaskie. From the evidence seen during the OECD study visit, such an offer is likely to be popular especially amongst some of the young graduates in or returning to the regional workforce. It would also allow more "constant education" to be shaped towards entrepreneurship in general rather than to specific sectors or occupations.

5. UK: Tesco regenerating poor communities (and linking employment/investment to older workers and unemployed)

Tesco is the UK's largest retailer and a major contributor to the UK economy. Tesco is also now well established in Poland and has stores in Bialystok. They employ over 200,000 people in the UK and create around 10,000 new jobs in the UK every year. When Tesco announced that they were to open a flagship "Extra" store in Seacroft district of Leeds (UK) with the creation of approximately 350 jobs, they knew that the majority of the store's staff were likely to come from within a mile of the store. They realised that in a tightening labour market (Leeds is a rapidly growing retail centre with new developments and major store openings throughout the city), they were unlikely to attract and retain workers from other parts of the city. Furthermore, the local authority's planning processes also required a focus on local employment and enterprise in order to get permission to build the store in the favoured location.

The Seacroft Estate, in East Leeds houses one of the largest social housing projects in Europe. Built to service the manufacturing and industrial employers located in the area (predominantly defence related manufacturing – the former Vickers and Royal Ordnance factory sites were the dominant employers for most of 20th century) and, despite sell-offs and stock transfer, 53% of the population still live in council-owned accommodation.

The resident population of Seacroft in mid-1998 was 18,200 people. But there were only 3900 jobs in the area. In August 1998 there were 2290 Income Support claimants in Seacroft: 17% of its adult population, compared to 9% for Leeds as a whole, and an average of 8% for the UK overall. Out of 8414 English wards, Seacroft was ranked the 388th most deprived (DETR 2000). Seacroft is four or five miles away from the bustling regenerated heart of Leeds and there is very little travel to work in the city centre from Seacroft residents. But as in Porter's definition of inner city competitiveness, the Seacroft estate lies close to major road routes leaving and entering the Leeds city centre. It therefore represented a prime location for a "big box" retailer where large proportions of their customer base would rely on private car transport.

The resulting partnership with a range of statutory and community groups involved the creation of a year- long training programme for unemployed local residents with guaranteed interviews and jobs at the end. The Seacroft Partnership in Leeds has been a highly successful venture. It has involved a wide range of major partners including: Leeds City Council, the East Leeds Family Learning Centre, the Employment Service, USDAW (the UK's major retail trade union) and a group of local employers led by Tesco. The development also included retail space for other businesses and not just the Tesco store. When the store opened in November 2000, over 240 previously unemployed local people, many of whom had been out of work for more than two years, took nearly two thirds of the jobs available.

The East Leeds Family Learning Centre was a crucial partner and the main "social economy" or "third sector" partner in the process. The Employment Service knew who was on benefits and who in the local area was looking for work and Tesco knew the numbers and types of people that they wanted to employ. But it was the East Leeds Family Learning Centre that transformed the detached, often long term benefit recipients into employees that could carry out the tasks in a Tesco job description. They did it with long term education and training programmes of around a year's length, improving basic skills in reading

and writing as well as technical skills in retail. But they also worked with the whole family or household – advised on childcare, wage versus benefit calculations and so on. They "glued" the process together.

Several of Tesco's most recent stores are also located in other deprived communities in the UK. It is not just the locations that make these stores different: each one depends on employing staff who have been out of work for several years: lone parents, older men made redundant years before, young people who have no qualifications and who have never worked in their lives.

Dragonville is a former mining and industrial area situated on the edge of Durham near the A1 motorway. Like Seacroft, it is an area with a high proportion of social housing. The resident population of the Dragonville area in mid-1998 was 2200 people. But there were only 600 jobs in the area. 16% of the adult population were on Income Support, compared to 7% in Durham as a whole. The area was ranked 332nd most deprived in the country.

The Tesco Extra opened in November 2001 with 340 new jobs – 296 of which went to locally unemployed residents. 120 of the unemployed recruits were previously classed as "economically inactive" and excluded as registered job seekers. These are people who were categorised as not looking for work, older, low-skilled people who had been claiming Incapacity Benefit and disability allowances, often described as the "very hardest to help".

