

SECTION VII

EDUCATIONAL OPPORTUNITY

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EDUCATION IN EUROPE AND THE LISBON BENCHMARKS

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In recent years, the Organization for Economic Cooperation and Development (OECD) has moved educational policies to the top of its agenda. One reason for this intensifying commitment lies in the fact that education is increasingly perceived as key to full employment in the knowledge economy. Without the OECD's active stance, many recent developments would not have been achievable. Who would have thought a decade ago that there could be an international large-scale study on the measurement of students' cognitive competencies? After all, such comparative research easily translates into naming and shaming practices that national policy makers usually seek to avoid. Based on hard indicators, it discloses the potential of their young people, reveals the efficiency of their educational systems, ascertains the scope of equal opportunity they provide, and outlines the sustainability of the educational systems, thus putting pressure on national policy makers to reflect upon the virtues of their policies.

Traditional comparisons of the percentages of young people who obtain various grade levels used to be countered by the assertion that educational systems differ so profoundly that such percentages say virtually nothing about the actual quality of education obtained at a certain level. Thanks to the OECD initiatives, this argument has become much more difficult to defend today. And if it was once possible to insinuate that children from a low educational background simply lack the ability to attend upper-secondary schools, it has now become evident that other factors account for the social inequality of educational success: lack of support and lack of appropriate educational concepts and structures.

In its efforts to move education to the top of the policy agenda, the OECD has not been alone. The European Union (EU) has pursued similar objectives since the 1990s (Martens and Balzer 2007; Martens et al. 2007; Martens and Wolf 2006). In the course of the so-called Lisbon process following the 2000 European Council meeting in the Portuguese capital, the EU became the prime actor in the process of developing a European educational space. Given the EU's lack of legal jurisdiction in the field, the success of its agenda setting in educational policy came rather unexpected.¹ Unlike economic, monetary, or competition policy, educational policy is not a sphere in which the EU has the power to issue directives. The only means at its disposal are those of soft law fostering European-level cooperation. The relevant instruments include the European Social Fund, educational exchange programs such as *Socrates* and *Leonardo da Vinci*, legal instruments such as recommendations and communications, and organs such as the European Center for the Development of Vocational Education (CEDEFOP) and the Information Network on Education in Europe (EURYDICE). The EU also has the Open Method of Coordination (OMC),² a legal tool with which it can affect the policies of the member states. In the course of the Lisbon process, the European Commission issued quantified policy objectives for its member states, but left the specific ways in which these would be achieved in the national competence of its members.

This chapter discusses how important the EU's involvement in education has been. We outline Europe's demographic development, the change in labor markets and human resources. The interaction of these three areas of society points to an enormous need for action. We then discuss how to gauge the level of education in a population and what absolute and relative measures of educational achievement could look like. Then we examine the educational policy objectives formulated by the EU and describe to what extent the European countries have already accomplished them. Are there countries that already meet all of the objectives, and are there some which still fail to meet any of them? Are results for European countries similar, suggesting a joint social model in terms of educational policy? The chapter ends discussing two fundamental questions: First, how coherent are the individual goal dimensions of the Lisbon strategy and what can we learn from the degree of their correlation for future empirical research on education? Second, what do the indicators allow us to say about issues of equal opportunity and social exclusion in European countries and

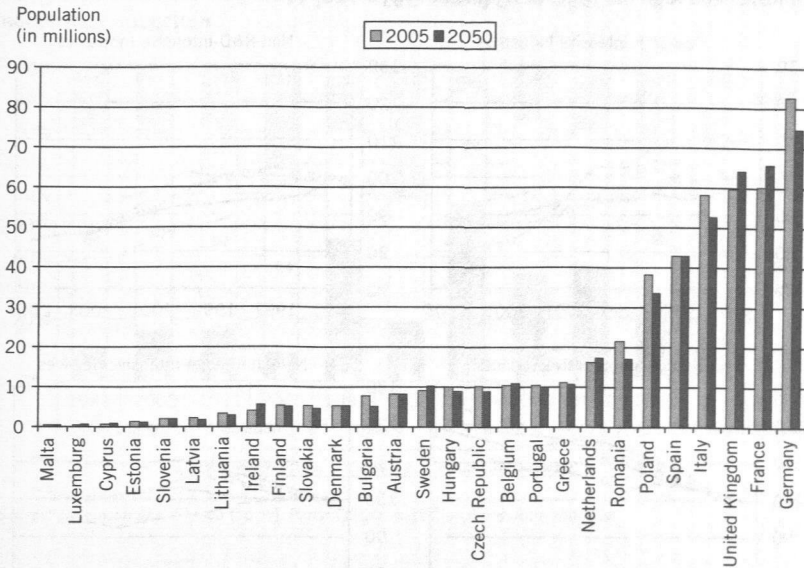
how much diversity is there within Europe in this respect? We conclude with a summary illustrating the analytical potential of the indicators and showing that purportedly simple measures have more to them than first meets the eye.

DEMOGRAPHY, CHANGING LABOR MARKETS, AND EDUCATIONAL PERFORMANCE

The world is currently inhabited by more than 6 billion people: 4 billion in Asia, 1 billion in Africa, 700 million in Europe, 600 million in Latin America, and 300 million in North America. World population will reach 9 billion in 2050 (United Nations 2007). This high population growth is not evenly distributed across the individual continents. It is disproportionately great in Asia and Africa, whereas a population decrease is in store for many European countries. This trend is associated with differences between the continents in terms of the population's median age. Europe currently has the population with the world's highest median age, and in several European countries this median age is expected to climb above 50 years by 2050. All available projections indicate that a smaller and older Europe is going to have severe problems supplying the labor force that its markets require.

