

**THE HUMAN CAPITAL AND EU INTEGRATION:
LESSONS LEARNED FROM POLAND, PORTUGAL AND SPAIN**

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1. INTRODUCTION

1.1 Objective of the Report

In the recent years, there is a proliferation of studies that support the view that human capital is a crucial factor of production and growth in contemporary economies.¹ Continuous enhancement of human capital helps to provide the current and future labour force with necessary skills and facilitates the adoption of new technologies, underpinning the conditions for a sustained economic growth and structural change. Therefore, it is now widely accepted that increases in human capital, achieved by correct educational and training policies accompanied by favourable demographic trends, stand out as one of the most indispensable tools of socio-economic development.

The start of Turkish-EU accession negotiations puts the issue of human capital at the forefront for a number of reasons: On the one side, at the domestic level, the EU accession brings along unprecedented opportunities for upgrading Turkish human capital and initiates a debate on the appropriate measures for investing in human resources. On the other side, at a more European level, the issue lies at the heart of a highly controversial discussion on Turkey's potential 'value added vs. cost' to the Union.

In this current context, a comparative analysis on the role of previous European accessions in supporting the development of human capital proves timely. Such an analysis serves a number of purposes: i) for Turkish authorities, it contributes to a better evaluation of the options available for investing in human capital in the light of past experiences of Europeanization; ii) for European decision-makers, it illustrates the potential of the European accession process itself in helping to narrow the human capital gap and consequently facilitating the convergence of the acceding country with the EU. Thereby it adds to a better-informed assessment of opportunities related to enlargement.

Given this need, this report aims to analyse the transformation of human capital in Poland, Portugal and Spain against the background of political, economic, and demographic shifts that have accompanied the European integration process. The time frame essentially covers the period of EU accession of Poland, Portugal and Spain, since a comparative look to pre and post accession circumstances provides an appropriate juncture from which to assess the progress of the countries in question. To the fulfilment of this principal objective, the report is divided into three parts:

- I. The first part examines the economic and demographic indicators of Portugal, Spain and Poland from a historical perspective, particularly concentrating on the period between pre and post EU accession with an

¹ There has been a scholarly interest in the interrelations between investment in human capital and economic development since the late 1960s with some early studies such as that of Nelson and Phelps (1966) and Mincer (1974). However, the 1990s witnessed a proliferation of such studies with some groundbreaking research realized by Barro (1991), Dowrick (1997), Wolff (1997), Lucas (1998) and O'Connor and Lunati (1999). For a detailed and updated description of the available economic research on the subject, please see the first chapter of the report on *Eğitim ve Sürdürülebilir Büyüme: Türkiye Deneyimi, Riskler, Fırsatlar, TÜSİAD*, 2006.

overarching aim to delineate interrelations between political, economic, and social changes and the EU integration.

- II. The second part of the report presents an analysis of key educational indicators and policies of Portugal, Spain and Poland during the period of EU integration and highlights the cases of success and failure in terms of enhancing human capital. An examination of the role of the EU accession process, both in terms of financial assistance and the harmonisation with the EU policies in supporting the educational development of the countries under study is also provided in this section.
- III. Based on the comparative findings of the earlier parts, the report concludes by an assessment of the impact of European integration on boosting and adapting human capital in the countries under study and building on the lessons learned from Poland, Portugal and Spain offers a set of policy recommendations for Turkish and European decision-makers in terms of the potential interplay between changes in human capital, socio-economic development and EU accession.

1.2 Selection of Countries for Comparative Analysis

The choice of Poland, Portugal and Spain for such a comparative analysis is motivated by a several factors:

As it is well known, Spain and Portugal joined the EU² in 1986 as part of the third wave of enlargement. Spain and Portugal first signed preferential trade agreements with the EU in June 1970 and July 1972 respectively. In March 1977, Portugal applied for EU membership, followed by Spain four months later. The accession negotiations with Portugal began in October 1978 and with Spain in February 1979. They were concluded in June 1985 and both countries became the members of the then-called European Community on 1 January 1986. Although the European integration of the two countries has been carried out during the same time period, their socio-economic development differed in many significant aspects from one another. Thus, a comparative exploration of the economic, demographic and educational indicators of these two Mediterranean countries, which share some historical similarities with Turkey with regards to the level of socio-economic development at the initiation of their European integration, provides some noteworthy insights for understanding whether or not the status of their human capital has played a part in the divergence of their paths. Seen from this perspective, the findings of the two cases also suggest some clues for a successful model of the interaction between demography, investment in education, and socio-economic development for Turkey in the course of its integration into the EU.

Poland, the third country of focus, presents a different, yet another useful comparative perspective for the study in question. Among the 10 countries, which joined the EU on May 2004 as part of the fifth enlargement wave, Poland stands out as a country that displays some forms of similarity to the case of Turkey. Following the collapse of the communist bloc, Poland first signed the association agreement with the EU in 1991, applied for membership in 1994, started accession negotiations in 1998 and successfully concluded them in 2002, becoming a member of the EU in May 2004. In common with Turkey, Poland is by far the most populous country

² As a matter of simplification, the term *EU* or *European Union* is utilized throughout the report irrespective of the historical alterations in the official name of the institution.

(around 39 million) of the 5th enlargement wave, and at the same in comparison to the other recent members; it possesses a large agricultural sector. Although Poland is a success story among the transition economies, it still has the highest unemployment rate in the EU and suffers from a large surplus of labour particularly in the agricultural sector. All these factors bring Poland close to Turkey and make a comparative analysis meaningful.

2. SOCIAL AND ECONOMIC CHANGE AND EU INTEGRATION

The following part offers an analysis of the political, economic and demographic transformation of Spain, Portugal and Poland during the period of their integration into the European Union.

2.1 The Spanish Case of Socio-economic Change

Spain's transition from a highly centralised authoritarian regime into a stable multiparty democracy is among the most noteworthy political developments of the twentieth century. After 39 years of dictatorship under Franco's rule (1936-1975), Spain turned into a liberal parliamentary democracy in the late 1970s and since then political stability has been maintained in the country. The majority of Spanish citizens welcomed the introduction of a participatory pluralistic democracy and gave extensive support to the 1978 Constitution, which established the principles of the new regime. Three principal factors contributed to the Spanish success in the consolidation of democratic rule: modernisation, decentralisation and EU integration.

For Spanish governments, which came to power following the dismantling of the Franco dictatorship, European integration has been a top priority. For Spanish authorities, like in other Southern European countries, modernisation and EU integration were deemed almost synonymous and both processes were carried out in parallel to one another. Although an initial application for membership to the EU was in fact made under the Franco regime in 1962 and an association agreement was signed under Luxembourg Accord, the EU-Spanish relationship never evolved into a clear membership perspective during this period due to unfavourable political circumstances engendered by the continued dictatorship. (Farrell, 2000: 1) Just two years after the end of the Franco era, in 1977, Spain applied for EU membership. The accession negotiations started in February 1979 and were concluded in June 1985. Spain became the member of the EU on 1 January 1986. It was under the 13-year PSOE (Spanish Socialist Workers Party) government of Felipe Gonzalez that the Spanish accession into the EU was completed and the Europeanization of Spain was achieved.

The EU membership has brought along a number of remarkable developments: On the political level, it helped the modernisation of the legal and institutional system. The Spanish commitment to Europe enhanced the legitimacy of the new democratic regime and helped to ease the long-standing regional tensions in the country. The devolution of the far-reaching centralism of the Franco era, a period in which any expression of cultural and linguistic diversity was disallowed, has been one of the defining tenets of this process. The 1978 Constitution created autonomous regional governments in an effort to relieve the ongoing conflict between the centre and periphery. By 1985, 17 autonomous regions were set up in Spain, all of them exercising a degree of self-government (though the levels of autonomy vary among regions) by a local elected legislature.

On the economic level, the European integration of Spain has been a central tool in ensuring the establishment and the maintenance of a successful market economy and has contributed a great deal to the sustained growth and increased prosperity. The EU accession on the one hand, allowed improved access of national industry to the larger European market, on the other hand, it exposed the Spanish economy to international markets, offering both carrots and sticks for further economic reform.

Gradual, prudent but complete economic integration

The EU membership prospect sustained the basis of a national consensus on deeper economic liberalisation and intense structural adjustment in the late 1970s and early 1980s, even though Spain was experiencing a critical economic recession in those years. As Isbell describes, during the 1980s and 1990s, "Spain has implemented the entire corpus of the so-called Washington Consensus: stabilisation, liberalisation, structural reform, institutional transformation and modernisation." (Isbell, 2004: 4)

Structural reforms such as the termination of inefficient production in heavy industry and mining were initiated during the accession negotiations. Following the EU membership, some areas of reform involved i) gradual privatisation of state owned enterprises; ii) a phased trade liberalisation and incorporation into GATT framework and iii) an ongoing liberalisation of capital markets (Isbell, 2004: 8). The Spanish integration into the Single European Market increased competitive pressures on Spain and helped policy convergence with the EU throughout the period in question.

Following 1993, another programme of macroeconomic stabilisation was carried out to join European Economic and Monetary Union (EMU). The successful Spanish entry into the system of EMU and the adoption of single European currency at the end of 1990s, coupled with the completion of final phases of market reform, contributed to the high rates of economic growth and job creation achieved throughout the late 1990s and the 2000s.

Sustained Convergence and Structural Change

Viewed in retrospect, the impact of European economic integration has been striking in Spain: Today, Spain stands out as the 8th largest economy in the world, enjoying a level of dynamism well above the EU average. At the beginning of its European experience, the Spanish economic development was lagging far behind that of the EU members. This stark contrast was marked not only by large differences in per capita incomes, but also by a high level of economic instability, as well as significant regional disparities engendering social and political tensions. During the 1980s, high inflation and unemployment rates seemed as permanent structural deficiencies of the Spanish economy. (Farrell, 2000: 46)

During its integration into Europe, Spanish economy grew fastest between 1986-1990 (average of 4.5%) and then again between 1996-2001 (average of 4.1%) (Table 2). Today, Spain continues to be among the fastest growing economies in the EU. The Spanish per capita income was under 5,000 USD in 1985. By the time Spain was negotiating the Maastricht Treaty, its per capita income increased to 13,000 USD and today it reached over 20,000 USD. (Isbell 2004: 14) In 2006, Spanish per capita income (calculated in PPS) reached 100 per cent of the EU-25 average (Table 4).

What is also significant, this increase in income levels was achieved along with improvements in income distribution. The country's Gini coefficient has fallen from 0.4 to slightly less than 0.3 in the late 1990s. (Isbell, 2004: 5) Given the massive level of transformation, it is important to note that Spanish economic development worked indeed in favour of enhanced social cohesion. This success was partly made possible by the creation of a welfare state complying with the dominant European social model.

The period of European integration also witnessed considerable changes in the structure of Spanish economy. The contribution of agriculture to the GDP dropped to 3.9 per cent in 1995, from 6.7 per cent in 1975. In contrast, the share of the services sector to the Spanish national income grew by over 5 per cent between 1975 and 1995, reaching 58.2 per cent (Table 7).

Along with sustained economic growth and structural change, Spain also achieved long-term macroeconomic stability. External debt was put under control, price stability was maintained, and interest rates gradually converged with the EU average, all together enabling Spain to integrate into EMU and become a founding member of the Euro zone (Çinar, 2005).

In terms of productivity convergence, the highest productivity growth rates were in fact achieved before Spain has become a member of the EU (6.5 per cent between 1961-1973 and 3.2 per cent between 1974-1985) (Table 10). Despite high levels of economic growth, productivity growth followed a meagre performance in the aftermath of accession. However, this early jump in productivity levels enabled Spain to converge with the EU average both in labour productivity per person employed and per hour worked during the 1990s (Table 12 and 13). Nevertheless, the Spanish inability to sustain productivity growth poses serious challenges for the long-term.

Labour market transformation

At the beginning of its European journey, unemployment constituted one of the major problems of the Spanish economy. Gradually with Europeanization, Spain witnessed a steady growth (with the exception of 1991-1994) in employment (Table 20 and 21), where labour shortage in certain sectors had to be compensated by imported labour in the late 1990s (OECD, 2005b).

Boosted by favourable monetary and fiscal conditions, as well as structural labour market reforms, job creation assumed a striking pace especially in the late 1980s and again in the late 1990s and 2000s, accompanying the trend of strong economic growth. However, this growth in employment was not matched with an equal drop in unemployment rates partly due to a parallel upsurge in immigration. During its EU membership, Spain has gradually become one of the most attractive destinations of job seekers, particularly coming from Africa and former Spanish colonies. In fact, Spain had the highest rates of immigration among the EU members between 1992 and 2002. (Teese and Aasen, 2006: 7) Thus, Spain's unemployment rate is still around 9 per cent, roughly equivalent to the EU average. Yet, remembering the fact that Spain was suffering from over 18 per cent unemployment a decade ago, Spanish case can still be considered a success in terms of reduction of unemployment (Table 25).

The EU integration and the parallel socio-economic change also had an impact on the structure of employment, marking a shift away from traditional sectors such as

agriculture and manufacturing towards post-fordist services sector. (OECD, 2005b) In 1997, almost 62 per cent of employment was in the services sector, whereas in the early 1980s, the services sector was employing much less than half of the labour force. In contrast to a rise in employment in services, the percentage of the work force engaged in agriculture fell from 19.2 in the early 1980s to 8.3 in 1996 (Table 32).

Another significant factor underpinning the transformation of the labour force has been the increased participation of women. The employment rates of women more than doubled in the twenty years of Spanish Europeanization, from a mere 25 per cent in 1986 to over 51 per cent in 2005. Similarly, unemployment rate of women fell from 25.4 per cent in 1986 to 12.2 per cent in 2005 (Table 30).

Benevolent external financing environment

Anchorage into the EU institutions made Spain a preferred destination of foreign capital inflows. In 1984, Spain attracted FDI worth around 1.8 billion USD, whereas this figure reached an annual average of around 9 billion USD in the 1990s. The inflows made their peak in 2000s, where over 30 billion USD entered the country annually (Table 17). Besides their financial contribution, foreign investments also fostered the transfer of know-how to Spain and added to the pace of technological development.

It should also be kept in mind that the Spanish economic transformation was facilitated and supported by significant inflows of European funds during the 1980s and 1990s, as well as high levels of foreign direct investment. The Community structural funds, sectoral aid (through the Common Agricultural Policy and the Common Fisheries Policy) and cohesion funds, have been indispensable instruments of the convergence process.

One of the ways in which the EU accession has contributed to the modernisation of economy and human resources in Spain has been through the transfer of substantial amounts of community funds. In this perspective, two instruments, Structural and Cohesion Funds (Box 1), have become key for building infrastructure, investing in human resources, improving industrial competitiveness, reducing regional disparities and overall for achieving convergence with the EU.

Box 1: Socio-economic Development and EU Funds

Integration into the EU has been one of the major determinants of the socio-economic transformation of Spain, Portugal and Poland. European integration brought many political and economic benefits and the much sought-after modernisation of the political and economic system. While on the one side the EU accession led to the legal and institutional convergence between the EU and new member states, the EU funds played an important role in initiating and enhancing social and economic transformation of the countries under study.

Structural Funds of the EU

The Community Structural Funds were established to assist the development and structural adjustment of regions of Europe, whose development is lagging behind the EU average, in order to reduce disparities and to support economic and social

development across Europe. The EU structural funds accumulate to almost one thirds of the total EU budget and consist of four individual funds:

European Regional Development Fund (E.R.D.F.)

Its main objective is to promote economic and social cohesion within the European Union through the reduction of imbalances between regions or social groups.

European Social Fund (E.S.F.)

Its principle mission is to enhance European human capital by equipping the workforce with skills to face new challenges. ESF, the longest established Structural Fund, was set up by the Treaty of Rome (Article 123) to improve employment opportunities by combating unemployment and increasing the geographical and occupational mobility of workers.

European Agriculture Guidance and Guarantee Fund (E.A.G.G.F.)

This financial instrument is created to carry out structural reform of the agricultural sector and the development of rural areas.

Financial Instrument for Fisheries Guidance (F.I.F.G.)

This fund contributes to the structural reform of the fisheries sector.

The first Community Support Framework (CSF) involving the transfer Structural funds between 1989 and 1993 gave priority funding to the Regional Development Plan (PDR), which provided financial assistance to large infrastructure projects, development of industry and tourism sectors and improvement of water supplies and sanitation.

The second CSF ran between 1994 and 1999 and this time the structural funds were complemented by cohesion funds. The focus of the second CSF was extended to include job creation, promotion of SME growth and boosting of industrial competitiveness.

The overall budget for structural funds for the period between 2000-2006 is 195 billion Euro. According to Agenda 2000, budgetary resources allocated to each member state were not changed over the period 2000-06. Nevertheless, the overall resources were increased by 22 billion Euro earmarked for New Member States following 2004.

For more information: <http://europa.eu/scadplus/leg/en/lvb/l60014.htm>

Cohesion Funds of the EU

The Cohesion Fund was established in 1993 through a provision of the Treaty on European Union signed in Maastricht to help the least prosperous Member States (Spain, Portugal, Greece and Ireland) in their preparation for Economic and Monetary Union. Cohesion funds have a national focus, rather than a regional one, and provide funding for investment projects in environment and transport infrastructure.

Cohesion funds have their own set of principles governing eligibility of expenditure and they are separate from the Structural Funds. The first funding period of the Cohesion Fund ran from 1993-1999 and the current period runs from 2000-2006. The budget for the Cohesion fund in 2000-2006 is 18 billion Euro.

For more information: <http://europa.eu/scadplus/leg/en/lvb/l60018.htm>

Spain has in fact been one of the largest beneficiaries of EU financial transfers. Almost a quarter of EU's structural aid was transferred to Spain under the first Community Support Framework (CSF), amounting to approximately 12 billion ECU. (Farrell, 2000: 142) Since 1990s, Spain has become the largest net recipient of community funds. Spain's share of Structural Funds between 1994 and 1999 was 22.9 per cent, while Portugal and Greece received 10.1 per cent each. In terms of Cohesion Funds between 1994 and 1999, Spain's share rose up to 55 per cent, Portugal and Greece receiving a more modest 18 per cent each. (Corkill, 1999: 220) Spain also ranks as a top recipient for the period 2000-2006, receiving 23.5 per cent of all funding. However it should be noted that while Spain's cumulative share has been much higher in comparison to other beneficiaries of EU funds, on a per capita basis Spain lags behind others. (Farrell, 2000: 138)

It is estimated that in recent years, Spanish contribution to annual EU budget has been around 6 billion Euro, whereas its receipts reached nearly 14 billion Euro. The difference amounts to a net inflow of some 8 billion Euro a year, equivalent to around 1.3 per cent of annual Spanish GDP. (Isbell 2004: 17)

There are a number of studies that attempt to assess the impact of EU financial inflows to Southern European countries. Although it remains difficult to quantify the impact of EU aid, one study shows that the first CSF contributed around 1 percentage point towards the GDP growth rate in Portugal and 0.7 percentage point to the Spanish GDP growth. (Economou 1997: 72) Another study conducted by Financial Times in 1999 indicates that the EU funds have been estimated to have increased Spain's GDP by 4 per cent over the period of its membership to the EU. (Farrell, 2000: 119-120). Beyond this direct impact on economic growth, EU funds have had a noteworthy contribution to the modernisation of the national infrastructure, improvement of social and regional cohesion and enhancing of human capital, which will be discussed in more detail in Section 3.