In both Seacroft and Dragonville these jobs have proved to be sustainable. Not only do large proportions (an average of 85% in both stores) of people succeed in taking up our jobs after the pre-employment training, they are still in the jobs over six months later. In Seacroft over 90% of recruits remained in store and in Dragonville over 81%.

Tesco has demonstrated that partnerships with state employment agencies and learning providers can bring outstanding results even in the most deprived areas and amongst groups with many barriers to labour market participation. In this instance, the "hard to help" groups are similar to those in the Podlaskie Voivodship – older workers with low levels of skills and often in semi retirement. Linking training to specific jobs and visible, high profile employers has helped to make even the most basic training activity real and relevant to the participants. The outcome of a specific job with a known employer makes the training much more attractive to people who have proved very difficult to motivate in the past. Strengthening private sector involvement and employer leadership is a very important dimension to "constant education" focused on the labour market.

PODLASKIE SWOT (STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS) ANALYSIS

Strengths

- Strong and sustained focus on improving human capital
- Rapid expansion of education and training participation over last decade after major investment at all levels of provision
- Expansion of training and employment infrastructure for young people and adults (diverse mixture of public and private bodies and types of provision, teacher training, etc.)
- Strong technical and general learning culture
- Internships and adult apprenticeships are good employer led opportunities
- Powiat network and expertise with good links to the education and training system – there is a high degree of success in securing employment outcomes[23]
- Innovation through the voucher system – user led reforms driving and co-creating new types of provision
- Enterprise/self employment schemes are generous and well targeted

Weaknesses

- Need better data and understanding of how skills and education is deployed and utilised amongst local firms
- Need to track impact of training investment better – that is, through employment and wage returns to individual (and productivity returns to firms/public services)
- Poor infrastructure in region[24]
- Low skills equilibrium visible in some sectors and occupations in region
- Skills investment may be fuelling outward migration (within Poland and beyond) – over education could be fuelling a regional "brain drain" at a time when human capital should be better used to drive growth in the regional and national economy
- Need stronger links to other drivers of productivity[25] (see UK economic framework in summary and recommendations)

- Complicated system – many "owners", with the possibilities of duplication, deadweight and confusion amongst learners and employers

- Stubbornly high unemployment and inactivity amongst certain groups (older unskilled, some rural areas – incentivised by early retirement schemes/occupations, such as for farmers) together with poor intra-region labour mobility

- Pension[26] and taxation issues in Poland may disincentivise many workers from taking up training and/or employment opportunities (for example, early retirement incentives)

Opportunities

- Greater focus on demand side interventions – what can employers do to drive training and employment systems?

- How can supply side investment and reforms be better linked to industrial/economic policies for region? Could link more effectively to key growth sectors in Podlaskie/Polish economy

- Chance to develop greater user driven activity through more demand led funding streams, such as through use of vouchers and/or learning account models

- Need to utilise EU infrastructure investment especially with regard to transport links

- Could make more of incentives to attract back emigrants (with capital funds and experience/ networks)

- Eastern trade opportunities – Russia, Belarus, Ukraine, Lithuania, Latvia, oil producing countries

Threats

- Over the long term – the uncertain impact of continuing outward migration[27] especially of more highly skilled and/or younger workers

- Possibility for training investment to be out of step with economic progress, creating an over-supply of skills with poor wage returns and firm performance

- Weaknesses in the Polish and regional economy (inflation/currency, high unemployment – lack of investment in region)

SUMMARY AND RECOMMENDATIONS

There is no doubt that there has been massive and sustained investment in lifelong learning and education generally in Podlaskie Voivodship – in schools, colleges and in higher education (and also in training for unemployed) – with massive increases in infrastructure alongside with an impressive mix of state sponsored and privately funded institutions at all levels.

The inclusion of the employment system providing training and reintegration of the unemployed is an impressive addition to this "human capital" infrastructure. The regional Labour offices and the Powiat offices and programmes all form vital parts of the overall system and the policy design. This is essential and often overlooked by education departments and institutions but in the field of "constant education" often provides the best links with employers and jobs – links that individual learners demand.

There is a wide range of good practice in Podlaskie and through the labour offices, an important way of anchoring qualifications, institutions and education policy into labour market and economic strategy. The offers of employer subsidy, internships, adult apprenticeships and business start up support are all interesting and important examples of this approach.