Two strands of action come to mind. An obvious one is to open European borders, the consequence being a clear rise in the percentages of non-Europeans in the labor force. Europe is not preparing itself for that option. Since integration policy is deficient in almost all European countries, a new kind of educational policy is necessary, an active one that enlarges the number of persons with high-quality education, basic training, and continuous training. The Europe of tomorrow can no longer afford to turn its back on 20% of the upcoming generation and leave it underskilled and underqualified (OECD 2007). In a population that is shrinking in absolute terms, the small percentage of highly skilled Europeans will encompass so few people that they will not be able to function as the employment engine that the continent needs. This implies that Europe cannot continue to do without women, or with senior citizens who go on early retirement, but must pursue activation policies. In Germany, for instance, the age-limit for pensions has recently been lifted to 67 years, but in 2004 just 5% of the 64-year-old men were still gainfully employed. The corresponding figure for women in western Germany was 3%; in eastern Germany, only 1% (Hirschenauer 2007).

Population levels and developments differ widely within Europe (see Figure 13-1). Germany, France, the United Kingdom, Italy, Spain, and Poland are the most populous European countries. Hence their demographic development and educational structures have a particularly heavy impact on the future of Europe. But Germany, Italy, and Poland are also the countries experiencing particularly sharp population declines, which are not being offset by more positive developments in France and the United Kingdom.

Figure 13-1: Population of the European Union member states, 2005 and 2050

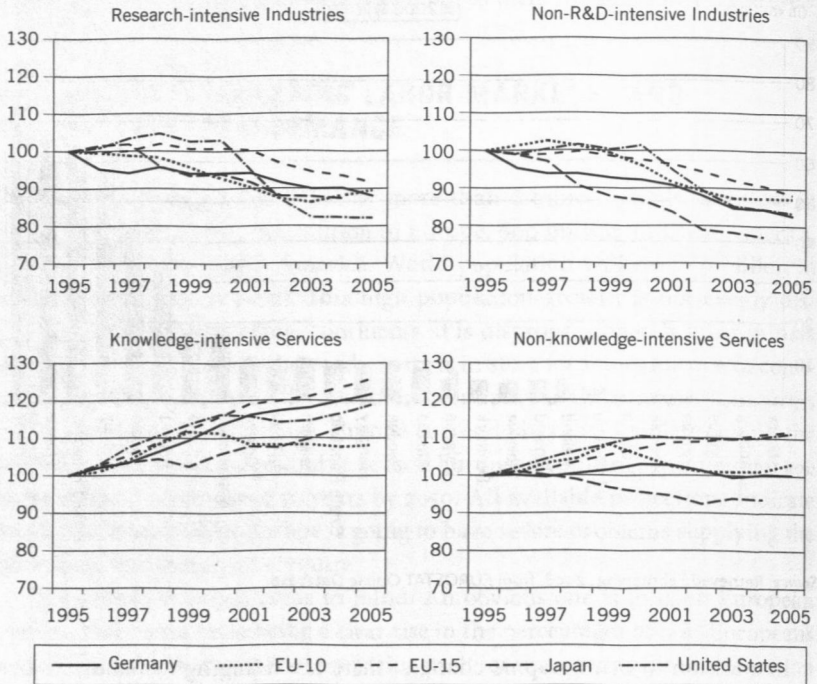
Source: Retrieved February 14, 2008, from EUROSTAT Online Database.

In addition to demographic changes, there are changing demands on jobs in tomorrow's labor markets. Recent developments were marked by a twofold structural change. First, unlike the burgeoning service (tertiary) sector, the industrial sector has lost many jobs since the early 1990s. Second, knowledge- and research-intensive economic activities have been spreading in both sectors at the expense of branches that are less dependent on the use of high-skilled labor and modern production techniques. The knowledge-intensive spheres of the economy have recently been the only ones with an increasing demand for labor (see Figure 13-2). The greatest losses have occurred in industry, especially where it is not research-intensive (Belitz et al. 2008).

For the less qualified working population, technological progress comes at the expense of employment opportunities. Expansion of the service sector also feeds the need for relatively qualified personnel. Corporate services—research and development, market and opinion research, and hardware consulting—will gain a great deal in importance (Belitz et al. 2008). There are no indications that this trend will reverse. In other words, while demographic change leads to an absolute scarcity of higher qualified personnel, changes in the economy entail a growing demand for highly skilled labor, and the European economy is likely to meet its limits of growth.

The educational policies of European countries have responded differently to these new challenges. First, there has been a general pattern of expansion.