Demographic Trends

An analysis of demographic indicators reveals that the Spanish integration into the EU has been accompanied by favourable demographic conditions. The rate of Spanish population aged between 25 and 64 (the working age) has been constantly rising since 1980, from 46.7 per cent to 56.4 per cent in 2005 (Table 41). As a result, age dependency ratio (population aged 0-14 and 65+ as a percentage of population aged 15-64) has also been falling in Spain since 1975, from 60 per cent to 47 per cent in 1995, illustrating the decrease in the numbers of dependent population (Table 42). In addition, during the period in question, total fertility rate constantly dropped from 2.8 in 1975 to 1.18 in 1995. Similarly, net reproduction rate fell from 1.31 in 1975 to 0.56 in 1995 (Table 45), while life expectancy steadily grew (Table 48).

Given these figures, it is evident that Spain has been experiencing the second phase of demographic transition during the period in question, which is characterised by the optimal levels of working age population in proportion to dependent population. During this phase, population growth also slows down and the number of young people in the education sector either starts to decline or remains stagnant (Gürlesel, 2004: 13).

However, it should also be noted that the drastic fall in both birth and death rates in the past twenty years signals to a rapid deterioration of the demographic situation in Spain, leaving the country face to face with an ageing population in the medium term. The steep fall in the proportion of total population between the ages of 0-14 and 15-24 and a parallel rise in the proportion of 65+ points to the fact that Spain is now entering into the third phase of demographic transition, where population growth halts or turns negative and population ageing takes place.

2.2 The Portuguese Case of Socio-economic Change

The revolution of 1974 ended more than forty years of dictatorship of Antonio Salazar (1932-1974) and marked the beginning of a startling pace of economic and political change in Portugal, the main framework of which was provided by the European integration. While Portugal has always been geographically part of Europe, it opted to be left in isolation from rest of Europe, holding back behind the protectionist and paternalist policies of the Salazar regime. As one writer on Portuguese affairs commented, "historically the Portuguese considered themselves to be in but not of Europe." (Corkill, 1999: 2)

With the reestablishment of democracy following the end of Salazar regime, Portugal also turned its focus towards Europe. Similar to its southern neighbour Spain, Portugal signed a preferential trade agreement with the European Community in July 1972 and applied for membership in July 1977, just four months after Spain. The accession negotiations with Portugal began in October 1978 and were concluded in less than 7 years in June 1985. Portugal became the member of the EU on 1 January 1986.

Following 1986, 'Europeanization' in fact became the strategic priority for successive Portuguese governments and all reforms related to economic restructuring and the democratic consolidation were intimately linked with the process of European integration. While a process of extensive decentralisation in Spain accompanied Europeanization, such a process did not take place in Portugal. In contrast to Spain, Portugal has never been a multiethnic or a multilingual society, where 99 per cent of the population speaks Portuguese and 95 per cent are Catholic. (OECD, 2000: 7) Again different from Spain, Portugal has experienced very low levels of economic migration, which left the homogenous composition of the society in tact. Thus, although there have been some political attempts to introduce decentralist measures, they were often met with public resistance. (OECD, 2000: 11) It is rather in recent years that Portuguese local administrative units are extending their powers, in compliance with European principle of subsidiarity, which states that central authority should only perform tasks, which cannot be performed effectively at a more immediate or local level.

Economic growth and convergence

In terms of Portuguese economic development, the European integration overall meant: i) the opening of the Portuguese market to the external world along with trade and capital markets liberalisation; ii) industrial reorganisation; iii) increased financing opportunities and higher investments; iv) a programme of extensive privatisation, all sustaining the basis of increases in national income.

During the pre-accession period and after joining Europe in 1986, the Portuguese economy gradually grew out of its isolation and this exposition to competitive global markets facilitated the growth of Portuguese economy. With the help of reforms that began in the mid-70s, Portugal achieved sustained growth particularly between 1986-1990 and 1996-2000. However, the pace of Portuguese convergence with the EU has been slower and could not match to that of Spain. (OECD, 2004)

In 1984, the GDP of Portugal was 22.9 billion USD, representing only 14 per cent of the Spanish GDP. In 1984, the Portuguese national income reached 168.3 billion USD, amounting to a seven-fold expansion in twenty years (Table 1). However, the GDP growth of Portugal almost came to a halt in the early 2000s (Table 2). Although the Portuguese per capita income rose steadily in the 1980s and 1990s, the income gap with the rest of the EU indeed started to increase after the year 2000. Per capita income in Portugal was around 55 per cent of the EU average in 1983; in ten years it steadily rose to 68 and finally reached 80 per cent in 2000. Nevertheless, with the start of the new millennium, the per capita income gap began to increase, dropping down to 71 per cent of the EU average in 2005 (Table 4). Thus, despite the solid growth, Portugal still had the lowest per capita among the EU-15 until the recent enlargement of May 2004. In sum, while Portugal has followed a positive trend of convergence with the EU in the 1980s and 1990s, the trend turned negative in recent years, postponing the catching up process.

Macroeconomic stability

Besides economic growth, European integration also helped to achieve macroeconomic stability in Portugal. Both the inflation and interest rates followed a steady downward trend: Long-term interest rates fell from an average of 13 per cent in late 1980s to around 5 per cent in the early 2000s (Table 38). In a similar fashion, the GDP deflator dropped down to an average of around 3.5 per cent in the 2000s in contrast to 22 per cent of early 1980s (Table 37). Given its sound macroeconomic policies and the subsequent fulfilment of convergence criteria to enter in the EMU, Portugal successfully adopted Euro at its launch in January 1999. However, one side effect of falling real interest rates in the run-up to single currency has been the easing of fiscal spending and monetary policies, which resulted in an expanding budget deficit and high household and corporate indebtedness. (OECD, 2004)

Productivity of Portuguese Economy

Low labour productivity constituted one of the major impediments of the Portuguese economy. Although Portuguese labour productivity grew around 4.6 per cent in the first several years of accession, this growth slowed down in the later 1990s and almost stagnated in the early 2000s (Table 10). In comparison to the USA (USA=100), Portugal's productivity level was 42.6 in 1975, 27 years later it rose up to almost 50 (Table 14). Thus, although European economic integration has given a boost to productivity growth, due to the initial levels of very low productivity, Portuguese economic performance can still not match the 'motor' economies of the EU.

Shifts in Labour Force

Historically, Portuguese employment rates have been higher than in Spain and continued to expand, though modestly, throughout the period of European integration. At the beginning of Portuguese *rapprochement* with Europe, the activity

rates were around 69 per cent and reached 73 per cent in the 2000s (Table 22). As for unemployment levels, a drop from an average of 7 per cent in the late 1970s and early 1980s to an average of around 5.6 per cent in 1990s was recorded (lowest in 1992 at around 4 per cent) (Table 23). Nonetheless, unemployment reached back to its pre-accession rates in the 2000s, stabilising around 6.9 per cent (Table 25). Yet, the Portuguese unemployment levels are still below the EU average.

Given Spain's better overall economic performance in comparison to Portugal, the difference in employment levels requires some explanation: Among the some underpinning reasons cited in studies on Portugal are the peculiarities of the Portuguese labour market such as low levels of unionisation, low levels of state compensation for unemployment, attractive (low) labour costs for foreign investors matched by a willingness on the workers' side to accept fluctuations in real wages to ensure employment stability. However, it is important to underline that, though employment levels are high in Portugal, the labour market is in fact dominated by an abundance of low-skilled workers mostly employed in traditional labour-intensive industries engaged in low-value-added export production. (Corkill, 1999: 174-180)

Although this labour-intensive structure helped Portugal to keep low unemployment levels during the periods of high economic growth, the augmented competition from countries of cheaper labour specialising in similar export basis has been increasingly affecting the Portuguese economy, signalling to a potential shrinkage in the job market in the long run. Already between 1991 and 1995, over 400,000 jobs were lost, amounting to almost 75 per cent of the jobs created during the period of strong economic growth between 1985 and 1991. (Corkill, 1999: 175)

With regards to the structural change in the labour market, Portugal followed a similar trend to that of Spain, where the share of workers engaged in agriculture steadily fell from 28.5 per cent in 1980, to 11.8 in 1994. In contrast, the share of service sector in employment rose from 35.6 per cent to 55.6 per cent during the same period (Table 33). This accelerated decline in farming, forestry and fishing workforce in the 1980s and early 1990s moved Portugal closer to the European average. However, Portugal still embodies a relatively large rural workforce in comparison to other EU members.

Two other factors of structural change in the Portuguese labour force are noteworthy: i) upsurge in self-employment levels particularly in services and agricultural sectors (26 per cent in 1995), which is now among the highest within OECD countries, ii) high employment rates among women. Portugal is among the four countries (in addition to Italy, Slovenia and Sri Lanka) in the world, which experienced the highest increase in women's employment in industry and service sectors in the last two decades. (*International Women's Rights Action Watch, Country Report on Portugal, 2001*) It should also be noted that for Portugal, participation of women in employment has been traditionally higher than in Spain. Even in 1986, activity rate of Portuguese women was about 54 per cent opposed to 34 per cent in Spain, while unemployment rate of women was nearly 12 per cent in comparison to 25.4 per cent in Spain during the same year. By 1992, activity rate rose up to 58.6 and unemployment rate fell down to 4.9 for women (Table 29 and 30).

International Financing Environment and EU Inflows

The integration into the economic and political framework of the EU brought in new financing opportunities that facilitated this transformative process. Given the small size of the Portuguese economy, the FDI inflows have been significant in diversifying the structures of production and changing the composition of tradable goods. In 1984, Portugal was receiving a very modest 198 million USD worth of FDI. This figure rose to an approximate average of 1.67 billion USD in 1990s, peaking in 2000 and 2001 (almost 13 billion in two years). However since 2003, there has been a significant drop of FDI to Portugal (Table 17). In fact, starting with the 1990s, Portugal has been competing with Central and Eastern European countries, which have become attractive destinations for FDI given their underexposed, yet flourishing markets along with their rapid adoption of EU legal and institutional regulations.

Like Spain, Portugal has also been a prolonged beneficiary of substantial EU structural and cohesion funds. It is estimated that the transfers that Portugal have been receiving between 1986 and 1993 amounts to around 2 per cent of annual Portuguese GDP during the period in question (Table 19). It should also be noted that with the creation of Cohesion Funds in 1993, there has been a sizeable increase in EU financial transfers to Portugal.

The transfers under Community Support Frameworks (CSF) I and II, which covered the 1989-1999 period, enabled Portugal to invest heavily in both transportation and environment infrastructure, as well as allowing Portugal to run extensive regional development programmes involving industry and human capital development schemes. Between 1994 and 1999 under the second CSF, similar to Greece, Portugal received approximately 10 per cent of structural funds and 18 per cent of cohesion funds equivalent to almost USD 27 billion (Table 18). (Corkill, 1999: 218-219)

Now, under the third CSF running between 2000 and 2006, around 23.8 billion Euro are being transferred to Portugal, equivalent to about 3 per cent per of annual GDP. CSF III also includes a new special focus on the development of information and communication technology (ICT). The role of European Investment Bank, which has continuously provided Portugal substantial amounts of low interest loans on investment projects, should also be taken into account when assessing the significance of Europe related inflows in helping Portuguese socio-economic development.

Demographic Trends

Overall, demographic indicators show that Portugal has enjoyed favourable demographic dynamics during its European integration, similar to the situation in Spain. The proportion of the population aged 25-64 to the total population has been rising since the 1975, while the proportion of dependent population has been declining (Table 41). It can be roughly estimated that Portugal had been in the first demographic phase, characterized by high population growth rates and high proportion of young population, until the 1980s and gradually passed into the second demographic phase after mid-1980s. The age dependency ratio has been steadily falling since 1975 and in late 1990s reached levels similar to those experienced by advanced industrial countries during their 'golden' period of economic expansion. (TEPAV, 2006: Table 1)

Like Spain, the crude rate of natural population growth fell significantly following Portugal's EU accession. While the population grew by 12.45 per cent during the 1960s and 8.85 during the 1970s, it dropped down to an average of 4.15 per cent

during the 1980s, and down to less than 1 per cent in the 1990s (Table 40). Moreover, given continuous emigration in the late 1980s and early 1990s, the crude rate of population increase in fact turned negative during the same period. As a result, while Portuguese population was 9.40 million at the time of start of accession negotiations, it only rose to 9.92 in 1996, ten years after Portugal became a member of the EU (Table 39). What is also worth mentioning is that, both Eurostat and UN population projections estimate a drop in Portuguese population down to around 9.7 million by 2020.

The proportion of total population aged 0-14 has been constantly dropping in Portugal, from 28.5 per cent in the beginning of 1970s to 15.6 per cent in 2005. This significant decrease in youthful population is matched by a notable increase in the proportion of the population over 65, from 9.7 per cent in 1970s to 17 per cent in 2005 (Table 41). To add to the issue of ageing, it should be also underlined that Portuguese life expectancy grew by 11 years for women and by 10 years for men between 1960 and 1990 (OECD, 2000: 8)

As a result, now, Portugal is slowly entering into the third demographic phase, where it is faced with an ageing population, an extending life expectancy, and stagnant population growth. However, it should be underlined that, none of these developments are as pronounced as in other EU members and there are significant differences in demographic indicators among Portuguese regions (birth rates in the Açores, Madeira, and in the Norte region are still relatively high compared to those in Alentejo). (OECD, 2000: 8)

Despite similar demographic trends, one significant factor differentiates Portugal from Spain: Portugal has historically been a country of emigration, whereas Spain has been a country of migration. Although emigration has been declining since the early 1990s (from 4.5 per cent in 1985 to 1.3 per cent in 1990), it is still more than immigration in Portugal.

2.3 The Polish Case of Socio-economic Change

In the 1990s, Poland went through simultaneous processes of economic and systemic transformation, modernisation, globalisation and European integration. In June 1989, after more than 40 years of Communist rule, free elections were held in Poland and resulted in an overwhelming victory for the Citizens' Committee and Tadeusz Mazowiecki became the Prime Minister of Poland. In the aftermath of the regime change, major economic, political and social changes swept the country: while on the one side market economy was being introduced in Poland, on the other side electoral laws were amended, a free multiparty democratic regime was put into place.

During this period of extensive transformation, integration into European structures have become a strategic objective for Poland and the Polish authorities quickly seized the opportunity of European accession and used it as both the stick and carrot for deeper political and economic reform. The formal relations between EU and Poland officially started in 1990, when negotiations for an Association Agreement began. The agreement, also known as 'Europe Agreement', created a legal platform through which further political dialogue and increased economic relations were achieved. In 1993 Copenhagen summit, EU officially recognised the membership perspectives of the Central and Eastern European countries dependent upon the fulfilment of the so-called Copenhagen criteria and following the summit decision, Poland formally

applied for membership in 1994. The accession negotiations began in 1998 together with Czech Republic, Cyprus, Estonia, Hungary and Slovenia. In June 2003, a referendum concerning the EU membership was realised in Poland, where a clear majority (77.5 per cent) voted in favour. Following the ratification of accession treaty, Poland became the member of the EU in May 2004, along with 7 other CEEs, Malta and Cyprus.

The official pre-accession period of Poland, which lasted around 10 years, seven years of which were active negotiations, have brought benefits to the country on a number of fronts: From the political perspective, a well-functioning and stable multiparty regime was consolidated, an extensive judicial reform was realised, corruption was curtailed, freedom of press was established by the eradication of censorship and creation of a dynamic media sector open to free competition. Moreover, the authority of local governments was strengthened and their representational powers were enhanced.

Economic Integration and Convergence

In the economic area, the 1990s witnessed radical restructuring and development in Poland, turning Polish economy into a competitive free market well integrated into European and global institutions. The principal achievements of this economic transformation included: i) maintenance of macroeconomic stability through the curtailment of high inflation and interest rates; ii) introduction of free exchange rate mechanism; iii) establishment of Stock Exchange; iv) large-scale privatisation of state-owned enterprises.

The impact of far-reaching reforms, coupled with the prospects of European membership, has been very positive for Poland. In terms of economic growth, Poland achieved on average 5 per cent annual GDP growth in the 1990s. Growth slowed down to 3 per cent in the first half of 2000s, however, regained momentum in the last few years (Table 2). Between the time Poland's Association Agreement with the EU became effective (1994) and the Polish membership to the EU (2004), Polish GDP rose from 98.5 billion USD to 241.8 billion USD (Table 1).

As for per capita income, Poland has been gradually converging with the EU standards: The Polish GDP per capita (measured in PPS) was about 40 per cent of the EU average in 1995, whereas in 2005 it reached 50 per cent (Table 4).

The growth of Polish economy was supported by macroeconomic stability achieved in the 1990s. The high inflation rates were brought under control, constantly falling from high 50s in the beginning of 1990s to around 6 per cent in the beginning of 2000s and currently stabilising around 3 per cent. A similar trend was observed in interest rates (Table 37 and 38).

In terms of productivity growth, Poland maintained an average of 5 per cent labour productivity growth in the 1990s, while this growth slowed down in the first half of the 2000s down to around 3.2 per cent (Table 10). However, in comparison to the other EU countries, the initial productivity levels have been very low in Poland. Therefore, productivity growth in Poland has been insufficient to achieve convergence with the average EU levels. A study on relative productivity growths of selected countries between 1975 and 2002 in comparison to the USA (USA=100), evaluates that Polish productivity level is still only 29 per cent of that achieved by the USA, while Spain's is 68.5 and Portugal's 49.8 in 2002 (Table 14).

Changes in Labour Force

Dramatic changes in the nature of work and labour market have also been taking place in Poland in the last fifteen years. While Polish economy succeeded in maintaining long-term growth and stability in macroeconomic indicators, Poland in fact experienced a form of “jobless growth,” especially after 1997, where unemployment emerged as a serious structural problem following the collapse of the communist system. (UNDP, 2004: 15) Employment levels steadily kept on falling in the 1990s and although unemployment rate followed a declining tendency between 1993 and 1997, it rose sharply after 1998, reaching a worrisome rate of 20 per cent in the first half of the 2000s³ (Graph 2).

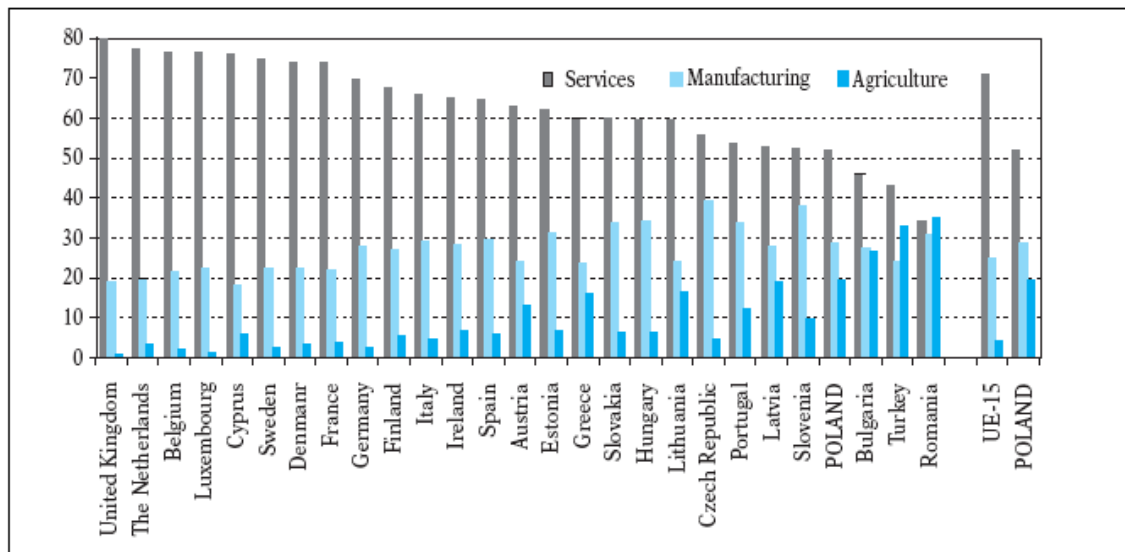


Graph 2: GDP growth and rate of increase in employment in Poland 1990 – 2002
(% in comparison to previous years)

Source: GUS-Statistical Yearbook presented in UNDP Human Development Report Poland (2004), p.16

There have also been significant shifts in the structure of employment in Poland in the 1990s and early 2000s. As in the case of many industrialised countries, the share of services in total employment rose from around 40 per cent in 1992 to above 50 per cent by 2003. On the contrary, the share of agriculture dropped from around 28 per cent to below 20 per cent in the same period. The decline in employment in manufacturing has been less dramatic, approximately 3 per cent between 1992-2003. However, in comparison to the EU average, Poland still enjoys a larger share of employment in both agricultural and manufacturing sectors (Graph 3).