This is especially valuable in the region because there is a danger that rapid increases in human capital are out of step with economic needs (business and jobs that want to hire people with new skills and pay them more for being more productive). This is a simple "supply versus demand" issue and one that could mean newly qualified people will look elsewhere for work – either in Poland or abroad. Generally it will be desirable to capture as much of the economic consequences and benefits of this investment in education and training within the region itself.

This means that there is a real need to strengthen the ties between employment and training policies and economic policies aimed at supporting enterprise, business development and sectoral support. Essentially, there needs to be stronger policies focused on the deployment of new skills and human capital (supporting job design, work organisation, innovation, etc.) generally as vital economic development issues.

Some of this will be linked to better evaluation and data collection. Authorities in Podlaskie will need to evaluate more specific outcomes from education and training investment such as the calculation and monitoring of wage returns and firm level performance (especially for "constant education"). This can be done easily in economic terms – tracking wage increases and firm profits and also in social terms by establishing indicators for increasing social capital, community capacity and so on.

Many of these issues have an important connection to migration. As discussed in this report, the long term effects of migration are massive but hard to pin down and really understand (both within Poland and beyond). There are advantages and disadvantages to mass migration (increases investment and networks in region but good skills and economic development potential may be lost) but opportunities will only be maximised if there is a better understanding of what is actually happening and clear strategies to retain and deploy human capital in the region.

Areas for recommendations/further thinking:

1. Demand side thinking
2. Human capital and economic development
3. Supporting entrepreneurship
4. Understanding impacts of migration
5. Increased efforts to mobilise older (and unskilled) people into labour market
6. Relationship between education and lifelong learning investment and social outcomes
7. Greater co-ordination across ministries and between state and regions/localities
8. Watch for deadweight/"creaming" effects in labour market policy

1. Demand side thinking

How can the demand for skills and the utilisation of growing skills base in the region be better understood and monitored? Is there a way of getting employers and trade unions more involved in the design and delivery of programmes so that the state and private investment in education is likely to be maximised? Can the investments in employment and education measures (active labour market policy, infrastructure etc) be better linked to economic/industrial policy in the region (or to gain most advantage from investments in infrastructure, construction, etc.)?

The links between social and industrial policy are important at this time for reasons of deadweight (see below) and the allocation of increasingly scarce resources but also so that individuals and firms within the region are able to see opportunities and returns in the future. There needs to be more widespread and active agreement on the need for economic diversification and new more innovative sectors bringing better jobs – but what will these sectors and jobs be? It would be helpful for the authorities to spell out those strengths that they see in the future (see the "New Industries, New Jobs" example from the UK above). A conscious process of identifying and supporting key sectors, clusters and firms will provide benefits to the economy and the labour force over the longer term. Resource constraints also suggest that some degree of prioritisation may be beneficial.

There is strong evidence of a "low skills equilibrium" in many parts of Podlaskie's economy. If the region is to react properly to global changes (both challenges and opportunities) and also to effectively realise its overall goals, it must do all it can to break out of these limited working practices and aim to increase both the demand for and utilisation of skills.

Improving skills utilisation (working towards a knowledge based not a low skilled economy) will accelerate the economic development of the region but also help to minimise outward migration.

This also sends strong signals to new entrepreneurs, investors and research and education providers in the region as well as to individuals considering training or retraining options.

2. Human capital and economic development

Can links between improving human capital and economic development be made more explicit (especially between training and self-employment/start up businesses)? Can conscious links be made between higher level (and research skills – for example, the medical university) education facilities and growth companies/services?

There should generally be a stronger and more explicit set of linkages between the policy interventions and Podlaskie Voivodship's future economic/industrial strategy. There should be a greater focus on R&D and links to knowledge intensive sectors and the skills and firms that are likely to thrive in the future. This may be one way to prioritise scarce resources now and in the future but also an even stronger way of sending signals to individuals and firms about change and the importance of adopting innovation and new working processes.

The region should play to its sectoral strengths and do more to encourage and support knowledge transfer between education and research and the private sector. It should consider adopting a more activist approach to nurturing its future industrial base by improving access to skills and training support and by using procurement and regional budgets to foster growing firms in the region.