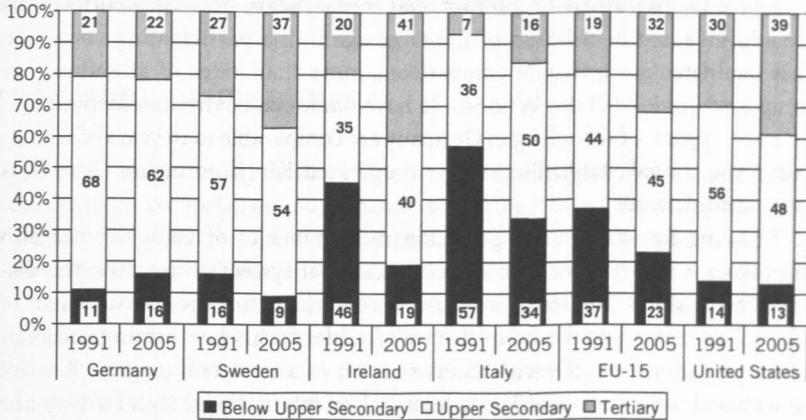
Figure 13-2: Labor deployment (hours worked), by economic area in selected countries and regions, 1995–2005 (index 1995 = 100)



Source: EUKLEMS data base, calculations and estimates in *Wirtschaftsstrukturen und Produktivität im internationalen Vergleich. Studien zum deutschen Innovationssystem* [International comparison of economic structures and productivity: Studies on the German system of innovation] (p. 9), by H. Belitz et al. 2008 (No. 6–2008), Berlin and Hanover: NIW and DIW.

We see “a universal development in Western Europe since the Second World War: more years in education, the opening of the upper secondary educational institutions for larger parts of the population and, as tertiary education has lost its exclusive property, the change of elite universities into mass universities” (Müller et al. 1997: 178; our translation).³ Second, however, the development illustrated in Figure 13-3 also reveals major differences in the starting levels and the degree of change within Europe. For example, Sweden and Ireland’s 1991 levels of tertiary education among 25- to 34-year-olds exceed those achieved by Germany and Italy in 2005. Germany has achieved little recognizable progress since 1991. Whereas most other European countries continued investing heavily in educational policy and significantly lowered the percentage of persons who do not complete upper secondary school, this percentage has been rising in Germany up to 2005. Particularly high proportions of people without upper secondary schooling live in the southern European countries of Italy, Spain, and Portugal.

Figure 13-3: Educational attainment of the population aged 25–34 years, 1991 and 2005 in selected countries. Upper secondary education includes postsecondary nontertiary education



Source: *Education at a Glance* (2007). Paris: OECD, p. 38ff (and previous editions).

Given the major tasks ahead in education and continuous training, it is important that the EU continues to give special importance to this area. In its Lisbon resolution, the EU has formulated objectives that are intended as a “coherent long-term policy framework” (Pépin 2006: 205) “to improve the quality and effectiveness of EU education and training systems, to ensure that they are accessible to all, [and] to open up education and training to the wider world” (Commission of the European Communities 2006: 4). But what does “better” education mean in actual practice? This question is dealt with in the following section.

MEASURING EDUCATIONAL PERFORMANCE

Education has conventionally been measured by the duration of a person’s school attendance or by the highest degree earned in the education or training system. New types of data have recently become available to educational research: those assessing cognitive competencies. These are gathered by a wide variety of surveys of persons at various age levels. The most well-known is surely the OECD’s Programme for International Student Assessment (PISA), which measures the competencies of 15-year-old students around the world on a broad front. Whereas PISA 2000 focused on reading skills, the 2003 study centered primarily on competence in mathematics and the one in 2006 on the natural sciences.

The measurement of actual competencies has moved educational research forward, although the reporting has increased in complexity, as certificates as well as competencies are now taken into account. This has indisputably enhanced the usefulness of international comparisons, because identical tests are administered to children of the same age in the participating countries. This facilitates performance comparisons more than rates of attendance or completed grade level do. Who would have dared make any statements about whether 10 years of schooling in Germany are comparable to 10 years of schooling in the United States, Finland, or the United Kingdom before these tests were administered?

Allowing for much finer gradation measurements of competencies also improve our ability to determine an educational system's impact on the distribution of skills. The traditional use of certificates ties the measurement of educational poverty to the completion of secondary school or training and associates educational wealth with the possession of a university degree. Relative educational poverty in relation to national or international standards or the dispersion of skills was virtually impossible to capture with these traditional measures.

Measures of competence are superior in many respects. Even though international comparisons (including those in the press) frequently rely simply on national averages and concomitant rankings, the new measurement offers many more sophisticated indicators of an educational system's performance. As with any index of absolute poverty, however, the point at which one speaks of deprivation or deficiency must be established more or less arbitrarily. Students who do not achieve competence level II are now conventionally said to be absolutely poor in competence.⁴ Those classified above level IV are termed absolutely competence rich. Besides these absolute measures, which apply to all countries, relative measures can be calculated as well. Thus it can be determined where a given country's lower or upper 10% lie in the distribution of competence relative to the "established" absolute level of competence richness or competence poverty. Absolute and relative values may coincide but need not have an interface, as illustrated by the case of Finland, a country with hardly any absolute educational poverty by PISA standards.

Measures of dispersion depict the degree to which competencies are distributed unevenly. At an identical mean in the competence distribution, countries may differ in the sense that one may impart similar competencies to all persons, whereas the other one may have a wide variation around the mean. The inequality of cognitive competencies is an important issue to which we will return below.