³Many reports have been produced offering an analysis of this upsurge in unemployment and among the most cited factors is the collapse of statist economic structures and guaranteed employment. The large state-owned enterprises, which either closed down or reduced their employment significantly in 1990s, created a sizeable ineffective labour surplus, where the absorption of the surplus could not be possible given the inflexible labour market.



Graph 3: Sectoral employment as a percentage of the total number of employed people aged between 25-64, in 2002

Source: Eurostat data presented in UNDP Human Development Report Poland (2004), p.13

At the present, the improvement of labour market structure stands out one of the most pressing contemporary problems of Poland. Currently, almost 50 per cent of the working age population is not working, and majority of this massive unemployment is estimated to be structural rather than cyclical (OECD, 2006)

Capital Inflows and EU financial assistance

During the period in question, large inflows of foreign direct investment and EU financial assistance contributed to the economic development of Poland. In 1991, FDI inflow amounted to a mere 359 million USD. In the year 2000, FDI reached 9.34 billion, an over twenty-six-fold expansion and stabilised around 5 billion USD in the recent years (Table17).

Following the Essen European Council in December 1994, the EU adopted a pre-accession strategy for financial assistance for Central and Eastern European Countries destined to become EU members based on the adaptation of the funds provided under the PHARE programme. Later in 2000, two other financial instruments, SAPARD and ISPA were added. As proposed by the European Commission in Agenda 2000, 3,120 million Euro (1999 figures) were made available annually to these programmes between 2000 and 2006. The participation of CEEs to certain Community action programmes, agencies and committees was also allowed following the decision on Luxembourg European Council in December 1997 (European Commission, <http://www.deltur.cec.eu.int/default.asp?lang=1&pId=3&fId=4&prnId=14&hnd=1&ord=13&docId=489&fop=0>). Poland received pre-accession financial assistance from the EU under three main programmes, namely Phare, ISPA and SAPARD:

The Phare programme was the Union's first financial tool to assist the countries of Central and Eastern Europe (CEE) in their transition to market economies and multiparty democracies. The first beneficiaries of Phare were Poland and Hungary and later the programme was expanded to all candidate CEE countries and became

the largest pre-accession financial assistance programme of the EU. Phare, with an annual budget of 1.56 billion Euro, mainly provides support for projects that strengthen the administrative capacity of candidate states to meet the rights and obligations of membership., as well infrastructure projects. Between 1995 and 2003, Poland has been granted over 3.6 billion Euro under the Phare Programme. (European Commission, <http://www.europa.delpol.pl/index.php?id=maps&samSession=a75c9430054ceeaf61e9d87f2d21aa93>)

Since 2000, ISPA (Pre-accession Instrument for Structural Policies) grants funds to major projects in environment and transport with an annual budget of 1.04 billion Euro. The share of Poland over this annual budget is estimated to be around 30 to 37 per cent depending on the quality of submitted projects and the possibility of their co-financing with domestic funds. The total value of ISPA programme for Poland over the period from 2000 to 2004 amounts around 1.4 billion Euro, out of which 50 per cent is allocated to transportation projects and the rest to projects related to environmental protection. (European Commission, http://www.europa.delpol.pl/index.php?id=eispa&drukowanie=1&q=&form_send=1)

SAPARD (Special Accession Programme for Agriculture and Rural Development) helps candidate countries deal with the problems of the structural adjustment in their agricultural sectors and rural areas, as well as in the implementation of the *acquis communautaire* concerning the CAP (Common Agricultural Policy) and related legislation. It has an annual budget of 520 million Euro. Poland is estimated to have received annually 168 million Euro under SAPARD since 1999. (European Commission, <http://www.europa.delpol.pl/index.php?id=esapard§ion=2&samSession=a75c9430054ceeaf61e9d87f2d21aa93>)

In addition, Polish public and private institutions have also been eligible to participate in community action programmes in various fields such as education, vocational training, social inclusion, culture and media during the Polish candidacy. These programmes have also constituted another significant channel for project financing.

Following its membership to the EU, Poland now receives financial support under structural funds including the European Regional Development Fund (ERDF), the European Social Fund (ESF), European Agriculture Guidance and Guarantee Fund (Guidance Section) (EAGGF), and the Financial Instrument for Fisheries Guidance (FIFG). In the post accession period between 2004 and 2006, Poland has been receiving approximately up to 13.8 billion Euro as part of structural policy. These funds can be spent between 2004 until 2008 or 2009. (*Warsaw Voice*, <http://www.warsawvoice.pl/archiwum.phtml/5436/>)

Demographic Conditions

In terms of demographic situation during its European integration, Poland has in fact been in the transition to third demographic phase, where population growth halts, or even turns negative, and population ageing takes place. Thus, in contrast to Spain and Portugal, whose European accession and its aftermath have coincided with the second demographic phase, Poland was already in phase three during its accession.

The demographic dynamics at play can be illustrated by striking figures indicating a steep decline of the crude rate of natural population growth: In 1960, Polish population was growing at an average rate of 15 per cent, this figure fell down to 8.5

per cent in 1970, further to 4.1 in the first half of 1990s and finally down to 0.3 in 2000 (Table 40). Besides the falling birth rates, it is also important to highlight the fact that Portugal has been experiencing a high emigration rate since the 1990s. This continuous emigration also adds to further population decline, especially visible for the working age population. The stagnation of population growth has been accompanied by an ageing population: In less than ten years, the percentage of population over the age of 65 increased almost 3 percentage points, reaching 13.1 in 2005 (Table 41).

3. TRANSFORMATION OF HUMAN CAPITAL AND EU INTEGRATION

As the above section clearly illustrates, the EU integration of Spain, Portugal and Poland has served as the motor for socio-economic change during the past decades. One of the major determinants of this process of transformation has been human capital. The following part highlights the shifts in human capital in three countries under study by focusing on major reforms in educational policies and resources induced by the process of Europeanization. The section identifies the principle challenges and achievements of Spain, Portugal and Poland in the field of education and training during the period of their European integration with the purpose of offering insights for policy-making in countries on their way to joining the EU.

Before delving into specific case studies, a closer look into the role of the EU in the field of education and training is instrumental. In this regard, it is first important to remember that education has become a legitimate area of EU responsibility only in 1992, when the Treaty on the European Union was signed in Maastricht. Prior to 1990s, EU's formal involvement in the field of education was limited to the creation of some schemes to foster coordination and interaction among the member states and also between the candidate countries and EU members. Among such initiatives were the establishments of *Eurydice*, a European-wide information network on education, in 1980 and *Erasmus*, a programme of student exchange among EU member states and candidate countries, in 1986. In terms of vocational training, CEDEFOP, the European Centre for the Development of Vocational Training was established in 1975 by the Council of Ministers. CEDEFOP has been responsible for producing academic and technical research and realizing activities to develop vocational training across Europe.

It should also be underlined that even after education has been recognised as a formal area of responsibility, the EU still has a complementary role to play in this field, where Member States retain full responsibility in terms of their education structure, curriculum and administration. Hence, the EU's legal role is rather confined with the improvement of the quality of education, the assurance of equal opportunity and the promotion of life-long learning, while at the same time the Union seeks to strengthen the European dimension in education.

The Article 149 of the Treaty of the European Union currently in effect states: "The Community shall contribute to the development of quality education by encouraging cooperation between Member States and, if necessary, by supporting and supplementing their action, while fully respecting the responsibility of the Member States for the content of teaching and the organisation of education systems and their cultural and linguistic diversity."

The Article 150 of the Treaty sets the framework of vocational training policy to be implemented by the Community as a supplement to the policies of Member States. The article identifies the facilitation of adaptation to industrial changes and reintegration into the labour market through vocational training and retraining as Community objectives in this field. The Treaty also contains a commitment to support life-long learning for all citizens of the Union.

Thus, the EU does not formulate or implement a "common policy" in the field of education, but rather it promotes cooperation and overall improvement through action at European level. Some of the ways in which the EU sets common objectives and seeks their execution include:

(1) The EU implements a number of Community Action Programmes in the field of education, which provide support for projects that help to improve the overall quality of education. The teaching and dissemination of the languages of the Member States, encouragement of mobility of students and teachers, development of youth and teacher exchanges, promotion of distance education and improvement of teaching materials are among the objectives supported. The most important community initiatives are:

- a. SOCRATES Programme, launched in 1995, covers all levels of education with five sub-programmes, namely Comenius, Erasmus, Grundtwig, Minerva, and Lingua.
- b. Leonardo da Vinci Programme, launched in 1994, contributes to the implementation of EU vocational training policy.
- c. Youth Programme, launched in 2000, is EU's mobility and non-formal education programme targeting young people aged between 15 and 25 years.
- d. TEMPUS Programme, launched in 1990, enables universities from EU Member States to cooperate with those in Western Balkans, Eastern Europe and Central Asia, and the Mediterranean partner countries in higher education modernisation projects.

(2) In addition to the Community Programmes, EU legislation promotes cooperation between the Member States on policy issues by production of recommendations, communications, working documents and pilot projects. These documents and pilot projects set common targets and strengthen cooperation to the fulfilment of EU's policy objectives in the field of education and training. Nonetheless, this form of cooperation is rather new in the EU, gaining significance after 2000s following the adoption of Bologna Declaration and Lisbon Strategy. Now, the EU recognises that "education is one of the bases of the European social model" and puts pressure on Member State governments to comply with the Community target that "Europe's education systems should become a 'world quality reference' by 2010." (European Commission, http://ec.europa.eu/education/policies/pol/policy_en.html) Based on this new form of cooperation, the EU has been undertaking a number of important new EU initiatives in the field of education and training (Box 3).

Box 2: New EU Initiatives in the Field of Education and Training

- Bologna Process in Higher Education: Based on the Bologna Declaration of 19 June 1999, the Bologna Process aims to strengthen the European dimension in higher education by setting up a system of academic grades which are easy to read and compare and a system of accumulation and transfer of credits;

promotion of mobility of students, teachers and researchers, and by enhancing cooperation with regard to quality assurance.

- 'Education and Training 2010': Education and Training 2010 is the integrated programme created to support the attainment of EU targets in the field of education and training set in the Lisbon Strategy. To achieve these goals, thirteen specific objectives were identified including areas such as teacher training, language learning, lifelong guidance, basic skills, integration of Information and Communication Technologies, citizenship education, efficiency of investments and flexibility of the systems to make learning accessible to all.
- Common Quality Indicators: To improve standardization of assessment in the field of education, some common quality indicators were identified in four different areas including attainment (mathematics, reading, science, foreign languages, learning to learn, ICT, and civics); success and transition (dropout rates, completion of upper secondary education, participation rates in tertiary education); monitoring of school education (parental participation, evaluation and steering of school education); resources and structures (educational expenditure per student, education and training of teachers, participation rates in pre-primary education, number of students per computer). Since 2000, the educational conditions of Member States are being evaluated by these common indicators.
- European Qualifications Framework (EQF): Through EQF, the European Union aims to facilitate the transfer and recognition of qualifications held by individual citizens, by linking qualifications systems at the national and sectoral levels and enabling them to relate to one another.
- Copenhagen Declaration on enhanced European cooperation in vocational education and training (30 November 2002): The declaration gives a mandate to develop concrete actions in the fields of transparency, recognition and quality in vocational education and training.

For more information: http://ec.europa.eu/education/index_en.html

Accordingly, when the role of the European Union in fostering human capital is to be assessed, this limited legal enforcement - more true in the historical context - should be borne in mind. Nevertheless, it is also as equally important to realise that the contribution of Europeanization to human capital improvement goes beyond the adoption of a set of *acquis communautaire*: Given the exigency of socio-economic convergence, it involves a comprehensive re-evaluation and re-definition of policy priorities in the field of education and training and overseeing their effective implementation. The following section provides three cases of human capital transformation along with European integration.

3.1 The Case of Spain

Spain is now being described as the "star" among the developed nations due to its success in upgrading its human capital (Bergheim, 2005), which in many ways has helped the outstanding socio-economic transformation of the country during the last 25 years. In return, socio-economic development enabled Spanish authorities to continually invest in the improvement of human capital. This mutual sustenance was strengthened by the European integration of Spain, both in terms of financial contribution and alignment of legal and institutional frameworks not only to meet EU requirements, but also to "catch up" with the EU standards. Moreover, the community programmes initiated by the EU in the field of education and training helped to Europeanise the Spanish education system and integrate it to the

European educational area. As a result, along with the Spanish integration into the EU, Spain's education system has undergone major changes with significant positive impact on the status of human capital in the country. The following part highlights the major achievements of Spain in the field of education and training accomplished during the period of pre and post European accession:

3.1.1. Indicators of Transformation in Spanish Human Capital

Participation in education and enrolment rates

Generalisation and expansion of education have been one of the most significant achievements of Spain during the past two decades. Basic general education (EGB) was made compulsory for the ages 6 to 14 by the education reform of 1970; and later in 1990 it was extended to the age 16. Thus, compulsory education, which was first introduced in 1970s, has been 10 years in Spain for the last fifteen years.

In twenty-five years between 1975 and 2000, school enrolment rates constantly increased in all levels in Spain. One significant area of extension has been in early childhood education. As many recent studies underline, universal expansion of pre-schooling for children between 3 and 5 can engender many positive results such as better preparation for formal school education (Heckman, 2000; Goodman and Sianesi, 2005), increased participation rates for women in employment and improved equality in education, particularly for children of poorer families and for children in rural areas. (O'Brien and Paczynski, 2006)

This successful expansion is illustrated by participation measures: Gross enrolment rates for pre-schooling increased from 33.2 in 1975 to 71.6 in ten years after accession and reached 102.3 in 2000 (Table 52). As a result of this remarkable growth, today, almost all Spanish children between the ages 3 and 5 attend pre-school and many children below the age of 3 attend to a nursery. Attendance to pre-schools is free of charge in Spain, however it is not compulsory.

Almost universal attendance to primary school has been sustained in Spain since the 1970s, while participation rates for secondary school, both for males and females, have been rising continually in the past three decades, conforming to the average of industrial democracies (Table 52).

Besides the expansion of pre-school and secondary school education, number of students in tertiary education surged during the Spanish integration into the EU. Gross enrolment rate for higher education was 19.6 in 1975. By the year 2000, the enrolment rate increased to 56.8. As a result, 354,000 Spaniards attended universities in 1970, whereas by 1985 the number rose to 750,000 and reached 1.6 million in 2000 (Teese and Aasen, 2001).

Especially noteworthy is the gain in the participation of women in tertiary education. In 1970, only 4.7 per cent (gross enrolment rate) of Spanish women enrolled in higher education, one of the lowest percentages in Western Europe, as opposed to 12.6 of males. By 1995, 51.6 per cent of females were attending universities, surpassing the male attendance of 44.2 (Table 52).

In terms of distribution of university graduates by field, students have increasingly made their preference on degrees in science, mathematics, computing and

engineering, whereas demand for humanities, social sciences and agricultural degrees dropped along the course of last ten years (Table 61).

Currently in terms of international quality assessments such as OECD's PISA (Program for International Student Assessment) measurement, Spanish students' performance in mathematics scores remain a little below the EU average while they are higher than those of Greece, Portugal and Italy. (OECD online database, <http://www.oecd.org/dataoecd/0/48/33995376.xls>)

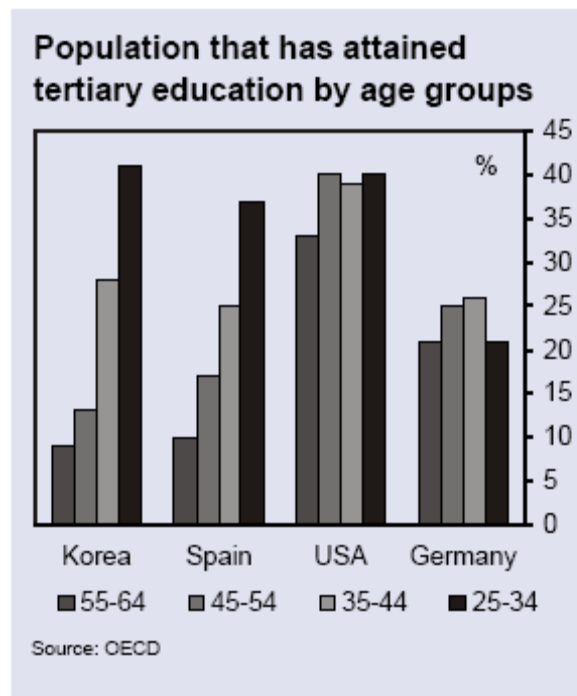
Yet, it should be underlined that despite continual regional convergence during Spanish harmonisation with the EU, regional disparities continue to exist - though to a lesser degree - in enrolment almost in all levels, where Madrid and Basque regions score above average, Andalucia, Valencia, La Rioja and Catalonia little below average, and Extramadura, Baleares and Castilla-la Mancha the lowest (Teese and Aasen, 2001).

Educational attainment

As a result of the expansion and the generalisation of education, one of the key successes of Spanish authorities in the field of education is reflected in the improvement of educational attainment of the adult population (+15) during the past two decades: In 1985, an adult received 5.8 years of schooling on average, whereas the figure increased to 6.8 a decade later and to 7.3 in 2000 (Table 50). What is more important is the continuation of the upward trend at a higher pace, indicating the increased potential for the medium-term future. A Deutsche Bank research on global growth centres, which identifies both Spain and Korea as the outstanding success stories of human capital improvement, estimates that the average years of education for the working population will rise to 13.5 over the next fifteen years, amounting to a further 20 per cent increase in human capital (Bergheim, 2005). Thus, Spain will continue to enjoy favourable conditions in terms of labour force, where workers with higher levels of education will continue to replace lower-skilled workers.

Another indicator of the upgrade in Spanish human capital is the percentage change of the population aged 25-64 having completed at least secondary education. This figure almost doubled in Spain in ten years (1992 to 2002) from 24 to around 43 per cent, whereas it remained almost stagnant in Portugal, recording only 1 per cent increase in 10 years (Table 51).

The below graph taken from the above-mentioned Deutsche Bank research report also provides a striking comparison of the fast pace of Spanish human capital improvement. While less than 10 per cent Spaniards aged between 55-64 have attained a university education in 2005, this figure jumps to around 40 per cent for the population aged between 25 and 34. In contrast, in Germany, tertiary education attainment of the population aged 25-34 remains even below the older generation, marking a downward trend in human capital development.