Generally, the authorities in Podlaskie need to make sure that they are also promoting other drivers of productivity and growth in the regional economy besides human capital. In the UK the Treasury (Finance Ministry) has developed a "five drivers" framework[28] where it has identified the interconnected and complementary sources of economic growth. They are skills, enterprise, investment, competition and innovation, and policies have endeavoured to combine all five into meaningful national and regional development strategies. The five drivers are more than the sum of the parts with the aggregate effect much more likely to be effective than the returns to any individual area in isolation.

3. Supporting entrepreneurship

Can this be linked effectively to anecdotal information on returning migrants with capital lump sums (as well as to foreign investment)? The diversification in the economy, as well as the need for new businesses and a new business culture, are seen as important through regions in the developing world and the OECD. In the process, the region should do as much as it can to support entrepreneurship generally, but new forms of entrepreneurship and self employment (such as incentivising returning migrants and/or graduates) in particular.

The connections between education and training policies and those that support entrepreneurship should be strengthened. New enterprises – especially technology and knowledge transfer businesses – should be encouraged in the region. Diversifying the economy will be important, but new businesses and people taking up self employment will provide more options for economic activity, especially for older workers.

It is an important distinction between "necessity entrepreneurship"; people who think that they have little choice but to be self-employed, and "opportunity entrepreneurship"; where people see a commercial opportunity and set up a business to exploit it. Necessity entrepreneurship has also been described as the "reluctant self-employed", an interesting category given the large overall rise in this category in the last few years. While this distinction between types of entrepreneurship also applies in other countries, there has to be a caveat applied in riskier labour markets (that is, low regulation and low social protection countries, such as the US and the UK) because many such "entrepreneurs" feel that they have little choice but to be self employed.

4. Understanding the impacts of migration

How can skills and human capital be retained in region so that it provides best boost to firms and public services in Bialystok and Podlaskie? Can this be linked effectively to anecdotal information on returning migrants with capital lump sums (as well as to foreign investment)? This might apply to those "graduating" from various levels and types of study in the region itself but also as incentives to emigrants to return to the region.

A better understanding of the longer term consequences of migration will be important – especially if education investment is being wasted on those who rapidly leave the region.

5. Increased efforts to mobilise older (and unskilled) people into labour market are required

It is acknowledged that Podlaskie Voivodship should adopt more active measures focused on older inhabitants to get them into the labour market – training, self-employment, incentives for firms, etc. (possibly twinned with less generous retirement benefits).

The need for a greater and sustained focus on older workers in education and employment policy is self evident. It is worth reminding all stakeholders that this is not just desirable but essential for demographic and economic reasons. Participation, though improving, remains a long way behind the EU average and the stock of human capital is generally falling and not rising because of the weaknesses amongst older residents of the region.

A dramatic intervention may be required along the lines of the Swedish "Knowledge Lift" case study where a significant and sustained effort was made to permanently expand lifelong learning and to facilitate higher skills levels in the workforce as a whole. There may also be a need to adopt both "push" and "pull" measures and to alter some of the existing incentives to retire or withdraw from the labour market at early ages.

But there are also smaller scale more pragmatic opportunities too. The case studies showing how Tesco has recruited workers from the most disadvantaged groups in deprived areas in the north of England are useful examples. Any employer involvement with a clear progression route from training into work will be more appealing to those people who rarely engage in formal training or jobsearch activity.

6. Relationship between education and lifelong learning investment and social outcomes

There are of course wider benefits to "constant education" than just economic activity. In a region such as Podlaskie where the population is dispersed and often isolated there are also threats to communities in terms of population loss, ageing and losses of communal identity and social networks. Lifelong learning can also make an important contribution to capacity building in rural communities, building social capital, improving resilience, improved public services, citizenship, better public health and so on.

As suggested in several sessions during the OECD visit, the purpose of lifelong learning policy in Podlaskie Voivodship is indeed broader and deeper than just having an economic focus. Active ageing policies will reduce dependency on public services and generally increase health and wellbeing.

However, as in the first recommendation above, a robust set of objectives and an effective evaluation framework should also be developed. What are the indicators that Podlaskie want to see improved through broader lifelong learning participation? Lack of service dependency in older age groups? Lower crime and other social problems? Improved health and wellbeing? Even social goals should be explicit.