A major challenge and opportunity for comparative educational research arises from the fact that the measurement of certificates and the measurement of competencies need not converge. This means that rankings of countries may differ depending on the concrete measure we are using. Countries with a high

level of poverty in terms of certificates can in fact be countries with low poverty in terms of competence levels. Before exploring this point further, we present the Lisbon objectives of the European Union in order to then use these yardsticks for a comparison of the state of education in various EU member states.⁵

THE LISBON BENCHMARKS

In March 2000, the EU heads of government agreed to make the EU the world's "most competitive and dynamic knowledge-based economy" by 2010 (Commission of the European Communities 2004: 9). The European Council's Lisbon strategy strengthens the role of general and vocational education within the agenda of economic growth and employment for the EU. For the first time, education is now considered a key factor for economic and social objectives (Pépin 2007: 121) and is one of the core areas in the European employment strategy (Bektchieva 2004: 76).⁶ The aim of the guidelines is to motivate the EU member states to enlarge and optimize their investments in human capital and to modernize their general and vocational educational systems in response to the demands of a knowledge-based economy and of mounting socioeconomic and demographic challenges.

Discussing the guidelines at the Stockholm summit in February 2001, the education ministers agreed on three major objectives to achieve by 2010: to improve the quality and efficiency of EU education and training systems, to ensure their accessibility to everyone, and to open up education and training to the wider world (Commission of the European Communities 2006: 4; Dion 2005: 302). In 2002 the education ministers accepted the OMC for the implementation of the Education and Training 2010 Work Programme. This method is promoted as an essential element in the Lisbon strategy. It leaves the EU member states the freedom to decide for themselves how to reach the targets, but the improvements are inspected through the exchange of best practice and through periodic monitoring and reporting (Dion 2005: 299; Pépin 2007: 128).

The three objectives formulated at the Stockholm summit in 2001 were later linked to five benchmarks (see next paragraph) and eleven further targets (Commission of the European Communities 2007: 10)⁷ associated with the "Education and Training 2010 Work Programme." The five benchmarks aim at: reducing the percentage of pupils with low reading competencies; reducing the percentage of early school leavers (18- to 24-year-olds who leave school without completing upper secondary education); raising the percentage of the 22-year-olds who have completed at least upper-secondary education; increasing the share of graduates in mathematics, science, and technology (MST); and expanding the participation of the adult working-age population in life-long learning (Commission of the European Communities 2004: 14).⁸ These European benchmarks are not considered fixed targets for individual countries

but rather as “reference levels of European average performance” (Commission of the European Communities 2004: 14).⁹

The objectives established in Lisbon are clearly based on widely used yardsticks for measuring educational performance. The measures of competence (benchmark 1) go hand in hand with approaches that measure school attendance (benchmark 2), and schooling certificates (benchmark 3). In addition, indicators relating to specific subject areas are being created to measure the degree to which the educational system is oriented to challenges posed by technological change (benchmark 4). Similarly, the necessity of lifelong learning is stressed (benchmark 5). In addition to these challenges and cutting across them, rather unspecified demands for more effective, fair, and open educational systems are made.

There are many untested assumptions underlying this procedure. First, it is supposed that the individual criteria are compatible, complimentary, and uncontradictory. Accordingly, a country with few young people who have not completed upper secondary education would also have few competence-poor pupils. By the same token, there is the notion that equal opportunity is to be measured by participation rates of the total population. In other words, the higher the participation rates are in the upper-secondary and tertiary echelons of education, the greater the degree of equal opportunity is assumed to be. We will return to this point, but first we describe and comment on the state of European education as measured by these criteria.

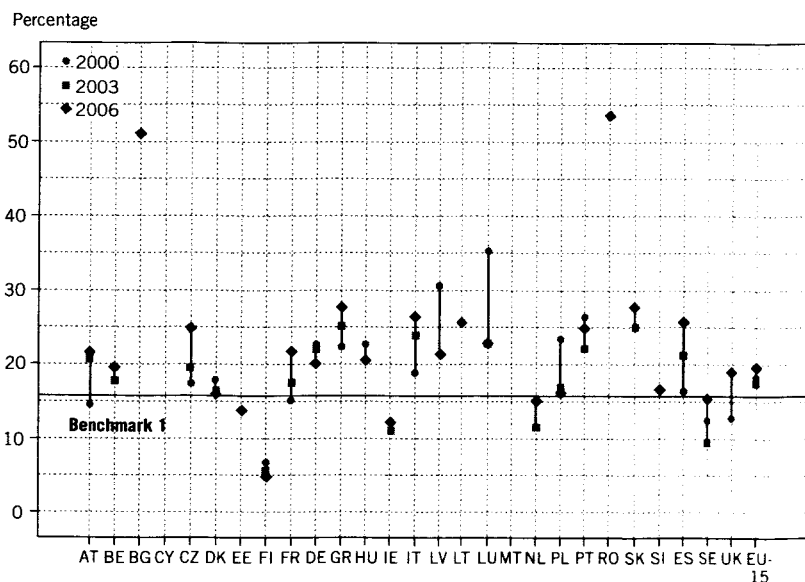
MEETING THE LISBON BENCHMARKS

Not all European countries participated in all surveys. Some new countries entered, while others left. This implies that a comparison of means or of positions in country rank orders may be misleading as the comparison is based on varying compositions of the group of participant countries. Hence it is advisable to interpret changes within the nation-specific framework of individual countries. We proceed in this way for the five benchmarks and then offer a summary going beyond the single dimensions and across all countries.