Graph 4: Population that has attained tertiary education by age groups
Source: Deutsche Bank Research, Global Growth Centres, August 2005

3.1.2 Reformation of the Spanish Education System

Background

The foundations of educational transformation were first laid down in 1970 by the General Education Law, which required the provision of general education for all between the age of 6 and 14. 1970 reform act also officially incorporated vocational training into the education system with the aim of improving the link between employment and education. Nevertheless, given the fact that a dictatorship was ruling Spain during the period in question, the 1970 law also served to strengthen the central and undemocratic nature of Spanish education system. (OECD, 1986: 86-88)

The articles 14, 16, 20, 23, and 27 of the 1978 constitution guaranteed Spanish governments' commitment and citizens' right to education. The most detailed article on education (Article 27) involved a compromise between the ones who asked for a freer education system (the Right) and the ones who sought the expansion of equality in education (the Left) (OECD, 1986:89).

With the initiation of Spain's orientation towards Europe, Spain's educational system has undergone noteworthy institutional and legal adjustments, the key features of which are presented below:

Decentralisation

Decentralisation has been one of the defining tenets of Spanish educational transformation accompanying the Europeanization of Spain. In a review prepared by

OECD on Spanish national policies for education in 1986, the examiners note that "freedom, participation and devolution have become guiding concepts, and education is seen to have a leading role to play in the consolidation of democracy." (OECD 1986: 11)

Beginning in 1983, the devolution of highly centralised education system and transfer of responsibilities from the centre to the autonomous regions have been a central feature of Spain's educational restructuring. Under the system of "shared responsibility," the central government pledges to provide minimum level of education for all, while the regions are held responsible for building onto this foundation by whatever means and ways they deem necessary. (OECD, 1986: 22)

Decentralisation of education has indeed been a slow and gradual process spread over twenty years, starting in the early 1980s and reaching a completion in early 2000s. Its legal framework has been provided by the articles 148 to 150 of the Constitution, the regional charters of autonomy, as well as the enactment of a series of organic laws, the most important ones of which include Law of University Reform (1983), Organic Law on the Right to Education (1985), The Organic Act on Participation, Evaluation and Administration of Educational Establishments (1995) and The Organic Act on the Quality of Education (2002) (Sedgwick, 2002).

Law of University Reform (LRU) of 1983 gave autonomy to universities in terms of curriculum development and budgetary issues. Universities could now offer their own degree programs in addition to the degree programs officially recognised by the Ministry of Education and Culture. Through LRU, the establishment of private universities was for the first time allowed in Spain (OECD, 1986: 101).

Organic Law on the Right to Education (LODE) of 1985 provided Spain's autonomous communities with the right to administer their own schools. The LODE recognised the cultural and linguistic diversity of Spain and asked schools to respect this pluralistic composition. Additionally, LODE enhanced Spanish commitment to free and compulsory education (OECD, 1986: 89).

The Organic Act on Participation, Evaluation and Administration of Educational Establishments (LOPEG) of 1995 enhanced the participation of educational community in the autonomous governance and management of publicly-funded schools, while the Organic Act on the Quality of Education (LOCE) of 2002 set to further increase school autonomy by altering the procedures of appointment and by increasing head masters' areas of responsibility in school management and internal evaluation (Balsera, 2005: 15).

Curriculum Development

While Spain successfully managed to expand overall participation in education in all levels, a parallel challenge has been the improvement of the quality of education by creation of a 'modern, plural education system that would be comparable with the best in Europe.'

To start with the quality of content, as the Spanish education system evolved from centralisation to decentralisation, a core Spanish national curriculum was established in primary and secondary education, and each autonomous community was left responsible for building onto this core based on social, economic and cultural exigencies of their region (Eurydice, 2003: 22). This flexible curriculum model

contributed to the democratisation of the Spanish education system and in the long term facilitated the easing of the ongoing tension between Spanish nationalism on the one hand and Basque and Catalan nationalisms on the other (Balsera, 2005: 17-19).

Organic Law on the General Organisation of the Educational System (LOGSE) of 1990 brought significant changes to the structure of primary and secondary education. LOGSE extended compulsory education to the age of 16, the legal age for entering the work force. Compulsory education now became divided into six-year phase of primary education and four-year phase of junior secondary. Moreover, some basic vocational training and foreign languages were added to the curricula (Sedgwick 2005).

Thus, accompanied by curricular redesign, a single-track school system was introduced until the 10th grade, postponing the selection between vocational and general streams to a later age. Under the current system, modified through the LOGSE act, those students interested in vocational training leave junior secondary school and attend vocational and technical schools, while those who wish to obtain a university degree continue with another two years of upper secondary education (ages 16-18) with an end objective of a baccalaureate (Teese and Aasen, 2001: 11).

LOGSE Act of 1990 also aimed to improve the quality of teaching through renewal of course content. Special educational systems were created for the arts and language learning. At the same time, voluntary religious instruction was made available at all schools. The core curriculum was once again reformed by the LOCE act of 2002, where a greater emphasis on mathematics, languages as well as reading was placed. Through this act, the start of foreign language teaching was reduced to the age of 6 instead of 8 (Qualifications and Curriculum Authority, 2006).

At a further attempt to improve quality, the Organic Act on the Quality of Education (LOCE) of 2002 set out to "reduce school failure, raise standards of education and promote a culture of effort." It was originally intended that the reforms would be introduced by the academic year 2003/04, however, the implementation was postponed due to a controversial debate surrounding some provisions of the act, including the proposed restructuring of lower secondary education and the introduction of the school leaving examination (the *PGB*) at age 18. (Qualifications and Curriculum Authority, 2006)

Higher Education

Along with the remarkable rise in the number of universities and students, an extensive reform process of tertiary education has also been carried out in Spain. As mentioned above, universities were first granted autonomy in terms of curriculum development and budgetary issues in 1983. Through the same act, the establishment of institutions of private higher education was also made possible. Universities could now offer their own degree programs in addition to the degree programs officially recognised by the Ministry of Education and Culture.

In 2001, by the enactment of Universities Organic Law (*Ley Orgánica de Universidades/LOU*), Spain set out to reorganise its tertiary education to adapt to the priorities set in the Bologna Declaration. In an attempt to improve quality in education and research, universities are now allowed to create their own admission

requirements instead of relying on the national university entrance exam (Sedgwick 2005).

Vocational training

One of the areas in which the active support of the European Union has been more pronounced is vocational training. Article 127 of the Treaty of Rome (Art. 150) stated that "the Community shall implement a vocational training policy which shall support and supplement the action of the Member States while fully respecting the responsibility of the Member States for the content and organisation of vocational training." Hence, while education was not a formally recognised area of community competence until 1992, the support of the EU for European-wide cooperation in vocational training was secured earlier than in the case of education. (European Commission, http://ec.europa.eu/education/policies/training/training_en.html)

The major reform of vocational training in Spain came in 1990 with the enactment of LOGSE Act. Departing from the belief that 1970 act did not put in place an adequate system of vocational training, LOGSE aimed to redesign the initial vocational training structure. Following the act, National Continuing Training Agreements (ANFC) were signed between the principle labour unions, employer confederations and the government, illustrating the Spanish commitment to fostering vocational training. Based on compromises reached in ANFC, the first national vocational training programme was created in Spain in 1993 (CEDEFOP, 2000: 15-16).

Extension and improvement of vocational training were supported to a great degree by the community structural funds, especially by the European Social Fund (Box 3), the main EU instrument for investing in human capital in Member States. In 1990s, Spain benefited from more ESF funding than any other EU member. A total of ECU 8,540 million was allocated to Spain between 1994 and 1999 and was put to use to complement national efforts to combat unemployment. These funds were allocated in five objective areas:

- To create an adaptable workforce (42 per cent)
- To pursue active labour market policies (35 per cent)
- To promote life-long learning (10 per cent)
- To enhance social inclusion (9 per cent)
- To increase women's participation in workforce (4 per cent)

To the fulfilment of the objectives of combating unemployment and facilitating the adaptation of workers to industrial change, two million Spaniards participated in the projects funded by ESF between 1989 and 1993 (CEDEFOP, 2000: 23). Overall, investment in human resources accounted for around 27 per cent of structural funds spent in Spain between 1989 and 1993 and 25 per cent between 1994 and 1999 (CEDEFOP, 2000: 24).

Box 3: European Social Fund (ESF)

European Social Fund (ESF) is the main means of the EU in supporting the upgrading of human capital in Member States. In 1957, ESF was created to promote training and to improve the functioning of the labour market. In partnership with EU Member States, the fund aims to achieve a high level of employment, equality between men and women, sustainable development and economic and social cohesion.

The activities that can be carried under ESF include educational and vocational training projects; schemes to encourage employment; initiatives to generate new sources of employment; and schemes to foster links between work, education and research. ESF also provides the financial means to implement the measures of the European Employment Strategy (ESS), the process for co-ordinating the employment policies of EU governments.

Box 4: Examples of Successful ESF Projects in Spain

(1) Plan FIJA (Plan de Formacion e Insercion Juvenil de Aragon) targeted young people aged 16 to 21 with low qualifications in Aragon, Spain. Over 1200 programme participants were provided tailor-made training in welding, carpentry, food industry and hotel management between 1999 and 2002. Some 85 per cent of attendees were integrated successfully into the work force. (European Commission, 2005)

(2) Training Plan for the National Electrical Company of Cordoba Empresa: Nacional Electrica de Cordoba, which runs power plants at Punte Nuevo and Puertollano, is involved in the restructuring of the Spanish electrical sector. The programme, developed with ESF support, has been incorporated into the company's general wage agreement and focuses on teaching the workforce about technological innovations currently being implemented, diversifying their activities to achieve a multi-functional workforce able to respond to the demands of specialist activities and improving their overall professional knowledge and skills. (European Commission, http://ec.europa.eu/employment_social/emplweb/esf/esf_country_en.cfm?id=8)

(2) The Escuela de Organizacion Industrial: Co-funded by the ESF, the Escuela de Organizacion Industrial initiative was set up to create new businesses and to stimulate a spirit of enterprise through training. The school provides training in business management in three integrated modules (theory, practical experience and supervision). Throughout the practical phase, students set up a business 'on paper' under the guidance of a project director with the goal of formally presenting the project, together with an assessment of its viability, during the final phase of the initiative. (European Commission, http://ec.europa.eu/employment_social/emplweb/esf/esf_country_en.cfm?id=8)

(3) Human Resources Community Initiatives in Spain: The Employment Community Initiative, with its four strands - NOW, Horizon, Integra and Youthstart - receives PTA 55.6 billion (ECU 348 million) to foster best practices in the field of human resources development through innovation, transnational cooperation and local partnerships. NOW aims to encourage employment opportunities for women. Horizon aims to improve the prospects of those with social and physical disabilities. The new Integra strand (formerly the Horizon Disadvantaged strand) works to improve employability and access to employment for the socially disadvantaged. Youthstart's main aim is to address the problems of young people who finish education with few qualifications. The Adapt Initiative, works within the new National Vocational Training Plan, and aims to stimulate the provision of continuing training. (European Commission, http://ec.europa.eu/employment_social/emplweb/esf/esf_country_en.cfm?id=8)

Educational resources

Public expenditure on education as a percentage of total public expenditure increased during the Spanish integration into the EU, though improvements were rather modest. In 1983, Spain was spending around 120 USD per capita on education, which placed Spain behind many European countries in per capita spending on education. Towards the end of 1990s, this amount was increased by 18 to 20 percent. (Library of Congress Country Studies, 1998) In fact, the rise in public spending on education did not match the fast pace of growth in Spanish GDP and as a result public spending on education as percentage of GDP indeed declined during the period in question (Table 58 and 58).

Despite the moderate increase in spending on education, advances in educational resources were made in Spain during past decades. The pupil/teacher ratios have improved significantly in all levels of education, but especially in pre-school and primary education (Table 54). This situation indicates the fact that public money on education appears to be used efficiently in Spain. At the same time, it should be underlined that demographics were working in favour of Spain's educational planners during this period. Given the steep fall in birth rates after late 1970s, which was indeed the fastest in all Western Europe, Spanish authorities found it easier to reform the system, since it implied increasing resources per student, even if overall expenditure did not rise.

During the period in question, the expansion of private schools and an accompanied increase in private spending on education also contributed a great deal to the enhancement of human capital in Spain. To meet the rise in demand as a result of lengthening of free compulsory education, the Spanish government decided to subsidise private schools on the condition that they complied with public policies and were genuinely open and free of charge. In addition to these private schools, a small sector of independent schools exists that do not receive subsidies. By the early 1980s, given the high levels of state subsidies, the share of private schooling rose to 40 per cent (Library of Congress Country Studies, 1998). Now, according to 2004 figures, around 25.5 per cent of Spanish students attend subsidised private schools and an additional 7 per cent enrol in unsubsidised private schools. (Teese and Aasen, 2001: 13)

3.1.3 Summary of Major Achievements and Remaining Challenges

Achievements

- Compulsory education extended to 10 years
- Enrolment rates increased in all levels with a more pronounced boom in pre-school and higher education
- Educational attainment continually improved
- Far-reaching process of decentralisation achieved
- Curriculum redesigned and democratised
- Higher education reformed
- Vocational training fostered
- Educational resources improved

Remaining Challenges

- While there has been a remarkable extension of early childhood education, pre-schooling is still limited for very young children (2 year-olds) and could benefit from additional public help in the form of fiscal incentives, which would also encourage participation of women in the labour market and higher fertility rates.
- Although universal participation in primary and secondary education has been one of the major achievements for the period in question, Spain still has to overcome questions related to quality and equity in education. As the report entitled *Equity* indicates, as many as 1 out of 4 children did not successfully complete primary school until the early 1990s, however, by 2001, this figure was reduced to 14 in 100 children. (Teese and Aasen 2001, 16)
- Participation in upper secondary education is still low in low-income regions.
- In *university education*, there is little competition for excellence across university departments.
- *Vocational training* is still underdeveloped and lacks prestige. Spain needs to increase resources and create more enterprise-based training.
- The educational reforms should be complemented by higher expenditure on research and development. The government plans to increase its R&D spending, from 1.2% in 2005 to 1.4% in 2007.

3.2 The Case of Portugal

Following the April 1974 revolution, the improvement of human capital has been a policy priority for the Portuguese authorities and the EU integration process provided the necessary momentum. Since that time consecutive governments made efforts to improve the education system to meet the challenges of a new era characterized by rapid Europeanization and internationalization of both the Portuguese economy and society.

The main features of the educational reforms undertaken during Portugal's integration into the EU included democratisation of education both in terms of curriculum development and provision of equal access to education, modernisation of the education system in terms of investment in teaching materials, staff and infrastructure, as well as expansion and generalisation of education. (OECD, 1984 107-110) Accordingly, some remarkable structural changes in the education system and education objectives took place. The following part analyzes the educational transformation of Portugal in line with its harmonization with the EU.

3.2.1 Indicators of Transformation in Portuguese Human Capital

Expansion and generalisation of education

Over the five decades that Salazar was in power, little attention was paid to education. As one Portuguese expert draws attention, Salazar is recorded to have said, "I consider more urgent the creation of elites than the necessity of teaching people to read." (Corkill, 1999) Given this prolonged disregard, at the beginning of its European orientation, the situation of human capital in Poland was very poor, particularly in comparison to rest of Europe. In 1970, average educational attainment was around 2.4 years in Portugal, roughly equivalent to the situation in Turkey. (TÜSIAD, 2006) In the mid-1970s, illiteracy affected the fifth of all 15 to 64 year-olds, and participation in upper secondary school was less than 5 per cent among the same age group.

With the prospective of EU membership, a political consensus was reached on the need to reorganize and improve the system of education in Portugal with an end result of 1986 Education Act. The law extended compulsory education to nine years and reiterated the Portuguese commitment to promote active and critical citizens. In 1960, mandatory education was only 4 years; in 1964 it was expanded to 6 years. It was with the 1986 Law that Portugal intended to catch up with the European average, where obligatory schooling generally cover at least the first 9 years of education including lower secondary school (Guichard and Larre, 2006: 6). This extension contributed to the assurance of basic education for all citizens and the elimination of high illiteracy rate, particularly prevalent among women, ageing population and in rural areas.

The Portuguese education system now consists of 9 years of mandatory basic schooling plus three years of secondary education. While basic education is essentially uniform (with the exception of vocational path for the last three years), the secondary level offers four different branches, which include general, technological, artistic and professional (created in 1989).

Enrolment rates

With substantial financial support from the EU, considerable progress has been made in expanding educational access in Portugal. Similar to Spain, one of the major achievements has been the expansion of pre-schooling in Portugal. In Portugal, a public pre-school education system was established by the act of February 1977 with the objective of setting up and extending a network of state nursery schools. Ministry of Education began establishing its own network in 1978 and in the following decade, public pre-school provision increased twenty-fold. In 1970, only 3.1 per cent of children between ages 3-5 attended pre-schools, whereas in 1995 the same rate rose to 60.6 (Table 52). The enrolment rates reached 90 per cent among 5 year-olds, and more than 70 per cent among 3-4 year-olds in 2004/2005. (OECD, 2000)

Particularly, significant efforts to generalise pre-school education were made after 1995 by the government supported by the Socialist Party. A new programme entitled *Expansion and Development of Preschool Education* was initiated in 1996 and was followed by a Framework Law in 1997, which put for the first time 3 to 6 year-olds under the responsibility of Basic Education. The pre-school budget was doubled, and effective coordination among the Ministry of Education, Ministry of Labour and Solidarity and the National Association of Portuguese Municipalities was achieved. At the same time, contract-based programmes with municipalities, private and social welfare institutions were established, an act which included the civil society in the provision of pre-schooling. The results of the programme were very positive expanding the coverage of pre-school sector from 57.5 per cent in 1995 to over 72 per cent in 1999. (<http://www.oecd.org/dataoecd/44/15/1942356.pdf>) As a result of continual reforms undertaken, pre-school education is now coordinated, inspected and evaluated centrally in Portugal, while there is a certain degree of decentralisation in terms of managing human, material and financial resources. (OECD, 2000)

Enrolment rates for primary schools have also been raised, reaching 100 per cent in the early 1990s. A parallel effort was carried out to reduce illiteracy, where literacy rates for the population over 15 improved from 73.7 per cent in 1970 to 92.2 per cent at the turn of the millennium (Table 51). However, the main challenge for Portuguese authorities has been in promoting higher enrolment rates in secondary

schools, where participation has been traditionally very low. To date, Portuguese enrolment rate for upper secondary schools remains well-below the EU average.

Educational attainment

As a consequence of higher enrolment rates, there has been a notable rise in the number of adults having completed basic education. In 1985, the educational attainment of the adult population (+15) was 3.9 years in Portugal. After fifteen years of membership to the EU, the average years of education of the population aged 15 and above rose to 5.9 years (Table 50). Despite the upward trend, Portuguese educational attainment is still among the lowest in the EU.

One of the underlining reasons of the slow rate of convergence relates to the problem of 'very low starting point.' Due to wide-spread illiteracy and minimal levels of educational attainment among the older generation, Portuguese authorities had hard time in finding qualified teachers. At the same time, performance of Portuguese students and their willingness to enrol in higher levels of schooling were negatively affected by their parents' poor educational status. (Corkill, 1999) Nevertheless, despite sluggish increase in attainment, it is important to underline that the trend of human capital development has been in the overall positive during Portuguese integration into the EU.

3.2.2 Reformation of the Portuguese Education System

Democratisation

Initial efforts to raise the level of country's human capital closer to that of Europe were made with 1976 Constitution, which set aims to eliminate illiteracy, to ensure increased participation of both students and teachers in the democratic administration of schools, while at the same time allowing the establishment of private institutions of education and guaranteeing the autonomy of universities.