7. Greater co-ordination across ministries and between state and regions/localities

There is a danger that duplication and complexity in the training system may be a problem – especially over time. This provides a practical challenge around creating a simple and accessible system but also one where resources will need to be better used in the future. As explained above, it is clear that there will be continued pressure on regional and national resources over coming years. Making the best use of what the region has will therefore be crucial as even existing resource levels may not be sustained. Addressing duplication and overlaps will be an important part of the process but so too will be more effective targeting of existing programmes and policies.

During the study visit, it was clear that several national and regional ministries have responsibility for different parts of the education and training system. With the growth of private and third sector provision in the "constant education" infrastructure there is also an additional area where duplication and overlaps are likely to exist.

Many institutions and services offer information and guidance services as well as similar programmes of study and the rapid development of new institutions and courses will have inevitably led to some overlaps and unnecessary competition. This is potentially wasteful but also confusing for users – especially businesses and individuals who typically find it hard to navigate their way around complex training systems.

8. Watch for deadweight/ "creaming" effects in labour market policy

There is a possibility that policy measures might focus on those that are likely to leave or would have gained employment without state help. It is clear from regional data and evidence during the OECD visit that the most qualified and motivated are those most likely to participate in "constant education". It is also clear that they are taking courses that are very closely related to labour market needs.

On this basis, the authorities in Podlaskie should be particularly watchful of possible "deadweight". or ineffective spending in its policy interventions. What would happen if these individuals and firms were not given support (would they manage without support to access training, start businesses and to survive without Government help)? Are there more deserving individuals and firms (that may not be presenting themselves for assistance)? Could the expenditure be better targeted (for example on firms more closely linked to industrial strategy for future or for individuals gaining skills in same sectors – see above)?

The authorities in Bialystok should evaluate the cost effectiveness of all interventions but with a particular focus on "deadweight" and "substitution" effects so that all money is well spent.

The global economic crisis does appear to have had a more limited effect in Podlaskie than in other regions in the EU, but this is mainly because its labour markets and economy are more localised and because unemployment and sectors with low wages and low skills were already issues. Although reforms and progress have been made it is clear that the region should have a much more developed view of how its economy will grow and develop in the future. In one sense, the authorities are convinced that this future will rest on dramatically improved human capital and a thriving knowledge based economy. There is no doubt that massive progress has been achieved with regard to the education levels of both young people and adults and with the infrastructure that supports lifelong learning and higher education in Podlaskie. This also applies to the impressive infrastructure and policy programmes delivered through the employment system. This is to be applauded as it provides a vital connection to the "demand side" and to employers and occupations in the region that may be lacking in some education programmes.

But a focus on human capital and knowledge is not enough on its own. This investment should be matched with economic strategies that develop innovation, knowledge transfer, technology, enterprise and general investment in parallel. Whilst there are investments and policies in these areas (such as for example the impressive enterprise assistance programmes) they are nothing quite as advanced as the policies and investment in human capital. Nor are they as interconnected with each other to the best economic advantage of the region.

As a result the region runs the risk of developing the workforce at too fast a rate for the economy and labour market to absorb. Already there is a problem of over supplying education with many individuals and firms not able to deploy their skills effectively or to receive higher wages or generate better profits as a result. This is the result of both an over-supply and low demand as a result of a "low skills equilibrium".

The problem of over supply is likely to exacerbate the one crisis that Podlaskie Voivodship has not been immune from in recent years – that of huge levels of migration. This phenomenon has uncertain effects but in the longer term presents a significant threat to the region's future even if only considered in demographic terms. However, if the flow of skilled young people away from the region continues at similar rates in the future then the "brain drain" will jeopardise the chances of developing a strong knowledge based economy in the future.

As explained in the report, there are opportunities from migration too, but these will only be realised if the situation is consciously monitored and policies are introduced to incentivise the return and/or retention of well educated young people in the region. Enterprise and economic policy should focus more strongly on such goals and attempt to build the sectors and companies that will be able to provide the jobs and opportunities to retain knowledge and talent in Podlaskie. In turn the growth of the economy and the circulation of knowledge (and higher wages) will strengthen the region's economy and society in the future.