*Benchmark 1: By 2010, the percentage of low-achieving 15-year-olds in reading literacy in the European Union shall have decreased by at least 20% compared with 2000.*¹⁰

The objective for reading competencies is modest. The Commission accepts a share of 15.5% of the population below the educational poverty line. As shown in Figure 13-4, however, most countries have a considerably higher percentage of poor readers. Worse yet, several countries have made no progress in reducing that figure over time. In PISA 2000, the share of students below proficiency level II in reading comprehension was generally 18.1% (EU-15, not including the Netherlands). In PISA 2006, it rose to 19.5%. Variation was substantial. The

Figure 13-4: Percentage of students below proficiency level II in reading comprehension (PISA 2000, 2003, and 2006).



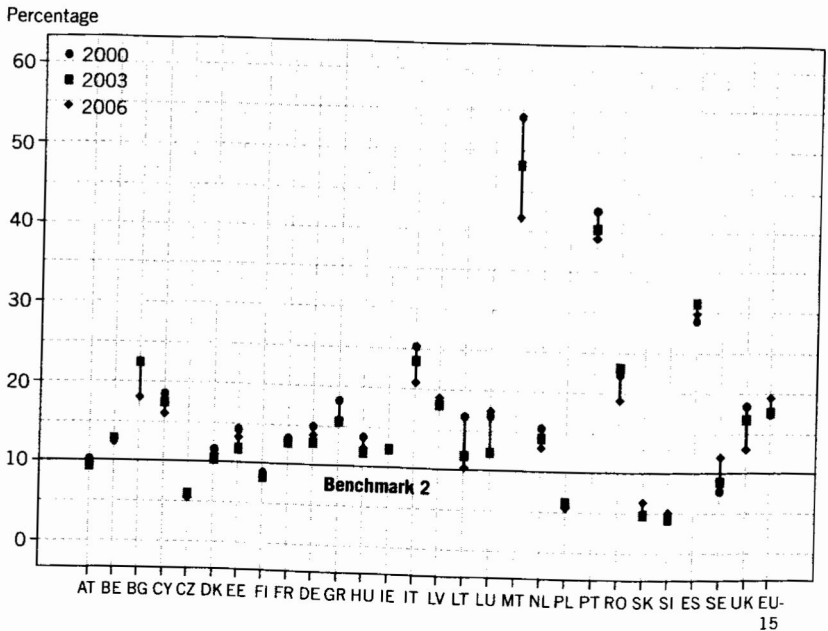
Sources: Knowledge and Skills for Life: First Results from PISA 2000, by OECD, 2001, Paris: OECD; Learning for Tomorrow's World: First results from PISA 2003, by OECD, 2004, Paris: OECD; and PISA 2006. Science Competencies for Tomorrow's World, by OECD, 2007, Paris: OECD. Cyprus and Malta did not participate in any of the three PISA Studies.

member state with the lowest percentage of poor readers in 2006 was Finland with 4.8%. Countries with the highest percentage (above 25%) were Romania, Bulgaria, Slovakia, Greece, Italy, Spain, and Lithuania. The 2006 PISA results also showed that 73% of the 15-year-olds in the European countries of the EU-15 did not achieve even the lowest proficiency level (level I). These low achievers have serious difficulties with written information and with any learning process dependent upon written material.

Benchmark 2: By 2010, the average share of early school leavers in the EU shall be reduced to no more than 10%.

The importance of having all member states reduce educational poverty is underscored by the Commission's second measure of educational poverty, the lack of certificates. Early school leavers face a high risk of under- or unemployment on today's labor market, so the share they represent of the EU's 18- to 24-year-olds is to be reduced to an explicit target of 10%. Surprisingly, the criterion of certificates is easier to meet than the one of competencies. In just six years, most countries made progress toward meeting the target of 10% (see Figure 13-5). The share of early school leavers in the total school population of

Figure 13-5: EU share of 18- to 24-year-olds with only lower-secondary education and not in education or training, 2000, 2003, and 2006



Source: retrieved February 14, 2008, from EUROSTAT Online Database.

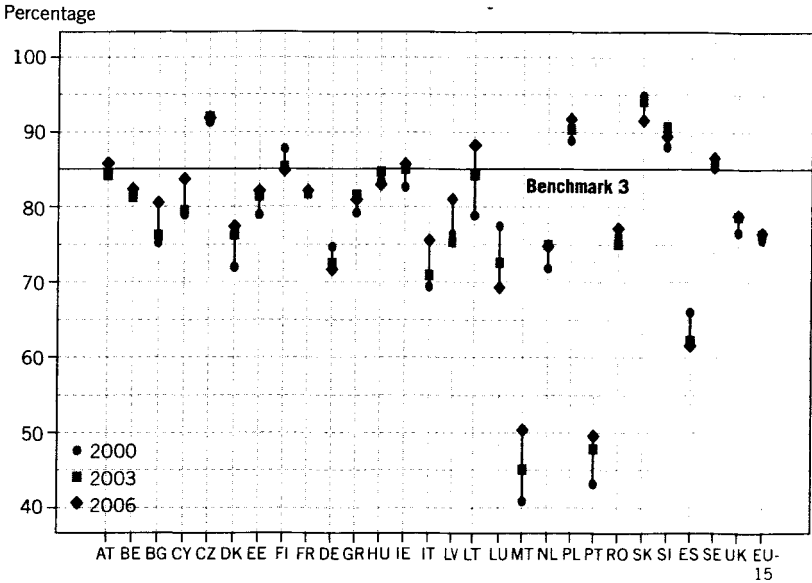
the EU is already less than 10% in Finland, Austria, and several of the new EU member states.