Following the late 1970s, a curricular restructuring with a renewed emphasis on diversity, integration, and citizenship was realised. A major reform came in 1989, which attempted to create a democratic model of school management along with a curricular redesign. The process of democratisation of education was further extended in 1996 by the initiation of a participatory revision of basic education curriculum. This revision sought the input of all social partners, including teachers, students, families and the educational scientific community (Menenez, 2003).

The Portuguese educational system has traditionally been highly centralized. Although some efforts were made for the devolution of powers from the centre to the regions in the constitution of 1976, the national Ministry of Education and Culture was still kept responsible for identifying education policies, setting the curriculum and financing the system (OECD, 1984: 106-107). Hence, in comparison to Spain, the decentralization of the Portuguese educational system has been minimal. It is only in recent years that question of decentralisation has been back on the agenda of Polish authorities. The government now recognises the fact that due to wide regional disparities, a certain level of devolution of central power is necessary (Guichard and Larre, 2006).

Reform of Higher education

Higher education plays a vital role in ensuring the competitiveness of the Portuguese economy, both in terms of research and in supplying the labour market with trained personnel. The tertiary education in Portugal went through a process of noteworthy change in the last twenty-five years, more particularly in the last ten years. One of the most dramatic successes in the transformation of Portuguese higher education has been the rise in participation rates. In 1970, only around 7 per cent of the population, what could be considered a small elite, attended tertiary education. In twenty-five years, almost a six-fold expansion was achieved and the number of student rose from about 60,000 in 1974 to around 360,000 in 1997 (Assunção, 1998).

What is also important to underline is the fact that the pace of increase for women's participation in higher education has been higher than that of men. In 1970, only 5.8 per cent of women attended university, whereas in 1995 this rate was up to 44.4 (Table 51). Nevertheless, in comparison to Spain, the convergence with the EU standards in overall participation levels in tertiary education has been lagging behind.

Along with the rise in the number of students, the number of institutions also increased. This growth was especially supported by the establishment of a number of private universities mostly specialising on law, management and humanities. In early 1970s, there were only four public and one catholic university in Portugal, whereas the number of higher education institutions upsurged to almost 70 (15 public universities, 14 public polytechnics, and around 40 private higher education institutions) in 2005. Besides the extension, the autonomy of universities was strengthened during the Portuguese integration into Europe through University Autonomy Law approved by the parliament in 1988 (Assunção, 1998).

Vocational Training

Vocational education followed a cyclical path in Portugal, first fading in the 1970s and early 1980s, then again with the European integration process it became an issue of concern for public authorities. Vocational training was expanded through reforms beginning in 1980s to promote technical and vocational education within the secondary level. An apprenticeship system was also launched to assist early drop-outs that enter the labour market without any vocational training. A new vocational education program was introduced in 1983. By the late 1980s, it was training 10,000 to 12,000 young people a year, amounting to about 6 to 7 percent of this age group (Library of Congress Country Studies: Portugal, 1993).

Similar to Spain, in terms of vocational training Portugal also benefited a great deal from European Social Fund. ESF improved organization of vocational training system through certification and accreditation mechanisms, reinforced education system through the continuous training of teachers, and helped social and economic reintegration of vulnerable groups. (European Commission, http://ec.europa.eu/employment_social/esf/en/public/leafs/sp-en.htm)

The EU funds helped to improve the organization of vocational training through a certification and accreditation system. At the same time, some of the EU funds were used for continuous training of teachers and for the improvement of higher secondary education, reinforcing the foundations of the Portuguese education system. The ESF funds were also beneficial in helping to integrate socially and economically disadvantaged groups. A successful example of the function of

European Social Fund in this regard can be illustrated by the CONFATRA project, through which the RTP, the Portuguese State broadcasting corporation, undertook an organisational change and established a range of innovative childcare services for its staff. As a result of this EU funded project, while many children were provided with pre-schooling, the personnel of RTP was also given the opportunity to better conciliate work and family life. (http://ec.europa.eu/employment_social/esf2000/docs/pt_esf_en.pdf)

Educational Resources

Public expenditure on education continuously rose from under 4 per cent of GDP in the mid-1980s to over 5 per cent in the 1990s and reached 5.63 per cent in 2003. In a similar fashion, the amount spent by the Portuguese authorities on education, expressed as a percentage of the total public expenditure has been over 12 per cent in the last ten years, sizably higher than EU countries such as UK and Spain.

As Guichard and Larre state in a recent OECD report on Portuguese human capital "only Ireland, the Netherlands and Finland in the European Union reach the level of Portugal's recent educational investment in terms of percentage of total governmental investment. Clearly, there is committed political will in Portugal to use educational investment as a means of development and progress." (Guichard and Larre, 2006)

The OECD report concludes that Portugal spends adequate resources on education with public spending per student almost matching the European average. However, despite high levels of spending, Portugal suffers from inefficiency in public spending since its performance in all measures of education outcomes is still below the EU average. (Guichard and Larre, 2006) Nevertheless, given the steady overall decrease in student population in basic education due to stagnant population growth (the number of 6-17 year-olds decreased by 23 per cent between 1991 and 2001), Portuguese authorities will have even higher resources per student at hand to remedy the shortcomings in the field of education.

In terms of private involvement in education, Portugal is behind of Spain. Primary and secondary education is mainly provided by the public sector, where the share of private institutions is a little over 10 per cent in basic education and nearly 20 per cent in upper secondary education. The share of private institutions is relatively higher in pre-schooling, reaching almost 50 per cent. Contrary to most EU countries including Spain, private schools are independent from the government in Portugal (Guichard and Larre, 2006).

The role of the European Union in helping Portugal to improve the low levels of education has been considerable. The EU's structural funds has been one of the underlying sources of Portugal's Educational Development Programme (PRODEP – *Programa de Desenvolvimento Educativo Para Portugal*) which has aimed to improve the quality of basic education through the promotion of initiative taking, responsibility and citizenship, as well as the quality of vocational training and life-long learning. (<http://www.prodep.min-edu.pt/intro.htm>) A new programme entitled *Novos Oportunidades* under the co-financing of the Union now targets to improve Portugal's human capital by increasing school enrolment rates through the diversification of streams. The programme aims to enroll half of the upper secondary school students in professional or technological education by 2010. Under this framework, some of the EU funded programmes include actions to reduce learning

failure in basic education through creation of alternative streams, to increase in supply of professional courses, to develop a system of career guidance to facilitate students' decisions, to reduce incentives to enter the labor market for those under 22 years who have not concluded upper secondary education, and to develop a system of quality certification. (OECD 2000, pg.20)

3.2.3 Summary of Major Achievements and Remaining Challenges

Achievements

- Compulsory education was extended to 9 years, illiteracy was reduced
- Participation in all education levels increased
- Educational attainment progressed
- Education system was democratized in terms of curriculum development and organization
- Greater equality in access to education was provided especially for women
- Higher education was reformed with an end result in the proliferation of students and institutions
- Drop-out rates were lowered
- Spending on education was increased, as a result teaching materials, staff and infrastructure were modernised

Remaining Challenges

- Although substantial improvements in the field of education have been recorded in the past two and a half decades in Portugal, Portugal still ranks close to the bottom of the EU in terms of educational attainment and student performance. According to the OECD PISA figures of 2000, on the combined reading literacy scale of 15-year-old students, Portugal is at the bottom of the OECD league, much below most new EU members. An OECD report on the status of human capital concludes that partly this is due to the fact that recent reforms have not yet delivered their full benefits, but also due to problems related to efficiency.
- While a noteworthy increase in enrolment rates has been achieved in Portugal, enrolment in secondary and higher education still remain below the EU average, especially in rural areas where children enter into the workforce at an early stage.
- Although considerable efforts are being made, Portugal still suffers from high drop-out rates in comparison to the EU average. In 1991, the drop-out rate for 10 to 15 year-olds was 12.5 per cent, by 2001 this figure was reduced down to 2.7 per cent (OECD, 2006).
- Portuguese still needs to improve the quality of higher education. Although participation in tertiary education increased significantly during the course of Portuguese integration into the EU, the composition of fields did not change much. Especially, higher focus on science and technology related fields is needed.
- Provision of life-long learning should also be increased. In countries such as Denmark, Sweden, Finland, and the United States more than 40 per cent of the work force enroll in job-related education and training. In contrast, only 10 per cent of adults take part in life-long learning schemes in Portugal.
- There is insufficient curricular space in Portuguese secondary education for technological or professional courses, as well as experimental sciences.

- Portugal appears as one of the least efficient countries in the OECD in terms of spending on education. Currently, 93.4 per cent of Portuguese spending on education goes to teachers' salaries, a figure which is much higher than the OECD average of around 74.5 per cent.

3.3 The Case of Poland

The collapse of the communist system and the following orientation of Poland towards the EU were accompanied by significant developments in the field of education. The partial reforms undertaken in the years 1990 and 1997 laid the ground stone for the far-reaching reform of the education system designed and implemented in 1998, with later adjustments carried out in 2000s.

3.3.1 Indicators of Transformation in Polish Human Capital

In opposition to Spain and Portugal, Poland already enjoyed high levels of educational attainment at the beginning of its European journey. In 1990, an average Polish adult received 9.5 years of schooling, a figure that already complied with the standards of the EU-15. By the year 2000, there was a slight improvement in educational attainment, which now reached 9.8 years. Advanced educational attainment has been mainly a result of extensive expansion and generalisation of education under the communist regime. Hence, provision of both primary and lower secondary education has been almost universal in Poland prior to Polish membership to the EU.

In Poland, full-time education has been compulsory for the ages between 6 and 16. Mandatory education includes one year of pre-school, then primary and lower secondary school. While above the age of 16 full-time education is not compulsory, since 1997 the constitution requires that, at least part-time education should continue up to the age 18, either in school or out of school.

Enrolment rates have also been traditionally very high in Poland. Since 1970s, attendance to primary school has been almost universal. Enrolment in secondary education has been constantly rising since the 1970s, from 62.1 per cent to 97.6 per cent in 1996.

Accordingly for Poland, main challenge has not been to increase the level of quantity but the quality of education provision. Moreover, as mentioned above, Poland had to design its system of education and accompanying administrative structures almost from scratch following the fall of the communist rule. It is in the following part that the details of this process of reformation will be discussed.

3.3.2 Reformation of the Polish Education System

Decentralisation

In the communist period, the Polish education system was characterised by far-reaching centralisation. While the communist party conceptualized and defined strategies and policies for education, the Ministry of Education was responsible for areas such as curriculum development, course content, selection and preparation of teaching materials, standardisation of admissions, and setting up and implementing examination procedures. *Kurators* (heads of educational authorities at regional level) carried out inspections in all educational establishments and ensured the application

of the Act on the School Education System and the implementation of Ministry's regulations. The day-to-day management of each individual school was administered by a headmaster and a pedagogical council. Given the level of centralisation, school autonomy was virtually absent (Wisniewski, 2001).

Although some demands were raised for local autonomy in schools during the Solidarity movement of 1980, the centralist system remained in tact until the fall of the communist regime. It was with 1989 that complete restructuring of the Polish education system was initiated. Decentralist measures were introduced in three areas, namely in administrative organisation, financing, and upgrading of teaching materials and resources.

In terms of the administration of education, the principal change was the transfer of responsibility of running educational establishments to local governmental units. At the level of primary and lower secondary education, *Gminas* (the lowest level of local government, where mean population is around 7,300) were selected as responsible administrative units. Upper secondary schools (lyceums), vocational schools and special schools were now to be administered by *Powiats* (local government units at the level above *gminas*, where mean population is around 75,000). While this devolution of administrative function helped to increase social participation in education, it also ended the monopoly of inefficient central state bureaucracy. This system became effective in 1996 (O'Brien and Paczynski, 2006).

As for the financing of education, the principle of shared responsibility was introduced where *Gminas* would finance educational institutions in their area both by their own revenues and by a state subsidy. A special algorithm formula (including number of students and teachers, the type of school and the type of *gminas*) was created to calculate the amount of the state subsidy with subject to re-evaluation each year. (O'Brien and Paczynski, 2006).

A further overarching revision was realised with 1998 reform, which "extended the autonomy of schools and teachers, and created conditions for schools to respond quickly and flexibly to both local needs and ever more challenging tasks of a wider nature." (Wisniewski, 2001).

Democratisation

Democratisation of the school system has been one of the principal objectives of the reform process initiated in the 1990s. To this end, the 1992 Act made increased social participation in education legally possible: It created school councils where teachers, parents and student took advisory decisions on equal terms. The act also established regional school education councils and the National School Education Council, creating effective platforms of dialogue and interaction among the educational community both at the local and national level.

It is also interesting to note that a special emphasis on internationally recognized agreements on human rights was put in the text of 1992 Act, illustrating the Polish governments' commitment to improve the status of human rights in the country. The 1992 Act on the School Education System reads: "Education in the Republic of Poland is a common welfare of the whole society; it is guided by the principles contained in the Constitution of the Republic of Poland as well as by the guidelines of the Universal Declaration of Human Rights, the International Covenant of Civil and Political Rights, and the Convention on the Rights of the Child. Education and

upbringing, respecting the Christian system of values, is based on universal ethical principles." (The act quoted in Wisniewski, 2001)

A framework for the establishment of non-public schools was also accepted in 1992, whereby the possibility for private persons, institutions and associations to establish and run schools was confirmed. By providing a legal and financial basis for private schools, the Act broke definitively the monopoly of the State in education. Elements of competition and innovative approaches were introduced to the education system. New types of schools, commonly called as "civic" to underline their difference from public and private schools for profit, have acted as a catalyst for introducing innovative teaching methods and materials during the 1990s. In the first year and a half following the Act, around 250 new private schools were established, 100 of which were affiliated with the Catholic Church. (U.S Library of Congress, Country Study on Poland). The state was held responsible to subsidise 50 percent of the per-student cost in private educational establishments.

Democratisation of the education system was also carried out in the area of curricular reform. Particularly, in the early 1990s, the national curriculum was redesigned with an end objective of eradicating ideological components. Russian was no longer presented as an obligatory subject, while the instruction of other foreign languages was extended. Despite the adoption of a core curriculum, the schools were granted a large degree of autonomy in terms of additions to the core. One of the areas of controversy in curriculum development was witnessed over the issue of introduction of religion course into the school curriculum. In 1990, the government decided to offer religion as an optional subject, attendance to which required parental permission for primary schools and the permission of the student in secondary schools (Wisniewski, 2001).

Reforms in primary and secondary education

The major reforms of 1991 and 1998 altered the structure of the primary and secondary education, whereby Poland reverted to a longer single track system in 1999. Before, students had to select between vocational and general education at the end of primary school (at the age of 14/15). Since 1999, this decision is delayed until the age of 15/16 with the creation of undifferentiated lower secondary schools.

Furthermore in 2002, a national examination system was introduced at the end of primary and lower secondary levels. Vocational qualifications awarded by basic vocational and technical schools are now being certified by external examinations since 2004. It is often indicated in reports on the Polish education system that the structural reform of the 1990s (the postponement of the choice of the vocational stream and the introduction of national examinations) is believed to have resulted in an overall improvement of educational performance through provision of a clearer division and standardisation of student assessments by examinations (O'Brien and Paczynski, 2006).

Vocational Training

Traditionally, attendance to vocational and technical schools has been very high in Poland in comparison to Western European countries. During the 1980s, more than half of students in secondary school system preferred the vocational stream. Even in the beginning of the 1990s, around 43 per cent attended three-year trade schools, 25 per cent to four-year vocational and technical schools, and only 26 per cent to

general high schools for college preparation. (The percentages were much higher for male students).

In the 1990s, the proportion of students enrolling in general upper secondary schools increased at the expense of vocational schools. There are two main reasons for this shift: i) Under the communist system participation in vocational schools in most cases meant a job guarantee, while graduates of general lyceums, if not admitted to university, could have difficulties in their job search. However, with changes in the economic system also came changes in the composition of secondary schooling. In the 1990s, enterprises within which work-based basic vocational schools operated increasingly refused to both finance training activities and to provide guaranteed employment to participants. As a result, qualifications acquired within a narrow specialisation would no longer guarantee lifelong employment in state-owned enterprises. Thus, with the collapse of the communist system, students who were channelled to basic vocational schools equipping them with skills for narrow occupations, now more and more turned to general secondary schools; ii) with the increased demand for attendance to tertiary education, demand for general schools also rose since they were thought to provide better preparation for the university entrance exam (O'Brien and Paczynski, 2006).

As a result, the Ministry of Education had to takeover the administration and financing of some vocational schools. While this transfer increased public expenditure, it also opened the way for the much needed reform of vocational training to adjust it to the requirements of the now Europeanised and globalised Polish economy. To respond to the pressing challenges, a new type of vocational education and training school (*Technicum*) was established in 2001. This new lyceum offered the possibility of general secondary education courses and gave students the option to take the university exam, while at the same time allowing pupils to complete vocationally oriented education specialising in a defined sector. (European Training Foundation, 2002)

Reform of Higher education

In the tertiary sector, there have been two parallel developments accompanying the Polish integration into the EU:

- i) A remarkable increase in participation to higher education: In 1991, there were about 400,000 students in higher education, while this number rose up to almost 2,000,000 in 2006, amounting to a nearly five-fold expansion in fifteen years. However, in comparison to most Western European countries Polish enrolment rates in higher education are still very low (Table 52).
- ii) A proliferation of private institutions in tertiary education: The establishment of private higher education institutions was allowed after 1991 and now nearly 30 per cent of students are studying in the private sector institutions. Most of the private higher education institutions were set up in smaller towns where previously universities did not exist. Their establishment was highly supported by local authorities since they were believed to bring the labour force dynamism and economic vitality in the long term to the otherwise economically and socially stagnant towns.

Expansion of life-long learning

Polish governments have increasingly recognised that adult education and training have an important impact on earnings as well as preparing the workforce to evolving demands of economic sectors. The development of life-long learning, though still modest, has been mostly achieved by the funds made available to Poland under European Social Fund and a number of Community Programmes. (OECD, 2005c)

Another factor has been the decision to grant public subsidies to enterprises that establish funds for adult training. As an OECD report indicates, Polish companies traditionally allocated lesser funds for training before the training subsidy approach was introduced, on average totalling to around 0.8 per cent of their labour cost. This figure is much higher - around 2 per cent - for the EU average (OECD, 2005c). However, following the introduction of training subsidy, Polish firms now invest more in vocational lifelong training.

Funding of education

Public spending on education has been traditionally high in Poland, matching those in industrialised democracies. As a proportion of GDP, Poland has been spending over 5 per cent on education in 1990s with a slight increase in 2000s. The share of education in total public expenditure has been close to 12 per cent during the Polish integration into the EU (Table 57 and 58). In comparison to public expenditure, the share of private spending is rather minimal in Poland, especially in basic and secondary education. Private spending increases in the higher education sector.

In terms of teaching staff, there has been a considerable increase in the number of teachers in all levels (except in secondary schooling), but particularly in pre-schooling. As a result, pupil/teacher ratios have been improving in the 1990s with the exception of higher education, where an upsurge in student numbers is observed (Table 53 and 54). When considering the adequacy of educational resources, the effect of demographic change should also be taken into consideration: In 1990, around 700,000 children started primary school, whereas this number declined to 400,000 by 2004. (OECD, 2006) With the diminishing demand in basic education, Polish authorities now find the necessary breathing space to reform the system, even without increasing spending.