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ANNEX 1: STUDY VISIT PROGRAMME

Project 'International Learning Models'
Hosting institution:
Voivodship Labour Office in Białystok
22 Pogodna Street, 15-354 Białystok, Poland
Poland, Podlaskie Voivodship, Białystok
02-03 July 2009

THURSDAY 2 JULY 2009

09.00- 10.30	Voivodship Labour Office in Białystok • Introductory meeting - presentation of Lifelong education system in Podlaskie region by **Jarosław Sadowski**, Vice-Director of Voivodship Labour Office in Białystok
11.00- 13.00	Technical visit: Vocational Training Centre in Bialystok
13.15- 14.30	*Lunch*
14.45- 16.00	Technical visit: Centre of Lifelong Education in Białystok
16.15- 17.00	Technical visit: • University of Finance and Management in Bialystok – Cetre of Postgraduating Studies
18.00- 19.00	*Town centre sightseeing tour, dinner*

FRIDAY 03 JULY 2009

09.00-9.15	Voivodship Labour Office in Białystok
9.15 - 13.30	Journey to Sokółka District • Technical visit: Poviat Labour Office in Sokółka • Technical visit: Group of Agricultural Schools in Janów • *Lunch*
14.30- 16.00	Voivodship Labour Office in Białystok • "Examples of ESF expending within the framework of lifelong training and anti-crisis measures", Hubert Ostapowicz, Head of Co-ordination and Implementation of Operational Programme "Human Resources Development" Unit, Voivodship Labour Office in Białystok
16.00	Transfer to railway station (or hotel)

ANNEX 2: LIST OF PARTICIPANTS – OECD STUDY VISIT BIALYSTOK

Vocational Training Centre in Bialystok

- Zdzisław Wilczko – Prezes ZDZ
- Barbara Wilczyńska - Dyrektor ds. Kształcenia i Projektów

Centre of Lifelong Education in Bialystok

- Maria Jolanta Korzeniecka - Vice-Director
- Rafał Michałowski – Vice-Dyrektor
- Mirosława Stankiewicz – Kierownik szkolenia kirsowego
- Jerzy Mantur – Pracownia Badań. Analiz i Strategii Rozwoju Edukacji

University of Finance and Management in Bialystok – Centre of Post graduating Studies

- doc. dr Edward Hościłowicz - Rektor Uczelni
- doc. dr Anatoliusz Kopczuk - Prorektor ds. Dydaktyki

Poviat Labour Office in Sokółka

- Mirosław Biernacki – Director of Poviat Labour Office
- Teresa Kieda – Vice-Director

Group of Agricultural Schools in Janów

- Czesław Jan Kiejko - Director ZSR CKU
- Bogusław Zarzecki - Vice-Director
- Andrzej Kopeć - kierownik kształcenia praktycznego

ENDNOTES

1 Donald Tusk in Warsaw news conference, reported in New York Times 3rd September 2009

2 Initial results. The statement about the social-economic situation In Podlaskie Voivodship, 11/2008, Statistic Office in Białystok November 2008, p. 2, Background Report

3 See, for example, evidence from the Leitch Review (UK) (2004)

4 "There are two main routes to pre-retirement. One is available to unemployed men and women aged 61 and 56 years-old and above, respectively, who have at least 25 years (men) and 20 years (women) of experience and who were laid off due to the employer closing off or going bankrupt. It is also available to unemployed men and women (60 and 55 years-old or more) as long as they have worked for at least 35 and 30 years, respectively, and provided that they were laid off for reasons on the employer side (though not necessarily closure or bankruptcy)." (OECD, 2008)

5 The special farmers' pension scheme (KRUS) is a social security system run in parallel to the main regime in that it offers similar types of benefits, though for people who either: *i*) own a farm of at least one hectare; or *ii*) are involved in farming activities that do not require owning land of that size; or *iii*) are a member of a farmer's household (OECD, 2004 and 2006).