Benchmark 3: By 2010, at least 85% of 22-year-olds in the European Union shall have completed upper secondary education.

This benchmark is an *implicit* measure of educational poverty. Although the European Council has not set a benchmark on educational wealth, it does define the share of population it aims to classify as “not poor” (85%). In other words, the share of the EU’s 22-year-olds who have not completed upper secondary education should remain below 15%.

Some EU countries have met this criterion (Figure 13-6).¹¹ New EU member states such as the Czech Republic, Lithuania, Poland, Slovakia, and Slovenia have performed especially well. Austria, Ireland, and Sweden have also achieved the benchmark. Most EU countries, however, have not. Granted, Bulgaria, Cyprus, Denmark, and Italy have obviously increased the percentage of their populations in the category of “not poor” in educational terms since 2000. But the percentage of persons who have completed at least upper secondary school seems to have stagnated in Belgium, France, Romania, and the United Kingdom. The average for the EU-15 has risen to only 75.2% since 2000.

Figure 13-6: Percentage of the EU's 20- to 24-year-olds having completed at least upper-secondary education, 2000, 2003, and 2005



Source: retrieved February 14, 2008, from EUROSTAT Online Database.

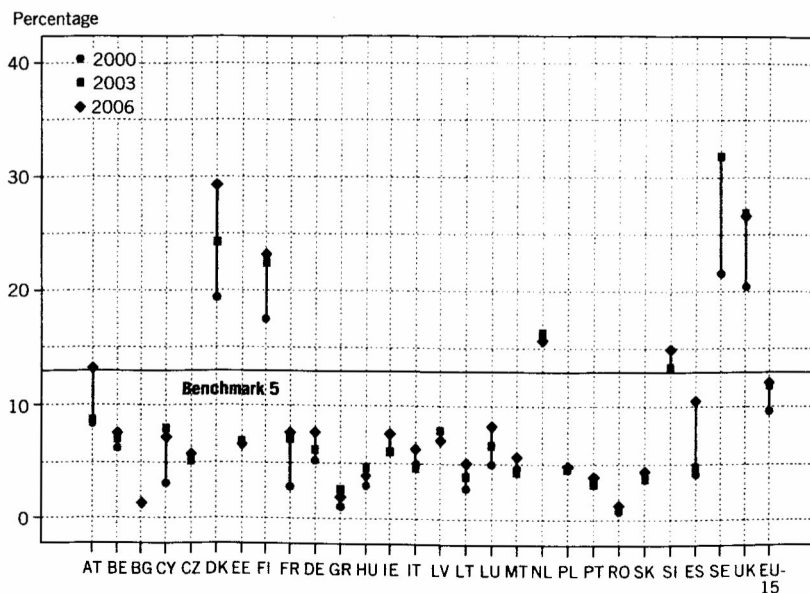
Benchmark 4: The total number of graduates in mathematics, science, and technology in the European Union shall increase by at least 15% by 2010.

Changing labor markets have prompted the heads of states and governments to agree to increase the total number of university graduates in MST in the EU by at least 15% by 2010 and to decrease the gender imbalance in those fields. The number of graduates in MST increased in the EU-15 from 576,300 in 2000 to 700,000 in 2005 and thus already exceeds the EU benchmark. The countries with the strongest growth in MST graduates are Portugal (85%), Estonia (85%), and Poland (81%). Little progress has been made toward the second objective—reduction of the gender imbalance among MST graduates. The countries with the highest proportion of female graduates in MST in 2005 were Bulgaria (41%), Estonia (44%), and Greece (41%). The Netherlands (20%), Germany (24%), and Austria (23%) are the countries with the lowest proportion.

Benchmark 5: The participation of the adult working-age population (25- to 64-year-olds) in lifelong learning shall increase to at least 12.5% by 2010.

Europe's aging workforce has moved the European Council to set a target to increase the participation of adults aged 25 to 64 years in lifelong learning¹² and to decide on a modest benchmark of 12.5%. As apparent in Figure 13-7, participation in lifelong learning activities varies considerably from one country to another. High rates are found in Sweden, Denmark, the United Kingdom,

Figure 13-7: Percentage of EU 25- to 64-year-olds participating in life-long education and training four weeks prior to the survey, 2000, 2003, and 2006



Source: retrieved February 14, 2008, from EUROSTAT Online Database.

Finland, the Netherlands and Slovenia. Most EU countries, however, still have participation rates below 12.5%. The rates of participation heavily depend on educational attainment and age. Adults with a high level of education are involved more than seven times as frequently as low-skilled adults, and older age groups participate much less than younger ones (Commission of the European Communities 2007: 81–82).

In summary, the most crucial targets—reducing educational poverty and increasing lifelong learning—have not been achieved across member states, and more substantial progress is needed in order to face the challenges of the near future (Commission of the European Communities 2007). Granted, some countries already meet most of the criteria. Finland and Sweden, for example, have not only a relatively low percentage of educationally poor people but also high rates of participation in continuous learning. Attendance of courses in technical subjects is climbing too (also among women). Such EU member states are exceptions, however. Most EU countries still have far to go before they achieve the stated objectives. The longest road lies ahead of the most populated EU countries such as Germany, France, the United Kingdom, and Italy, where achievement of the targets by 2010 is improbable. The striking educational shortcomings in those countries sharply contrast with the holistic and convincing orientation that Finland and Sweden have toward tomorrow's knowledge society.