What is equally important as the increase in the number of teachers is the increase in the quality of teacher training. Prior to Poland's pre-accession period, Polish teachers were provided with a four-year master-degree training, which was identical to students in pursuance of any type of academic career. The only difference was that the curriculum of teacher training included a few courses on education science and psychology. This system proved expensive as well ineffective: most students with lower grades in university entrance exams would opt for teacher training (which had lower rankings though the education was almost identical to other four-year degrees) and in the end they would not take up teaching as a profession. This ineffective system was mainly replaced by the establishment of foreign language teacher training colleges in the 1990s. This new type of higher education institution has been very fruitful in alleviating the quality of teacher training in Poland, both in terms of the expansion of education force with foreign language capabilities as well as allowing for a customised new curricula in teacher training suited to the needs of the changing Polish education system.

3.3.3 Summary of Major Achievements and Remaining Challenges

Achievements

- Important reforms to undertaken to decentralise primary and secondary education in the late 1990s
- Efforts were made to raising the quality of education in all levels and to widen the equality of opportunity in education
- Vocational education was redesigned to adapt to the changing needs of the market economy
- Enrolment rates for secondary and tertiary education were improved. Tertiary sector, which has seen a four-fold expansion in 15 years was supported by the establishment of a number private institutions
- Wider social participation in the education system was ensured
- Life-long learning was expanded
- Curriculum was redesigned, a new emphasis on foreign language teaching was added.
- Common compulsory tests for student performance assessments was introduced at the end of education in the primary school and gymnasium
- A longer single track system was created
- Foreign language teacher training colleges were established
- A European dimension to Polish education system was added through mobility of teachers, students and administrators

Remaining Challenges

- Despite the reform process in education to include more technical and professional courses, still a weak linkage between education and labour force requirements exists in Poland.
- The very rapid expansion of tertiary education might be expected to cause some dilution of quality.
- Though expanded, adult training is still low, especially among the most vulnerable groups such as older and less skilled groups. While privately financed adult training increased, public spending on vocational training decreased.
- Some further adjustments in public spending is needed, especially considering the heavy financial burden that the financing of primary education places on local administrations. As an OECD report on Poland states, "while this decentralisation may have resulted in a better targeting of expenditure and more efficiency, it also resulted in a dramatic inequality in the level of per capita government spending on primary and secondary education, with the richest poviats spending almost 60 per cent more on a per student basis than the poorer ones and attracting the best teachers by paying them a premium over national pay scales." (OECD, 2006)
- The drop in the pre-school education participation levels needs to be recovered. As explained above, while pre-school education expanded in Spain and Poland during their EU accession, in Poland, enrolment rates have dropped, particularly in rural areas. This decline can be partly explained by two related developments: i) The decision to transfer the administration of nursery schools to local authorities (*gminas*): With this transfer of authority as part a larger decentralisation process, local authorities now had to assume the financing of nursery schools out of their limited budgets, which in turn was reflected in higher fees (cost of pre-school education is shared by public authorities and parents). Moreover, *gminas* were given the right to close down nursery schools; ii) a

government decision to extend the period during which parents looking after small children were entitled to receive an allowance. Given the soaring unemployment rates in Poland following the collapse of the communist system and its job security schemes, coupled with higher fees for nursery schools many parents preferred to look after their children at home and receive allowance from the state. The drop in the rate of pre-schooling not only affected students' performance in primary school marking the rest of their education career, but also had an undesirable impact on women's activity rates. The detrimental future consequences of this decline were partly remedied with a government decision to introduce mandatory schooling for 6 year-olds in 2004. Following the act, 6 year-olds participation rates in pre-school education reached 100 per cent in 2005.

4. CONCLUSION: POLICY RECOMMENDATIONS FOR TURKEY

Extracting maximum advantage from the European Integration: Thinking beyond the *acquis communautaire*

- Although the European law and competence in education was very limited during Spanish and Portuguese integration into the Union, both countries recognized that convergence with the EU could only be ensured through investment in human capital. Accordingly, they declared education as a top strategic priority and began to channel increased resources into education, training programmes and employment services. Given high European standards in education and training, European integration forced Spanish and Portuguese governments to set up ambitious targets and to carry out their effective implementation. Hence, it is also very important for Turkish authorities to understand that the process of Europeanization goes beyond the mere adoption of the community *acquis*, especially in the field of education and training.

Early reform and investment necessary for higher socio-economic growth induced by increases in human capital

- Demographic trends can work in favor of Turkey, as in the case of Spain and Portugal provided that Turkish authorities make appropriate and timely decisions on human capital investment. Both the Spanish and Portuguese cases show that, if Turkey uses its "demographic gift" effectively, Turkey can improve chances of convergence. In this perspective, rapid action in reformation and expansion of the education system is needed for higher socio-economic growth since the cases of Spain, Portugal and Poland reveal that decades can pass before educational reforms can have a positive impact on the composition of the work force.

Making the best of out of EU transfers allocated to education and training

- As the Portuguese, Polish and Spanish accessions illustrate, a shift in the composition of the economy from traditional sectors such as agriculture and manufacturing occurs during the course of European integration, which requires a parallel change in the structure of employment. Therefore, it becomes even more of a challenge for authorities to avoid mismatch between labour market requirements and available qualifications and the skills of the

workforce. In this regard, harmonization of Turkish education and training policies with those adopted by the European decision-makers proves ever important. EU transfers provide a useful tool for investing in projects that promote adaptability of the workforce.

Widening participation in education and training is a must

- Compulsory education in all countries under study, 9 in Portugal, 10 in Spain and Poland, are higher than that in Turkey (8 years). Extension of compulsory school education should be considered by Turkish authorities.
- The expansion of pre-schooling provides long-term benefits for the improvement of human capital. As discussed, in both Portugal and Spain, the EU integration was accompanied by a noteworthy increase in early childhood education through the adoption of governmental programmes supported by the EU. Currently, almost all Spaniards between the age of 3 and 5 attend pre-school, which is not compulsory but free of charge. In fact, widening participation in pre-schooling has also been identified as one of the priority areas in EU's Lisbon strategy. In a similar fashion, Turkish authorities should also engage in programmes that aim to expand early childhood education, which still remains at very low levels in Turkey in comparison to the EU Member States.
- One important question that needs to be addressed when thinking about the correct investments in human capital is the appropriate balance between provision of general and vocational education. As it is described, all countries under study went through an extensive reformation of their vocational training schemes. Both in Spain and Poland, while on the one side a longer single track system was introduced until the 10th grade, allowing a more conscious choice to be made between the alternative streams, on the other side vocational training was constantly modernised and improved by the help of decrees, government programmes, national agreements between the educational bureaucracy, industry representatives and trade unions, supported both by increased government and EU funding. In Turkey too, there is an urgent need to redesign vocational training schemes as to correspond to the need of the labor force. In the Lisbon European Council in 2000, the EU set itself the strategic goal of becoming the most competitive and dynamic knowledge-based economy in the world. The improvement of vocational training is an integral part of this strategy and convergence with the EU requires the enactment of a comprehensive strategy in Turkey in this regard.
- One other area in which all countries in question made some progress is the promotion of life-long learning. In Poland, for example, EU-subsidized training programmes were put in place with some considerable positive results in helping to integrate otherwise excluded adults to the workforce. Similarly both in Spain and Portugal, a number of initiatives were taken to facilitate the integration of low-skilled and unemployed people to the labor market. So far there is little evidence of a move towards the wider promotion of life-long learning in Turkey. The introduction and expansion of life-long learning schemes can help low-skilled workers to better respond to the exigencies of a transforming labor market.

Developing a curriculum in line with the needs of the work force

- The cases of Spain, Portugal and Poland show that the widening of participation in education and training is in all cases accompanied by a curriculum reform to improve quality. Both in Spain and Poland, the EU accession process brought significant changes with regards to the curriculum of primary and secondary school teaching such as the reduction in the age of foreign language teaching, the increase in hours allocated to mathematics and courses related to information technology and the supplementation of general education with professional courses. Turkish education system can also benefit from similar adjustments. In doing so, regular and sustainable cooperation should be sought between the public authorities and industry representatives.

Increasing educational spending and ensuring its efficient use

- In comparison to all countries under study, Turkish spending on education and training remains low, particularly in terms of proportion to total public spending. While the overall expenditure is higher due to high private spending associated with preparation for university entrance exam, public spending is still low in Turkey.

Improving Governance: Increased autonomy and participation

- In the cases of Spain and Poland, decentralization of the education system has been a defining tenet of the transformation that accompanied their European integration. Turkish authorities should also look into the potential merits of devolution of some administrative and financial power to regional and local administrative units. At the same time, greater curriculum flexibility, such as in the cases of Spain and Poland, can be achieved to tackle both under-achievement and cultural and socio-economic diversity. As in the cases of Spain, Portugal and Poland, social participation in all education levels should be increased.
- In all three countries, the EU accession process coincided with the overthrow of dictatorships and centralized regimes, the effects of which in return were reflected in the 'democratization' of the curricula through the elimination of ideological content. A thorough scrutiny of Turkish primary and secondary school curricula can also underline the need for an update in line with European Union's Copenhagen criteria.

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6. ANNEX 1: SUPPLEMENTARY TABLES

I. ECONOMIC PROFILE

A. GDP and Structure of the Economy

Table 1: Gross Domestic Product in USD

GDP (US \$ billions)			
YEAR	SPAIN	POLAND	PORTUGAL
1984	163.6	NA	22.9
1994	504.3	98.5	90.5
2003	838.7	209.6	147.9
2004	991.4	241.8	168.3

Source: The World Bank Group, WDI, 2005

Table 2: GDP Growth Rate

GDP annual percentage change %			
YEAR	SPAIN	POLAND	PORTUGAL
1961-1973	7.2	NA	6.9
1974-1985	1.8	NA	2.2
1986-1990	4.5	NA	5.7
1991-1995	1.5	4.6	1.7
1996-2000	4.1	5.4	4.0
2001-2005	3.6	3.0	0.7

Source: European Commission, *European Economy*, 2003

Table 3: GDP Growth Rate Per Capita

GROWTH RATE OF REAL GDP PER CAPITA %			
YEAR	SPAIN	POLAND	PORTUGAL
1984-1994	3.2	NA	4.0
1995-1999	3.9	4.0	5.4
2000-2004	2.2	3.8	0.6
2005	2	2.4(f)	0(f)
2006	2 (f)	4.8 (f)	0(f)

Source: OECD online database

Table 4: GDP per capita in PPS:

GDP PER CAPITA IN PPS (Purchasing Power Standards) (EU-25=100)			
YEAR	SPAIN	POLAND	PORTUGAL
1995	86.8	40.4	75.1
1996	87	42(e)	75
1997	87	44(e)	76
1998	89	45(e)	78
1999	92	46	81
2000	92	47	80
2001	93	46	80
2002	95	46	79
2003	97	47	73
2004	97	49	72
2005	99	50(f)	71(f)
2006	100(f)	52(f)	71(f)
2007	100(f)	53(f)	70(f)

Source: Eurostat online database

Table 5: GDP Index

GROSS DOMESTIC PRODUCT AT CONSTANT PRICES, index: 2000=100			
YEARS	SPAIN	POLAND	PORTUGAL
1970	39.8	NA	34.8
1975	51.6	NA	43.1
1980	56.8	NA	55.2
1985	60.9	NA	57.7

1990	75.9	69.9	76.1
1991	77.8	65.0	79.4
1992	78.5	66.7	80.3
1993	77.7	69.2	78.6
1994	79.6	72.8	79.4
1995	81.8	77.9	82.8
1996	83.7	82.6	85.7
1997	87.0	88.2	89.1
1998	90.9	92.4	93.2
1999	95.2	96.2	96.7
2000	100.0	100.0	100.0
2001	103.5	101.0	101.7
2002	106.3	102.4	102.1
2003	109.5	106.3	101.0
2004	112.9	112.0	101.9

Source: OECD Productivity Database, January 2006

Table 6: Comparative GDP per capita indicators

	GDP PER HEAD AS PERCENTAGE OF EU-15 AVERAGE	
YEAR	Portugal	SPAIN
1983	55.1	70.5
1988	56.5	72.4
1993	68.2	77.8
1995	68.4	76.2

Source: European Commission 1996

Table 7: Sectoral contribution to GDP in Spain

SPAIN				
SECTORAL CONTRIBUTION TO GDP (% 1986 CONST PRICES)				
Year	Agriculture	Industry	Construction	Services
1975	6.7	30.8	9.4	53.0
1985	6.7	30.4	6.7	56.1
1995	3.9	29.8	7.9	58.2
1996	4.7	29.5	9.4	60.7

Source: Sevilla (1997), presented in table form in Farrel (2000), *Spain in the EU. The Road to Economic Convergence*, p. 22

Table 8: Sectoral contribution to GDP in Portugal

PORTUGAL			
SECTORAL CONTRIBUTION TO GDP			
Year	Agriculture	Industry	Services
1970	NA	NA	NA
1973	16.3	44.6	39.1
1980	NA	NA	NA
1982	8.5	37.8	53.8
1990	6.3	38.9	54.7
1994	NA	NA	NA

Source: OECD database

Table 9: Structure of economy: growth of the main sectors

	AGRICULTURE (average annual growth %)			INDUSTRY (average annual growth %)		
YEAR	SPAIN	POLAND	PORTUGAL	SPAIN	POLAND	PORTUGAL
1984-94	3.0	NA	-0.1	3.0	NA	3.7
1994-04	0.6	1.7	-0.4	3.8	4.0	3.6
2003	0.7	0.7	NA	2.0	4.8	NA
2004	NA	1.0	NA	NA	7.4	NA
	MANUFACTURING (average annual growth %)			SERVICES (average annual growth %)		
YEAR	SPAIN	POLAND	PORTUGAL	SPAIN	POLAND	PORTUGAL
1984-94	3.0	NA	-0.1	3.5	NA	4.1
1994-04	3.6	6.4	3.6	3.2	4.0	3.2
2003	2.0	7.3	NA	2.0	3.1	NA
2004	NA	10.0	NA	NA	6.7	NA

Source: The World Bank Group, WDI, 2005

B. Productivity Indicators

Table 10: Labour productivity growth (1961-2005)

Labour productivity growth			
YEAR	SPAIN	POLAND	PORTUGAL
1961-73	6.5	NA	6.6
1974-85	3.2	NA	2.6
1986-90	0.9	NA	4.6
1991-95	1.9	NA	2.3
1992	NA	NA	NA

1993	NA	6.2	NA
1994	NA	4.2	NA
1995	NA	5.1	NA
1996-00	0.7	4.7	1.9
2001-05	0.7	3.2	0.7

Source: European Commission, *European Economy*, 2003

Table 11: Total factor productivity growth (1961-2005)

TOTAL FACTOR PRODUCTIVITY GROWTH (%)			
YEAR	SPAIN	POLAND	PORTUGAL
1961-73	4.9	NA	6.6
1974-85	1.4	NA	2.6
1986-90	0.8	NA	4.6
1991-95	0.5	NA	2.3
1996-00	0.6	NA	1.9
2001-05	0.0	NA	0.7

Source: European Commission, *European Economy*, 2003

Table 12: Labour productivity per person employed (1996- 2007)

LABOUR PRODUCTIVITY PER PERSON EMPLOYED EU-25=100 (GDP in PPS/person employed)			
YEAR	SPAIN	POLAND	PORTUGAL
1996	102.3	44.5(e)	67.9
1997	99.8	45.6(e)	68.8
1998	99.1	46.2(e)	69.8
1999	100.2	49.1	71.9
2000	97.5	51.3	72.0
2001	97.3	50.3	71.4
2002	98.6	51.5	71.3
2003	99.7	50.5	65.9(f)
2004	98.9	61.9	65.8(f)
2005	98.6	62.1(f)	65.5(f)
2006	97.6(f)	62.4(f)	65.0(f)
2007	96.5(f)	63.2(f)	64.5(f)

Source: Eurostat online database

Table 13: Labour productivity per hour worked (1993-2004)

LABOUR PRODUCTIVITY PER HOUR WORKED (Index 1995=100), GDP/Hour at 1995 constant prices			
YEAR	SPAIN	POLAND	PORTUGAL
1993	NA	NA	96.1
1994	NA	NA	98.7
1995	100	NA	100
1996	101.3	NA	104.6
1997	101.3	NA	108.9
1998	101.5	NA	111.1
1999	101.9	NA	112.5
2000	102.3	25.1	117
2001	103.9	26.1	116.8
2002	105.4	27.2	116.6

2003	107.1	28.5	117.1
2004	NA	29.5	116.9

Source: OECD online database

Table 14: The growth of the productivity level (relative to USA)

RELATIVE PRODUCTIVITY LEVELS BY COUNTRY (USA=100)					
No	COUNTRY	YEAR 1975	No	COUNTRY	YEAR 2002
1	Sweden	108.8	1	Luxemburg	165.8
2	Luxemburg	106.1	2	Ireland	103.7
3	USA	100.0	3	Norway	102.4
4	Holland	98.9	4	USA	100.0
5	Belgium	91.4	5	Belgium	95.0
18	Spain	71.4	20	Spain	68.5
27	Portugal	42.6	24	Portugal	49.8
34	Poland	25.2	33	Poland	29.0

Source: World Bank, WDI, 2004

Table 16: Relative labour productivity growth (USA=1)

RELATIVE PRODUCTIVITY GROWTH (1975-2002)		
No	COUNTRY	LABOUR PRODUCTIVITY GROWTH (%)
11	Poland	1.16
12	Portugal	0.58
27	Spain	-0.41
28	Turkey	-0.44

Source: World Bank, WDI, 2004

Table 15: Labour productivity growth among the "poor 4" of the EU-15:

LABOUR PRODUCTIVITY (AVERAGE PERCENTAGE GROWTH)				
YEAR	PORTUGAL	SPAIN	GREECE	IRELAND
1950-73	6.0	6.4	6.4	4.3
1973-92	1.9	3.3	2.5	4.1
1996	2.5	0.5	1.4	3.8

Source: Maddison (1996), European Monetary Institute, presented in table form in Corkill (1999) *Development of Portugese Economy: Case of Europeanization*, p. 208

C. Capital Inflows

Table 17: Foreign Direct Investments

FDI (MILLIONS USD), INFLOWS (in millions USD)			
YEAR	SPAIN	POLAND	PORTUGAL
1974-1980 (Cumulative flows)	7060	NA	535

1981-1990 (Cumulative flows)	47292	NA	5636
1992	13350.7	678.0	1903.8
1993	9571.6	1715.0	1516.2
1994	9275.8	1875.0	1254.6
1995	6285.1	3659.0	660.1
1996	6820.6	4498.0	1488.5
1997	6837.8	4908.0	2478.8
1998	11798.4	6364.9	3143.5
1999	15758.8	7269.8	1233.5
2000	37 530.2	9341.0	6788.8
2001	28 010.1	5713.0	5893.7
2002	35 939.8	4131.0	1846.3
2003	25 649.3	4225.0	962.5

Source: OECD online database, <http://www.oecd.org/dataoecd>

Table 18: Shares of Structural and Cohesion Funds, 1994-1999

SHARES OF STRUCTURAL AND COHESION FUNDS, 1994-99 (PERCENTAGE OF PROJECTED TOTAL AT 1994 PRICES)			
	PORTUGAL	SPAIN	GREECE
STRUCTURAL FUNDS	10.1	22.9	10.1
COHESION FUNDS	18.0	55.0	18.0

Source: European Commission, cited in *Financial Times*, 18 November 1997, presented in table form in Corkill (1999) *Development of Portuguese Economy: Case of Europeanization*. p 220.

Table 19: EU transfers, PORTUGAL:

EU TRANSFERS (MILLIONS OF CONTOS)			
YEAR	OUTGOING	INFLOWS	BALANCE AS % OF GDP

1986	41.1	66.1	0.6
1987	56.2	106.0	1.0
1988	69.2	166.7	1.6
1989	82.8	198.7	1.6
1990	94.8	215.5	1.4
1991	130.2	300.9	1.7
1992	146.3	557.4	3.6
1993	162.9	619.4	3.8

Source: Lopes (1996:182), presented in table form in Corkill (1999) *Development of Portuguese Economy: Case of Europeanization*. p 220.