6 "Realization of the idea of lifelong learning", the statement of the European Commission, quoted in Background Report from Podlaskie (2009)

7 The internship means gaining practical skills for a specific job (by an unemployed person) in a workplace without an employment agreement with the employer. Any unemployed person up to the age of 25, who within the period of 12 months after graduation does not exceed the age of 27, can be sent on an internship, lasting a maximum of 12 months. Such internships are done on the basis of an employment agreement signed by the Starost (on behalf of a Powiat labour office) and the employer according to a programme specified in the agreement. The unemployed person is entitled to a grant (of PLN 791 per month) over the internship and the employer formulates an opinion about the person, the realized tasks and the practical skills gained. Internships are organized by Powiat labour offices.

8 PLN 40,000 is available to start an enterprise and can be obtained by a person (unemployed or an employee) who participates in a project financed by the European Social Fund. The unemployed person, registered with the Powiat labour office can be given up to six times average salary to start an enterprise. The average salary in Podlaskie Voivodship in April 2009 wan PLN 3294.76.

9 These estimates include those Polish citizens staying outside Poland to study or as part of a family group.

10 Information about the number and directions of emigration from Poland 2004-2007. Main Statistical Office, July 2008, quoted in Podlaskie background report 2009)
www.stat.gov.pl/cps/rde/xbcr/gus/PUBL_Informacja_o_rozmiarach_i_kierunk_emigra_z_Polski_w_latach_2004_2007.pdf

11 Based on 58,000 Poles in the 2001 Census and 458,000 in 2007 as estimated by Pollard *et al.* (2008).

12 "Tide turns as Poles end great migration" (www.timesonline.co.uk/tol/news/uk/article3378877.ece)

[13] www.independent.co.uk/news/uk/home-news/tide-of-migration-turns-as-polish-workers-return-787914.html (27 February 2008)

[14] In this context, low skilled means having an educational attainment below the level of a 3-year 'gymnasium' degree, while medium skilled means having attained this level but not any levels beyond that. The 3-year gymnasium degree roughly corresponds to the upper secondary education level or senior high school.

[15] Scotland and Wales have devolved powers in this area, and so this example specifically applies only to England.

[16] The Director General of the CBI Richard Lambert argued that what the UK need from the Government was "a vision of the kind of economy we want to have in ten years time and what it's going to take to get from here to there" Richard Lambert's speech at CBI North West annual dinner www.cbi.org.uk/pdf/20090401-rl-speech-nw-annual-dinner.pdf

[17] Technology Strategy Board is a public-private fund providing capital funds to support investment and collaboration in new technologies and the sectors that exploit them for commercial gain.

[18] See website for more details: www.22barcelona.com/

[19] The area around Raleigh and Durham and encompassing major public and private sector research institutions in bioscience, such as Duke University and leading pharmaceutical industries, including Glaxo Smithkline. See website for more details: www.rtp.org/main/

[20] See website for more details: www.kista.com

[21] Because of the specialist facilities in physics, in particular, and the need to locate scientists near to such facilities, this is part of an increasing phenomenon of the "suitcase physicist".

[22] The voucher scheme was described as a benefit for both users and also for supply side reform – addressing perceived rigidities in formal vocational and education systems – with too many "one size fits all" approaches in jobcentres and training that wasn't directly relevant to jobs and to businesses.

[23] So far, over half of the unemployed who have benefited from training programmes have successfully returned to paid employment, a very good outcome by international standards (OECD, 2008).

[24] "The gaps in housing and transport infrastructures need to be addressed, not least to facilitate labour mobility, reduce regional disparities and ease the restraints on aggregate supply. Closing the gaps in transport infrastructure is a key to raising potential. A major challenge is to implement the ambitious spending plans sufficiently rapidly so that the substantial EU funds can be fully and efficiently absorbed without massive cost overruns. Access to the labour market for foreign construction workers should be further facilitated." (OECD, 2008)

[25] Growth would benefit from efforts to strengthen competition so as to foster entrepreneurship and innovation.

[26] In 2005, the effective retirement age remained, at around 58 for men and 56 for women, well below the corresponding statutory retirement ages (respectively 65 and 60). OECD 2008

[27] Depending on the source of data, the annual flow of Poles going abroad for a period longer than that the typical length of a seasonal job is estimated to have increased by between 40 and 80% shortly after EU accession. (OECD, 2008)

28 See: www.hm-treasury.gov.uk/productivity. This framework also explains why other recommendations in this report focus on enterprise, investment and innovation.