An interesting empirical finding is that a few countries perform well in some dimensions but miserably in others. Slovakia and the Czech Republic, for instance, have very few people who leave school before completing upper secondary education but many competence-poor people and a low share in lifelong learning. This fact raises a host of questions. The first one, of course, concerns the national condition of educational policy. Another issue—and not extraneous one in the present context—is the European Commission’s objectives and their usefulness.

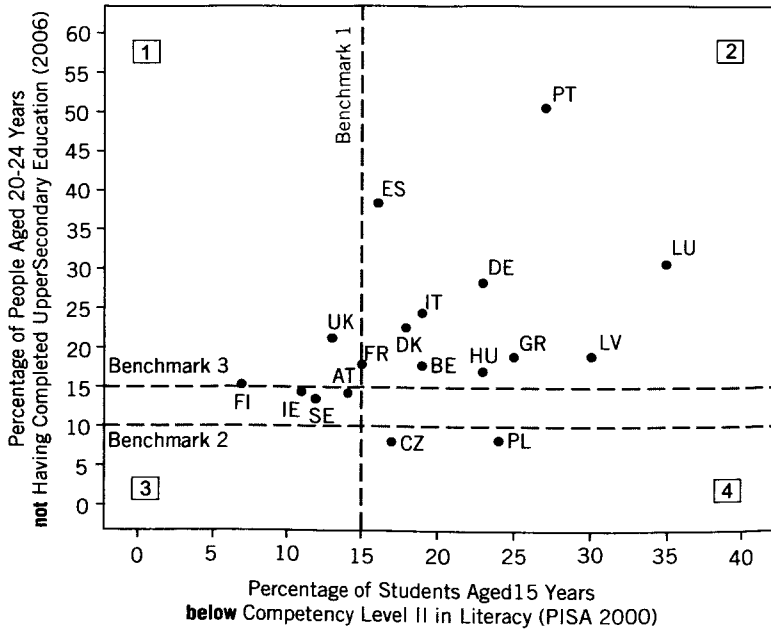
PARTICIPATION, CERTIFICATES, AND COMPETENCIES

Taking a closer look at the relation between the single indicators, we confine ourselves to two yardsticks, competencies and educational certificates, which are usually presumed to measure the scope of educational poverty in similar ways. In Figure 13-8, the *y*-axis shows the percentage of 20- to 24-year-olds who had not completed upper secondary education in 2006. The *x*-axis refers to the 15-year-olds six years earlier, that is, those tested in the 2000 PISA study. In the absence of panel data, the figure thus serves as an illustration of what certificate level students whose reading skills were tested in 2000 obtained six years later, when they were 21 years old. It is evident that the correlation between the two measures is far from perfect. Applying the benchmarks, one obtains four quadrants. Quadrant 2 shows countries with high poverty in terms of certificates *and* competencies. Most European countries, Portugal and Luxembourg being the most conspicuous examples, appear in this worst-case scenario. Quadrant 3 represents the best possibility: low poverty in terms of both certificates and competencies. Depending on the benchmark applied, one finds few, if any, countries meeting both criteria. Only Sweden and Finland, as well as Austria and Ireland belong to this minority group. Hence for most European countries the Lisbon criteria are challenging indeed. Quadrants 1 and 4 represent cases of crossover. The United Kingdom (quadrant 1) has high poverty rates in terms of certificates but low poverty rates regarding competencies. Quadrant 4 represents countries with low poverty rates with respect to certificates but high poverty rates regarding competencies. Poland and the Czech Republic are illustrations of this mixed scenario.

From the perspective of educational sociology, the weak linkage between these two indicators of educational poverty is intriguing for many reasons. The European comparison shows that they measure anything but the same thing. This conclusion also means that conventional international comparative studies concentrating on one of the two dimensions only tell half of the story.

This also has implications for the matching of educational credentials and labor market positions. For example, it is clear that, on some national labor markets, signaling theory (Spence 1974) focusing on certificates, which are simple to measure, may work well, but on others certificates may prove to be a

Figure 13-8: Correlation between competencies and certificates as measures (in percentages) of educational poverty



Source: *Knowledge and Skills for Life: First Results from PISA 2000*, by OECD, 2001, Paris: OECD; and EUROSTAT Online Database, retrieved February 14, 2008.

much less reliable signal of skill levels. The reason is that certificates from some countries have no predictable competence rating behind them and are therefore inappropriate guides to the placing of people in the labor market. For instance, employers can hardly depend on what certificates from Poland and the Czech Republic seem to signal. Hence it is necessary to measure actual competencies.

Overall, the relationship between competencies and certificates that appears at the upper end of educational distribution has not undergone much research, yet. Temporal processes of adaptation or deviation are likely to be particularly interesting. In other words, are competencies and certificates converging over time, or are they continuing to diverge? At any rate, these relationships seem to call for increased attention from the OECD and other organizations.

QUALITY OF EDUCATIONAL PERFORMANCE AND EQUALITY OF OPPORTUNITY?