D. Labour Market Indicators

Table 20: Employment Growth (1961-2005)

EMPLOYMENT (annual percentage change %)			
YEAR	SPAIN	POLAND	PORTUGAL
1961-73	0.7	NA	0.0
1974-85	-1.3	NA	0.7
1986-90	3.6	NA	1.8
1991-95	-0.3	NA	-0.4
1996-00	2.3	-0.3	1.9
2001-05	2.6	-0.7	0.2

Source: European Commission, *European Economy*, 2003

Table 21: Total employment growth (1994-2005)

TOTAL EMPLOYMENT GROWTH (annual % change in total employed population)			
YEAR	SPAIN	POLAND	PORTUGAL
1994	-0.5	NA	NA
1995	1.9	NA	NA
1996	1.7	1.9	NA
1997	3.6	2.8	NA
1998	4.5	2.3	NA
1999	4.6	-2.7	1.9
2000	5.1	-2.3	1.7
2001	3.2	1.5	1.6
2002	4.4	-1.9	0.5
2003	2.6	-1.2(e)	-0.4(f)
2004	2.6	-0.3	0.1(f)

2005	3.6	0.9	0.0(f)
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Source: Eurostat online database

Table 22: Activity rate (1961-2005)

ACTIVITY RATE (%)			
YEAR	SPAIN	POLAND	PORTUGAL
1961-73	62.6	NA	68.8
1974-85	58.5	NA	69.1
1986-90	59.2	NA	69.6
1991-95	61.6	NA	70.1
1996-00	63.7	65.7	70.8
2001-05	67.2	64.5	73.0

Source: European Commission, *European Economy*, 2003

Table 23: Unemployment rate (1961- 2005)

UNEMPLOYMENT RATE (Eurostat definition, annual average change)			
YEAR	SPAIN	POLAND	PORTUGAL
1961-73	0.8	NA	2.5
1974-85	8.2	NA	7.0
1986-90	15.4	NA	6.4
1991-95	17.1	NA	5.7
1996-00	12.8	12.6	5.6
2001-05	10.0	20.0	6.9

Source: European Commission, *European Economy*, 2003

Table 24: Total employment rate (1994-2005)

TOTAL EMPLOYMENT RATE %			
YEAR	SPAIN	POLAND	PORTUGAL
1994	46.1	NA	64.1
1995	46.9	NA	63.7
1996	47.9	NA	64.1
1997	49.5	58.9	65.7
1998	51.3	59.0	66.8(b)
1999	53.8	57.6	67.4
2000	56.3	55.0	68.4
2001	57.8	53.4	69.0
2002	58.5	51.5	68.8
2003	59.8	51.2	68.1
2004	61.1	51.7	67.8
2005	63.3(b)	52.8	67.5

(b): break in series

Source: Eurostat online database

Table 25: Total unemployment rate (1994-2004)

TOTAL UNEMPLOYMENT RATE %			
YEAR	SPAIN	POLAND	PORTUGAL
1994	19.5	NA	6.9
1995	18.4	NA	7.3

1996	17.8	NA	7.3
1997	16.7	10.9	6.8
1998	15.0	10.2	5.1
1999	12.5	13.4	4.5
2000	11.1	16.1	4.0
2001	10.3	18.2	4.0
2002	11.1	19.9	5.0
2003	11.1	19.6	6.3
2004	10.7	19.0	6.7
2005	9.2	17.7	7.6

Source: Eurostat online database

Table 26: Unemployment rate of men (1983-2005)

UNEMPLOYMENT RATE OF MEN			
YEAR	SPAIN	POLAND	PORTUGAL
1983	NA	NA	NA
1986	19,8	NA	7,0
1989	13,3	NA	3,6
1992	13,7	NA	3,5
1994	16.2	NA	6.1
1995	14.8	NA	6.5
1996	14.3	NA	6.5
1997	13.1	9.1	6.1
1998	11.2	8.5	4.1
1999	9.0	11.8	4.0
2000	7.9	14.4	3.2
2001	7.5	16.9	3.2
2002	8.1	19.1	4.1
2003	8.2	19.0	5.4
2004	8.0	18.2	5.9
2005	7.0	16.6	6.7

Source: Labor force survey, 1993. Eurostat, in *Eurostat yearbook, 1995, A Statistical Eye on Europe 1983-2003*; Eurostat online database

Table 28: Employment rate of men (1983-2005)

EMPLOYMENT RATE OF MEN			
YEAR	SPAIN	POLAND	PORTUGAL
1983	NA	NA	NA
1986	63,3	NA	76,9
1989	67,0	NA	78,9
1992	65,7	NA	77,2
1994	61.8	NA	74.5
1995	62.5	NA	73.5
1996	62.9	NA	73.9
1997	64.5	66.8	75.5
1998	66.8	66.5	75.9(b)
1999	69.3	64.2	75.8
2000	71.2	61.2	76.5
2001	72.5	59.2	77.0
2002	72.6	56.9	76.5
2003	73.2	56.5	75.0
2004	73.8	57.2	74.2
2005	75.2(b)	58.9	73.4

Source: Labour force survey, 1993, Eurostat in *Eurostat yearbook 1995, A Statistical Eye on Europe 1983-2003*; Eurostat online database

Table 29: Unemployment rate of women (1983-2005)

UNEMPLOYMENT RATE OF WOMEN			
YEAR	SPAIN	POLAND	PORTUGAL
1983	NA	NA	NA
1986	25,4	NA	11,9
1989	25,6	NA	7,6
1992	25,3	NA	4,9
1994	25.4	NA	7.9
1995	24.6	NA	8.2
1996	23.8	NA	8.2
1997	22.6	13.0	7.6
1998	21.1	12.2	6.3
1999	18.0	15.3	5.2
2000	16.0	18.1	4.9
2001	14.8	19.8	5.0
2002	15.7	20.9	6.0
2003	15.3	20.4	7.2
2004	14.5	19.9	7.6
2005	12.2	19.1	8.7

Source: Labour force survey, 1993. Eurostat, in *Eurostat yearbook 1995, A Statistical Eye on Europe 1983-2003*; Eurostat online database

Table 30: Employment rate of women (1983-2005)

EMPLOYMENT RATE OF WOMEN			
YEAR	SPAIN	POLAND	PORTUGAL
1983	NA	NA	NA
1986	25.1	NA	47.3

1989	29.5	NA	52.4
1992	31.3	NA	55.7
1994	30.7	NA	54.4
1995	31.7	NA	54.4
1996	33.1	NA	54.9
1997	34.6	51.3	56.5
1998	35.8	51.7	58.2(b)
1999	38.5	51.2	59.4
2000	41.3	48.9	60.5
2001	43.1	47.7	61.3
2002	44.4	46.2	61.4
2003	46.3	46.0	61.4
2004	48.3	46.2	61.7
2005	51.2	46.8	61.7

Source: Labor force survey, 1993 in *Eurostat Yearbook 1995, A Statistical Eye on Europe 1983-2003*; Eurostat online database

Table 31: Comparative Unemployment Rates (1986-1997)

COMPARATIVE UNEMPLOYMENT RATES (AS PERCENTAGE OF WORKFORCE)				
YEAR	PORTUGAL	SPAIN	IRELAND	EU AVERAGE
1986	8.6	21.0	17.0	10.3
1987	7.1	20.5	16.8	10.0
1988	5.8	19.5	16.1	9.4
1989	5.1	17.3	14.6	8.5
1990	4.7	16.3	13.2	7.9
1991	4.2	16.3	14.7	8.5
1992	4.1	18.4	15.5	9.6
1993	5.6	22.7	15.6	11.1
1994	6.9	24.2	14.2	11.6
1995	7.2	22.9	12.9	11.2
1996	7.3	22.2	11.9	NA
1997	6.7	20.8	10.2	NA

Source: OECD Economic Outlook 59, June 1996, June 1998, presented in table form in Corkill (1999) *Development of Portuguese Economy: Case of Europeanization*. p 174.

Table 32: Structure of employment (1980-1997)

STRUCTURE OF EMPLOYMENT (% total employment)						
YEAR	AGRICULTURE			INDUSTRY		
	SPAIN	POLAND	PORTUGAL	SPAIN	POLAND	PORTUGAL

1980-84	19.2	NA	NA	38.0	NA	NA
1985	17.4	NA	NA	30.4	NA	NA
1987	15.2	NA	22.2	32.4	NA	34.1
1992	11.4	27	11.5	32.7	32	32.6
1993	NA	27	NA	NA	31	NA
1994	NA	23	NA	NA	32	NA
1995	10.1	22	NA	32.1	32	NA
1996	9.2	21	NA	30.1	32	NA
1997	8.3	20	11.4	29.9	32	31.0
1998	NA	18	NA	NA	32	NA
1999	NA	18	NA	NA	31	NA
2000	NA	19	NA	NA	31	NA
2001	NA	19	NA	NA	30	NA

SERVICES			
YEARS	SPAIN	POLAND	PORTUGAL
1980-84	47.3	NA	NA
1985	52.2	NA	NA
1987	52.4	NA	43.7
1992	57.2	41	56.0
1993	NA	42	NA
1994	NA	45	NA
1995	56.6	46	NA
1996	60.7	47	NA
1997	61.8	48	55.7
1998	NA	50	NA
1999	NA	51	NA
2000	NA	50	NA
2001	NA	51	NA

Source: Martin (1997), presented in table form in Farrel (2000), *Spain in the EU: The Road to Economic Convergence*, p 25; Statistical Yearbooks of Poland 1997-2002, GUS Warsaw, in *Working Out Employment. Human Development Report Poland 2004*, United Nations Development Program, 2004, p 45; Labour force survey, results 1997. Eurostat, in table form in Eurostat Yearbook. A Statistical eye on Europe 1987-1997.

Table 33: Sectoral Share of Employment in Portugal

YEAR	EMPLOYMENT		
	AGRICULTURE*	INDUSTRY	SERVICES
1970	33.0	36.0	31.0
1973	NA	NA	NA
1980	28.5	35.9	35.6
1982	NA	NA	NA
1990	17.9	34.5	47.6
1994	11.8	32.6	55.6

* includes forestry and fishing, secondary includes mining.

Source: Baer and Leite (1992:23), Barreto (1996:103), Eurostat 1995, presented in table form in Corkill, (1999) *Development of Portuguese Economy: Case of Europeanization*. p 170.

Table 34: Employment growth by sectors, Portugal

EMPLOYMENT GROWTH BY SECTORS (PERCENTAGE GROWTH RATE)			
YEAR	AGRICULTURE	INDUSTRY	SERVICES
1986	-8.1	0.7	4.4
1987	4.0	4.9	0.2
1988	-4.4	3.3	5.6
1989	-6.4	2.8	5.9
1990	-4.1	0.9	5.8
1991	0.5	0.3	5.9
1992	NA	NA	NA
1993	-1.6	-2.7	-1.7
1994	1.6	-0.4	-0.3

Source: OECD 1996:82, presented in table form in Corkill (1999) *Development of Portuguese Economy: Case of Europeanization*, p 174.

Table 35: The active rural labour force in Portugal 1980-93

PORTUGAL	
YEAR	ACTIVE LABOUR FORCE IN THOUSANDS
1980	1202
1981	1135
1982	1098
1983	1012
1984	1017
1985	1020
1986	942
1987	983
1988	983
1989	967
1990	846
1991	714
1992	650
1993	577

Source: Publico & UAL 1996:148, presented in table form in Corkill (1999) *Development of Portuguese Economy: Case of Europeanization*. p 120.

E. Other Macroeconomic Indicators

Table 36: Current Account (1961-2005)

CURRENT ACCOUNT (average annual change)			
YEAR	SPAIN	POLAND	PORTUGAL
1961-73	-0.7	NA	0.4
1974-85	-1.5	NA	-6.6
1986-90	-1.5	NA	-0.2
1991-95	-2.0	NA	-2.6
1992	NA	9.7	NA
1993	NA	0.2	NA
1994	NA	2.4	NA
1995	NA	1.5	NA
1996-00	-1.6	-4.1	-23.8
2001-05	-3.1	-3.3	-6.0

Source: European Commission, *European Economy*, 2003

Table 37: GDP deflator (1961-2005)

GDP deflator (average annual change)			
YEAR	SPAIN	POLAND	PORTUGAL
1961-73	7.2	NA	3.9
1974-85	15.0	NA	20.8
1986-90	7.4	NA	13.0
1991-95	5.4	NA	7.9
1992	NA	38.6	NA
1993	NA	30.6	NA
1994	NA	37.2	NA
1995	NA	28.0	NA
1996-00	2.9	12.6	3.4
2001-05	3.8	2.6	3.5

Source: European Commission, *European Economy*, 2003

Table 38: Long-term interest rates (1961-2005)

LONG-TERM INTEREST RATES (average annual change)			
YEAR	SPAIN	POLAND	PORTUGAL
1961-73	NA	NA	NA
1974-85	NA	NA	NA
1986-90	12.8	NA	16.8
1991-95	11.1	NA	11.8
1996-00	6.2	9.8 (1999-2002)	6.0
2001-05	5.0 (2001-03)	NA	6.1(2001-04)

Source: European Commission, *European Economy*, 2003

II. DEMOGRAPHIC PROFILE

Table 39: Total population (1960-2005)

POPULATION ON 1 JANUARY, TOTAL, 1960-2005 (1000)			
YEAR	SPAIN (excluding Ceuta and Mellila from 1962 to 1971)	POLAND	PORTUGAL

1960	30 327,0	29 480,0	8 826,0
1965	31 776,3	31 339,0	9 028,7
1970	33 587,6	32 671,0	8 697,6
1975	35 338,0	33 846,0	8 879,1
1980	37 241,9	35 414,0	9 713,6
1985	38 353,0	37 063,3	10 008,5
1990	38 826,3	38 038,4	9 919,7
1994	39 246,8	38 504,7	9 990,6
1995	39 343,1	38 580,6	10 017,6
2000	40 049,7	38 653,6	10 195,0
2005	43 038,0	38 173,8	10 529,3

Source: Eurostat. Demographic Statistics 1997; Eurostat online database

Table 40. Population change (1960- 1995)

POPULATION GROWTH						
YEAR	SPAIN			POLAND		
	Crude rate of natural increase (annual average, per 1000 population)	Crude rate of net migration (annual average, per 1000 population)	Crude rate of increase (annual average, per 1000 population)	CRUDE RATE OF NATURAL INCREASE (per 1000 population)	CRUDE RATE OF NET MIGRATION (per 1000 population)	CRUDE RATE OF INCREASE (per 1000 population)
1960-1964	12,8	-3,5	9,3	15,0	-0,8	14,2
1965-1969	12,0	-0,9	11,0	10,0	-0,8	9,9
1970-1974	11,1	-0,9	10,2	8,5	-0,4	8,1
1975-1979	9,7	0,8	10,5	10,2	-0,2	10,0
1980-1984	5,9	0,0	6,0	9,6	-0,6	9,0
1985-1989	3,0	-0,5	2,5	7,9	-0,5	7,4
1990-1994	1,4	0,4	1,8	4,1	-0,3	3,8
1995	0,4	1,2	1,6	1,2	-0,5	0,7
POPULATION GROWTH OF PORTUGAL						
YEAR	Crude rate of natural increase (annual average, per 1000 population)		Crude rate of net migration (annual average, per 1000 population)		Crude rate of increase (annual average, per 1000 population)	

1960	13,3	-8,7	4,5
1965	11,6	-19,1	-7,5
1970	9,4	-5,2	4,1
1975	8,3	9,7	18,0
1980	5,5	0,5	6,0
1985	2,8	-4,5	-1,8
1990	1,1	-1,3	-0,2
1995	0,3	0,5	0,9

Source: Eurostat. Demographic Statistics 1997

Table 41 : Proportion of age classes to total population

SPAIN				
YEAR	PROPORTION OF TOTAL POPULATION AGED 0-14 (%)	PROPORTION OF TOTAL POPULATION AGED 15-24 (%)	PROPORTION OF POPULATION AGED 25-64 (%)	PROPORTION OF TOTAL POPULATION AGED +65 (%)
1960	27,4	15,3	49,1	8,2
1965	27,4	15,6	48,2	8,8
1970	27,7	15,4	47,4	9,5
1975	27,3	15,6	46,9	10,2
1980	26,0	16,5	46,7	10,8
1985	23,5	16,7	47,9	11,9
1990	20,2	16,9	49,5	13,4
1995	16,9	16,5	51,5	15,1
2000	14,9	14,8	53,5	16,8
2005	14,5	12,3	56,4	16,8

PORTUGAL				
YEAR	PROPORTION OF TOTAL POPULATION AGED 0-14 (%)	PROPORTION OF TOTAL POPULATION AGED 15-24 (%)	PROPORTION OF TOTAL POPULATION AGED 25-64 (%)	PROPORTION OF TOTAL POPULATION AGED + 65 (%)
1960	29,2*	16,3*	46,5	8,0*
1965	29,0	16,4	46,4	8,2
1970	28,5*	15,8*	46	9,7*
1975	27,9	16,9	45,4	9,8
1980	25,5*	16,6*	46,5	11,4*
1985	23,9	16,8	47,6	11,7
1990	20,8	16,2	50,7	12,3
1995	18,0	16,5	51,1	14,4
2000	16,2	14,7	53,1	16,0
2005	15,6	12,6	54,8	17,0

*data from nearest census

POLAND				
YEAR	PROPORTION OF TOTAL POPULATION AGED 0-14 (%)	PROPORTION OF TOTAL POPULATION AGED 15-24 (%)	PROPORTION OF TOTAL POPULATION AGED 25-64 (%)	PROPORTION OF TOTAL POPULATION AGED + 65 (%)

1994	23.7	15.1	50.5	10.7
1995	23.1	15.5	50.4	11.0
2000	19.6	16.9	51.5	12.0
2001	19.1	16.9	51.7	12.3
2002	18.4	16.9	52.1	12.6
2003	17.8	16.8	51.7	12.7
2004	17.2	16.7	53.1	13.0
2005	16.7	16.5	53.7	13.1

Source: Eurostat. Demographic Statistics 1997; Eurostat online database

Table 42: Age Dependency Ratio (1st variant)

AGE DEPENDENCY RATIO, 1st VARIANT (population aged 0-14 and 65 and over a percentage of population aged 15-64)			
YEAR	SPAIN	PORTUGAL	POLAND
1960	54,9	59,1	NA
1965	56,7	59,5	NA
1970	59,4	61,7	NA
1975	60,0	60,7	NA
1980	58,3	58,6	NA
1985	54,9	55,4	NA
1990	50,8	51,6	NA
1995	47,0	48,0	50.8
2000	NA	NA	46.1
2005	NA	NA	42

Source: Eurostat. Demographic Statistics, 1997

Table 43: Age Dependency Ratio (2nd variant)

AGE DEPENDENCY RATIO, 2nd VARIANT (POPULATION AGED 0-19 AND 60 AND OVER AS A PERCENTAGE OF POPULATION AGED 20-59)		
YEAR	SPAIN	PORTUGAL
1960	91,2	97,2*
1965	94,9	101,0
1970	98,6	105,7*
1975	100,9	104,2
1980	98,1	100,4*
1985	95,8	96,4
1990	90,5	91,6
1995	83,9	85,1

Source: Eurostat. Demographic Statistics, 1997

Table 44: Dependency ratio of population at working age % (1980-2003)

DEPENDANCY RATIO OF POPULATION AT WORKING AGE %	
YEARS	POLAND
1980	69
1990	74
1993	72
1994	71

1995	70
1996	69
1997	68
1998	66
1999	66
2000	65
2001	63
2002	61

Source: Demography Yearbook of Poland 2002, GUS, Warsaw 2002, presented in table form in *Working out Employment. Human Development Report Poland 2004*, United Nations Development Programm, 2004, p 44

Table 45: Total fertility rate, Net reproduction rate, Gross reproduction rate (1960- 2005)

YEAR	TOTAL FERTILITY RATE			NET REPRODUCTION RATE		
	SPAIN	POLAND	PORTUGAL	SPAIN	POLAND	PORTUGAL
1960	2,86	2,98	3,10	1,24	NA	1,31
1965	2,94	2,52	3,14	1,35	NA	1,36
1970	2,90	2,20	2,83	1,35	1,01	1,23
1975	2,80	2,27	2,58	1,31	1,06	1,19
1980	2,20	2,28	2,18	1,08	1,07	1,03
1985	1,64	2,33	1,72	0,77	1,10	0,83
1990	1,36	2,04	1,57	0,64	0,97	0,72
1995	1,18	1,61	1,40	0,56	0,77	0,67

GROSS REPRODUCTION RATE			
Year	Spain	Poland	Portugal
1960	1,32	1,44	1,50
1965	1,42	1,22	1,50
1970	1,39	1,06	1,34
1975	1,35	1,10	1,26
1980	1,11	1,11	1,07
1985	0,79	1,13	0,85
1990	0,65	0,99	0,74
1995	0,57	0,78	0,69

Source: Eurostat, Demographic Statistics, 1997

Table 46: Crude death rate (1994-2003)

CRUDE DEATH RATE (per 100.000 inhabitants)			
YEARS	SPAIN	POLAND	PORTUGAL
1994	864.0	NA	1006.1
1995	883.0	NA	1048.1
1996	894.8	NA	1066.4
1997	888.3	NA	1042.1
1998	913.8	NA	1052.1
1999	936.5	986.6	1064.4
2000	902.6	952.2	1034.8
2001	894.4	940.1	1025.5
2002	892.2	940.3	1029.0

2003	916.2	956.0	1045.4
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Source: Eurostat online database

Table 47: Infant mortality rate (1960-2004)

INFANT MORTALITY RATE (per 1000 live births)			
YEAR	SPAIN	POLAND	PORTUGAL
1960	43,7	56,1	77,5
1965	37,8	41,7	64,9
1970	28,1	33,2	55,5
1975	18,9	24,9	38,9
1980	12,3	21,3	24,3
1985	8,9	18,5	17,8
1990	7,6	16,0	11,0
1995	5,5	13,6	7,5
2000	3.9	8.1	5.5
2004	3.5	6.8	4.0

Source: Eurostat, Demographic Statistics, 1997; Eurostat online database

Table 48: Life expectancy at birth (1993-2004)

LIFE EXPECTANCY AT BIRTH			
YEARS	SPAIN	POLAND	PORTUGAL
1992	NA	71.2	NA
1993	77.5	71.8	74.3
1994	77.8	71.9	75.2
1995	77.9	72.1	75.1
1996	78.0	72.5	75.1
1997	78.5	72.8	75.5
1998	78.6	73.0	75.7
1999	78.6	73.1	76.0
2000	79.1	73.8	76.6
2001	79.4	74.2	76.6
2002	79.5	74.4	76.9
2003	80.2	75.0	77.1
2004	80.5	75.0	77.3

Source: Eurostat online database

Table 49: Human Development Index*

HDI (TREND)			
YEARS	SPAIN	POLAND	PORTUGAL
1975	0.837	NA	0.787
1980	0.854	NA	0.802
1985	0.868	NA	0.826
1990	0.886	0.803	0.849
1995	0.904	0.816	0.878
2000	0.918	0.845	0.898
2003	0.928	0.858	0.904

Calculation of average achievement in 3 basic dimensions of human development: i) life expectancy index, ii) education index, iii) GDP index

Source: Human Development Reports online database

III. HUMAN CAPITAL INDICATORS

Table 50: Educational attainment of adult population

EDUCATIONAL ATTAINMENT OF ADULT POPULATION (+15)				
YEAR	SPAIN	POLAND	PORTUGAL	TURKEY
1985	5.8	8.8	3.9	3.7
1990	6.4	9.5	4.9	4.2
1995	6.8	9.6	5.5	5.1
2000	7.3	9.8	5.9	5.3

Source: Barro and Lee, 2000

Table 51: The educational attainment rate of adult population (25-64) by level of education

PERCENTAGE OF THE POPULATION AGED 25 TO 64 HAVING COMPLETED AT LEAST UPPER SECONDARY EDUCATION			
YEAR	SPAIN	POLAND	PORTUGAL
1992	24.0	NA	19.9
1993	25.5	NA	20.0
1994	27.5	NA	20.9
1995	29.5	NA	21.9
1996	32.2	NA	21.8
1997	33.7	76.3	22.0
1998	34.5	77.8	17.8
1999	36.3	78.5	19.1
2000	38.3	79.7	19.6
2001	40.2	80.0	20.2
2002	42.7	80.8	21.0
2003	42.8	82.1	22.2
2004	45.0	83.4	35.3

Source: Eurostat online database

Table 52: Enrolment rate by level of education (T/M/F), (1970- 2005)

GROSS ENROLMENT RATIO BY SEX. PRE-PRIMARY.SPAIN			
YEAR	TOTAL	MALE	FEMALE
1970	31.5	30.1	33.0
1975	34.8	33.2	36.6
1980	44.4	43.0	45.8
1985	51.4	50.5	52.4
1990	59.4	58.6	60.3
1995	71.8	71.6	72.1

GROSS ENROLMENT RATIO BY SEX. PRE-PRIMARY; POLAND			
YEAR	TOTAL	MALE	FEMALE
1970	36.7	NA	NA
1975	53.1	NA	NA
1980	54.6	NA	NA
1985	50.6	NA	NA
1990	46.7	NA	NA

1995	45.9	46.2	45.6
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GROSS ENROLMENT RATIO BY SEX. PRE-PRIMARY. PORTUGAL			
YEAR	TOTAL	MALE	FEMALE
1970	3.1	3.1	3.1
1975	9.1	9.3	8.9
1980	20.2	20.2	20.2
1985	29.8	29.8	29.7
1990	52.9	53.2	52.6
1995	60.6	61.8	59.3

GROSS ENROLMENT RATIO BY SEX. PRIMARY. SPAIN			
YEAR	TOTAL	MALE	FEMALE
1970	122.8	120.9	124.9
1975	111.2	111.0	111.5
1990	109.0	109.5	108.5
1985	110.0	110.7	109.4
1990	108.6	109.1	107.9
1995	109.0	110.2	107.8

GROSS ENROLMENT RATIO BY SEX. PRIMARY. POLAND			
YEAR	TOTAL	MALE	FEMALE
1970	101.3	102.9	99.6
1975	100.4	101.6	99.2
1980	99.6	100.1	99.1
1985	101.1	102.0	100.2
1990	98.3	98.8	97.8
1995	96.4	97.3	95.5

GROSS ENROLMENT RATIO BY SEX. PRIMARY. PORTUGAL			
YEAR	TOTAL	MALE	FEMALE
1970	94.9	95.0	94.7
1975	116.8	117.9	115.6
1980	123.1	123.8	122.6
1985	128.7	132.0	125.3
1990	123.4	126.3	120.4
1995	127.6	130.6	124.4

GROSS ENROLMENT RATIO BY SEX. SECONDARY. SPAIN			
YEAR	TOTAL	MALE	FEMALE
1970	56.2	64.3	47.8
1975	72.9	74.4	71.4
1980	86.9	85.3	88.5
1985	98.5	94.7	102.4
1990	104.1	100.9	107.5
1995	122.1	116.1	128.4

GROSS ENROLMENT RATIO BY SEX. SECONDARY. POLAND			
YEAR	TOTAL	MALE	FEMALE

1970	62.1	59.8	64.4
1975	71.7	69.7	73.8
1980	77.1	74.7	79.7
1985	78.2	75.6	80.9
1990	81.5	79.6	83.4
1995	97.6	97.8	97.4

GROSS ENROLMENT RATIO BY SEX. SECONDARY. PORTUGAL			
YEAR	TOTAL	MALE	FEMALE
1970	56.1	60.4	51.6
1975	54.9	55.3	54.4
1980	37.2	34.3	40.3
1985	57.3	53.2	61.5
1990	67.4	62.5	72.4
1995	110.7	105.8	115.0

GROSS ENROLMENT RATIO BY SEX. TERTIARY. SPAIN			
YEAR	TOTAL	MALE	FEMALE
1970	8.7	12.6	4.7
1975	19.6	25.1	14.2
1980	23.2	25.7	20.5
1985	28.5	28.5	28.6
1990	36.7	35.1	38.3
1995	47.8	44.2	51.6

GROSS ENROLMENT RATIO BY SEX. TERTIARY. POLAND			
YEAR	TOTAL	MALE	FEMALE
1970	13.2	13.7	12.7
1975	16.5	14.9	18.2
1980	18.1	15.6	20.7
1985	17.1	14.8	29.5
1990	21.7	18.7	25.0
1995	24.7	21.0	28.5

GROSS ENROLMENT RATIO BY SEX. TERTIARY. PORTUGAL			
YEAR	TOTAL	MALE	FEMALE
1970	6.6	7.3	5.8
1975	10.3	11.3	9.3
1980	10.7	10.7	10.7
1985	12.3	11.3	13.3
1990	23.2	20.3	26.1
1995	38.8	33.4	44.4

Source: Unesco, Montreal, 2006, Global Education Digest 2006, *Comparing Education Statistics Around the World*, p 17

Table 53: Teaching Staff by Level of Education

TEACHING STAFF BY LEVEL OF EDUCATION		
	PRE-PRIMARY	PRIMARY

YEAR	SPAIN	POLAND	PORTUGAL	SPAIN	POLAND	PORTUGAL
1970	20745	37807	692	115607	228743	29554
1975	24621	44542	1903	172122	208173	59485
1980	35588	57730	5047	127679	195608	68746
1985	39573	78092	6408	137807	267620	73343
1990	40051	89864	9700	128034	317474	72140
1995	57017	73867	NA	162112	325601	NA
SECONDARY			TERTIARY			
YEAR	SPAIN	POLAND	PORTUGAL	SPAIN	POLAND	PORTUGAL
1970	90770	170457	26782	NA	NA	2869
1975	NA	169635	29714	29701	NA	7891
1980	190251	93346	32028	42831	NA	10695
1985	217364	95552	NA	47504	NA	12476
1990	285557	103814	64513	65736	NA	14432
1995	270866	121301	NA	88223	75432	NA

Source: Unesco, Montreal, 2006. Global Education Digest 2006. *Comparing Education Statistics Around the World*, p 12

**Table 54: Pupil/teacher ratio
Pre-Schooling**

	1970	1975	1980	1985	1990	1995	2000	2001	2002
Poland	19.7	24.9	23.4	17.4	13.6	13.3	12.0	13.0	13.0
Portugal	24.8	23.6	19.8	20.0	18.7	17.9	17.0	17.0	17.0
Spain	39.5	37.4	33.2	28.5	24.8	19.3	16.0	15.0	14.0

Primary School Education

	1970	1975	1980	1985	1990	1995	2000	2001	2002
Poland	23.0	20.7	21.3	17.9	16.3	15.4	11.0	11.0	11.0
Portugal	33.6	20.2	18.0	16.8	14.1	12.4	13.0	11.0	11.0
Spain	34.0	21.2	28.3	25.3	22.0	17.3	14.0	14.0	14.0

Secondary School Education

	1970	1975	1980	1985	1990	1995	2000	2001	2002
Poland	10.2	11.5	17.9	16.4	18.2	20.9	13.0	12.0	12.0
Portugal	16.6	15.7	12.4	13.6	10.4	11.4	10.0	9.0	9.0
Spain	21.5	22.7	20.9	21.0	16.7	15.2	11.0	11.0	11.0

Higher Education

	1970	1975	1980	1985	1990	1995	2000	2001	2002
Poland	-	-	-	-	-	9.5	20.0	21.0	21.0
Portugal	17.5	10.1	8.6	8.3	12.9	11.7	11.2	11.1	11.0
Spain	-	18.2	16.3	19.7	18.6	18.0	15.0	14.0	13.0

Source: UNESCO database

Table 55: School life expectancy

SCHOOL LIFE EXPECTANCY (years)			
YEAR	SPAIN	POLAND	PORTUGAL
1970	10.0	NA	8.9
1975	11.4	NA	10.4
1980	12.5	12.0	NA
1985	NA	12.0	NA
1990	NA	12.2	NA
1998	17.0	15.6	16.1
1999	17.0	16.1	16.5
2000	17.0	16.4	16.9
2001	17.0	16.9	17.0
2002	17.0	17.0	16.9
2003	16.9	17.2	17.0
2004	17.1	17.1	17.0

Source: Eurostat online database

Table 56: Average years of schooling

AVERAGE YEARS OF SCHOOLING, 1960-2002		
YEAR	SPAIN	PORTUGAL
1960	5.0	4.4
1965	5.1	4.6
1970	5.2	4.9
1975	5.5	5.3
1980	5.9	5.7
1985	6.5	6.1
1990	7.1	6.4
1995	NA	NA
2002	9.2	7.2

Source: De la Fuente and Domenech(2001) for 1990-95, Table in the main text for 2002, Commission services for population data, in European Commission, European Economy, 2003

Table 57: Public expenditure on education as percentage of gross national product

PUBLIC EXPENDITURE ON EDUCATION AS PERCENTAGE OF GDP, FOR ALL LEVELS OF EDUCATION COMBINED			
YEAR	SPAIN	POLAND	PORTUGAL
1992	4.77	NA	NA
1993	4.89	NA	NA
1994	4.71	NA	NA
1995	4.66	5.10	5.37
1996	4.62	4.67	5.32
1997	4.48	4.77	5.36
1998	4.42	5.02	5.36
1999	4.38	4.78	5.42
2000	4.28	4.87	5.42
2001	4.24	5.43	5.61
2002	4.25	5.42	5.54
2003	4.29	5.62	5.61

Source: Eurostat online database

Table 58: Public expenditure on education as percentage of total public expenditure

PUBLIC EXPENDITURE ON EDUCATION AS PERCENTAGE OF TOTAL PUBLIC EXPENDITURE			
YEAR	SPAIN	POLAND	PORTUGAL
1995	10.4	10.0	11.9
1996	10.7	9.2	12.1
1997	10.9	10.5	12.7
1998	11.2	10.5	12.7
1999	11.2	10.2	12.6
2000	11.0	11.2	12.6
2001	11.0	12.4	12.7
2002	11.0	12.3	12.5
2003	11.2	12.7	12.3

Source: Eurostat online database

Table 59: Literacy Rate

LITERACY RATE FOR + 15 YEARS OLD (%)		
YEAR	SPAIN	PORTUGAL
1970	91.5	73.7
1975	92.9	77.5
1980	94.3	81.8
1985	95.3	84.4
1990	96.3	87.2
1995	97.0	89.9
2000	97.6	92.2

Source: World Bank, WDI , 2005

Table 60: Results of PISA Math Test

PISA EDUCATION PERFORMANCE MEASURES				
YEAR	MATHS SPACE AND SHAPE SCALE		MATHS CHANGE RELATIONSHIP SCALE	
	POLAND	PORTUGAL	POLAND	PORTUGAL
2000	470	440	451	448
2003	490	450	484	468

Source: OECD online database, Programme For International Student Assessment

Table 61: Distribution of university graduates by field

YEAR	GRADUATES IN EDUCATION AND TRAINING FIELD AS % OF ALL FIELDS			GRADUATES IN HUMANITIES AND ART FIELDS AS % OF ALL FIELDS		
	SPAIN	POLAND	PORTUGAL	SPAIN	POLAND	PORTUGAL
1998	12.1	25.6	16.5	9.3	11.6	8.6
1999	11.9	22.0	16.1	9.4	10.6	9.2
2000	11.9	19.5	17.7	8.8	9.1	8.9

2001	12.1	17.3	19.7	9.4	10.1	7.9
2002	11.9	16.3	22.1	9.4	8.4	8.3
2003	11.2	16.1	21.9	9.2	8.3	8.3
2004	11.2	16.4	18.6	9.4	7.8	9.3

	SOCIAL SCIENCE, BUSINESS AND LAW FIELD			HEALTH AND WELFARE FIELD		
YEAR	SPAIN	POLAND	PORTUGAL	SPAIN	POLAND	PORTUGAL
1998	37.9	36.3	39.8	11.7	3.5	9.7
1999	37.2	42.2	38.7	10.9	3.0	10.1
2000	35.1	47.8	35.1	11.7	2.2	12.9
2001	32.0	49.4	31.9	12.0	2.6	16.7
2002	31.0	51.8	28.9	12.2	2.5	15.6
2003	30.0	51.5	28.1	12.6	2.3	15.5
2004	29.3	50.4	26.7	12.9	2.8	15.7

	SCIENCE, MATHEMATICS, COMPUTING FIELD		
YEAR	SPAIN	POLAND	PORTUGAL
1998	9.2	3.1	5.4
1999	9.3	4.0	5.8
2000	10.2	4.4	5.8
2001	10.5	4.8	5.4
2002	10.7	4.8	5.4
2003	11.2	5.1	6.0
2004	11.0	6.3	9.4

	ENGINEERING, MANUFACTURING AND CONSTRUCTION FIELD			AGRICULTURE AND VETERINARY FIELD		
YEAR	SPAIN	POLAND	PORTUGAL	SPAIN	POLAND	PORTUGAL
1998	12.7	12.0	12.5	2.6	2.8	3.2
1999	14.2	10.8	13.1	2.9	3.0	2.5
2000	14.8	10.3	12.8	2.5	2.3	2.2
2001	16.3	9.5	11.6	2.3	2.3	2.3
2002	16.6	9.4	12.9	2.3	2.1	2.1
2003	16.9	9.6	13.0	2.3	2.0	2.0
2004	16.9	8.6	12.7	2.1	1.8	1.8

	SERVICES FIELD			UNKNOWN FIELD		
YEAR	SPAIN	POLAND	PORTUGAL	SPAIN	POLAND	PORTUGAL
1998	4.4	5.0	4.2	0.0	26.7	NA
1999	4.1	4.6	4.4	0.1	27.2	NA
2000	4.9	4.3	4.6	0.0	31.2	NA
2001	5.4	3.9	4.4	0.1	37.6	NA
2002	6.0	4.7	4.8	0.1	30.9	NA
2003	6.5	5.2	5.2	0.1	26.8	NA
2004	7.2	5.8	5.9	0.1	23.0	NA

Source: Eurostat online database

Table 62: Rural vs. Urban educational performance in Portugal

A. Educational attainment rates

	Higher	Secondary and post-secondary	Basic vocational	Primary	Incomplete primary
Rural areas	4.3	22.4	29.2	38.3	5.0
Urban areas	13.7	38.6	21.1	22.2	1.5

B. Distribution of students with high and low scores in standardised tests

	Standardised test scores			
	Primary		Gymnasium	
	Low	High	Low	High
	Per cent		Per cent	
Rural areas	25.4	18.7	26.1	20.2
Urban areas	18.9	24.9	12.7	33.5

Source: Panel A: National Census, Central Statistical Office (GUS), 2002. Panel B: Central Examination Board, Ministry of National Education and Sport.