The question of equal opportunity is a major topic in the assessment of educational systems. It is also one of the chief criteria on the EU agenda. So far, however, it has not been translated into a benchmark indicator but is a rather loosely

Table 13-1: Effects of Differentiation and Level in Selected Countries: Reading Competence (PISA 2006)

Level of Competence	Differentiation of Competence	
	Low (Egalitarian)	High (Unequal)
High	1	3
	Finland (265/547)	Belgium (360/501)
	Estonia (279/501)	Germany (359/495)
	Ireland (303/517)	Austria (353/495)
Low	2	4
	Romania (298/396)	Bulgaria (379/402)
	Spain (291/461)	Slovakia (347/466)
	Lithuania (312/470)	Greece (341/460)

Note: The EU mean serves as the basis for classifying the level and differentiation of competence into the categories of “high” and “low.” The first figure in the parentheses following each country’s name designates the bandwidth of competence between the 95th and the 5th percentile (average for the EU-15: 331). The second figure designates the national mean competence level (average for the EU-15: 472). Data are from *PISA 2006. Science Competencies for Tomorrow’s World*, by OECD, 2007, Paris: OECD.

associated, overall guiding objective. Nevertheless, measurements of competence alone make it possible to establish direct links between the benchmarks and equal opportunity without having to resort to microdata.

In this section, we take up the proposal by Allmendinger and Leibfried (2002) to link indicators of quality with measures of the level of dispersion. At a given mean, which can serve as an indicator of quality, the dispersion is used to indicate the inequality of the result. In this way, we can classify and diagnose the individual member states at a given point in time as to whether their manifestations of quality and inequality are changing over time.

Some countries are highly differentiating and students cover the full spectrum of competencies; other countries are rather egalitarian with most students achieving similar competence levels. This dimension of the degree of differentiation should be kept separate from the dimension that designates the level of education. The latter one indicates the extent to which a differentiating or leveling educational system lies at a high or low average level of competence. The typology in Table 13-1 is based on a cross-classification of both dimensions—differentiation *and* level—and yields four types. The case of an egalitarian, high-competence country may be illustrated by Finland (field 1); an unequal, high-competence system is represented by Belgium (field 3); an unequal, low-competence country, by Bulgaria (field 4); and an egalitarian, low-competence country, by Romania (field 2). The dimensions we have formed are closely related to a paramount problem: the fact that educational attainment is determined by a low social background. The countries with an egalitarian and high-competence producing school system tend to be the ones with a comparatively

weak link between social origin and scores in competence tests (OECD 2001, 2004, 2007).

The PISA surveys conducted in 2000, 2003, and 2006 permit us to follow the topology of differentiation and level depicted in Table 13-1 across three points in time.¹³ Shifts in both the level and divergence of reading competence have occurred since PISA 2000. The changes are particularly manifest in Austria, France, and Italy, where the level of competence has fallen and the divergence has widened. In Latvia, conversely, the level of competence has risen and the divergence has narrowed. Marginal differences are observed in Hungary and Poland. Presumably, these changes are due to educational policy reforms that eventually altered the organizational and governance structure of the educational system, the level of educational spending, or the curricula. Further research on the causes of these observed changes and on the impact that EU educational policy has on national educational policy is yet to be done.

CONCLUSION

Demographic development in Europe and changing demand from tomorrow's labor markets are putting pressure on the educational system and the systems for basic and continuous training. Most European countries know that it is high time to do something. If the individual European countries and Europe as a whole want to remain competitive, then it is essential to improve both the use of educational reserves and the preservation of achieved educational levels through continuous education and training. It is also necessary to grapple with the ever more clearly emerging problems of fairness that are transmitted largely through education and training. If children from low social background and those from migrant backgrounds are not given the opportunity for a good education, they will be excluded from working society for their entire lives and will depend on government welfare.

The OECD and the EU are performing an important mission with their activities in educational policy and are building great momentum that would not be possible at the national level alone. Their focus on educational poverty is to be welcomed, too, and countervails national trends for the funding of elites. Although the EU has no mandate to intervene in the affairs of individual national governments through monitoring or guiding, systematic cross-national comparison will probably not be altogether ineffective.

Nonetheless, this inventory still paints a dark picture. Only Finland and Sweden are meeting the benchmarks satisfactorily. Most of the EU member states have not yet achieved them, and this is unlikely to change dramatically by 2010. The reason is that some of the benchmarks set by the EU do not cluster together. For example, countries with a low percentage of school dropouts are not simultaneously countries with a small percentage of competence-poor

persons and vice versa. Our contribution suggests that there is a definite need for research on this topic and it also suggests that processes of finding an occupation are determined by criteria that may differ from one country to the next.

The competence measures supplied by the OECD have great potential for future research on educational systems. Two dimensions—the extent of differentiation between competencies within a country and the average level of competencies—make it possible to delineate four worlds of competence production. Within the European Union, these four worlds are much in line with Castles' notion of distinct families of nations (Castles 1993). In the Scandinavian countries we find little *differentiation* and Sweden is the only case not entirely consistent with this picture. We also discern little differentiation in the Baltic states and in Slovenia. By contrast, differentiation is especially pronounced in the German-speaking countries. With respect to *levels*, competence levels are highest in Scandinavia, especially so in Finland. The Anglo-Saxon countries also have high competence levels. The lowest average values relating to competence are found in the Southeast European countries, followed at some distance by the Southern European countries. The considerable heterogeneity in Europe within both dimensions suggests that in terms of educational policies European countries are far from forming a joint social model but are at varying distances from the benchmarks established by the Lisbon agenda and in this sense even a far cry from convergence.

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