Ariane Baye
Marc Demeuse
Christian Monseur
Christelle Goffin

A Set of Indicators to measure Equity in 25 European Union Education Systems

A Set of Indicators to measure Equity in 25 European Union Education Systems[1][2]

Ariane Baye[3]
Service de Pédagogie théorique et expérimentale [Department of Theoretical and Experimental Education], University of Liège (Belgium)

Marc Demeuse[4]
Institut d'Administration scolaire [Institute of School Administration], University of Mons-Hainaut (Belgium) & Service de Pédagogie théorique et expérimentale [Department of Theoretical and Experimental Education], University of Liège (Belgium)

Christian Monseur[5]
Service de Pédagogie théorique et expérimentale [Department of Theoretical and Experimental Education], University of Liège (Belgium)

Christelle Goffin[6]
Service de Pédagogie théorique et expérimentale [Department of Theoretical and Experimental Education], University of Liège (Belgium)

February 2006

---

[3] Department of Theoretical and Experimental Education (SPE), University of Liège, Boulevard du Rectorat 5 (Bât. B32), B-4000 Liège, Belgium, Phone. +32 4 366 20 57, Fax +32 4 366 28 55, ariane.baye@ulg.ac.be, http://www.ulg.ac.be/pedaexpe

[4] Institute of School Administration (INAS), Université de Mons-Hainaut, Académie universitaire Wallonie-Bruxelles, Place du Parc 18, B-7000 Mons, Belgium, Tel. +32 65 37 31 95, Fax +32 65 37 30 54, marc.demeuse@umh.ac.be, http://www.umh.ac.be/inas.

[5] Department of Theoretical and Experimental Education (SPE), Université de Liège, Boulevard du Rectorat 5 (Bât. B32), B-4000 Liège, Belgium, Tél. +32 4 366 20 57, Fax +32 4 366 28 55, cmonseur@ulg.ac.be, http://www.ulg.ac.be/pedaexpe.

[6] Department of Theoretical and Experimental Education (SPE), Université de Liège, Boulevard du Rectorat 5 (Bât. B32), B-4000 Liège, Belgium, Tél. +32 4 366 20 57, Fax +32 4 366 28 55, christelle.goffin@ulg.ac.be, http://www.ulg.ac.be/pedaexpe.

Context

This report has been produced following a European study led by the European Group for Research on Equity in Education Systems, for which the final report (EGREES, 2005) has been published in French and in English. The European Group for Research on Equity in Education Systems (EGREES) includes Ariane Baye, Marc Demeuse, Anne Matoul, Julien Nicaise and Marie-Hélène Straeten (University of Liège, Belgium) (international coordination of the project), Denis Meuret and Sophie Morlaix (IREDU, University of Burgundy, France), Luciano Benadusi, Giuseppe Ricotta, Orazio Giancola and Giuseppe Bove (University of Rome I "La Sapienza", Italy), Stephen Gorard and Emma Smith (University of York, the United Kingdom), Alejandro Tiana-Ferrer, Noelia Alvarez, Marisa García de Cortázar and Jezabel Vico (Universidad National de Educación a Distancia, Spain), and Vincent Vandenberghe (Catholic University of Louvain, Belgium). Two consultants, Norberto Bottani and Walo Hutmacher, participated in this European study as international experts.

This report serves both as an extension to include all 25 European Union Member States and as an update to the data used to present all of the initial twenty-nine equity indicators of the European education systems.

1. Introduction

The concept of equity and its specificities with regard to the concept of equality was presented and discussed in the EGREES report in the framework of an interuniversity project supported by Action 6.2 of the Socrates programme. This report draws on this theoretical work, which has been the subject of detailed publications (EGREES, 2005; see also Demeuse, 2004; Meuret, 2001, 2003, 2005; Nicaise, Straeten, Baye, & Demeuse, 2005), which is why this framework will not be discussed again here.

The values for the indicators selected for the previous study are presented in this report, mainly in the form of commented tables, but for a wider set of countries, because, on May 1st, 2004, ‒ just when the EGREES team was finishing its work ‒ ten new Member States joined the European Union. Another innovation introduced here is an update of the data, in so far as more recent and sometimes more satisfactory information has been able to be identified[7]. The unit of analysis, as in the previous report, is the country, even if several sometimes very autonomous education systems can coexist in the same country.

The data in this report can be used in many ways, at both the national and international levels. A first way of using all the indicators which are proposed could consist in using the multiplicity of countries presented to examine general questions such as the links existing between a type of disparity in particular and one or another variable. Notably, Duru-Bellat, Mons and Suchaut (2003), followed this path, with an analysis of the PISA 2000 data. They show, for example, following in Crahay's footsteps (1996, 2000), that the practice of repeating a class year, like the existence of different fields of education, is associated with the average performances of the weakest students, to a lower-calibre school elite, to a greater education disparity between social categories and to the presence of more very weak students within the education system.

A second avenue for research offered by this work consists in examining the tendencies in terms of equity for the education systems presented in the first report (EGREES, 2005). In other words, do we note any changes in certain countries in terms of educational equity? If yes, are they partially attributable to political or methodological changes? Such an analysis would be particularly interesting to those responsible for the education systems concerned in judging the absolute or relative improvement in the equity of their education systems.

The third approach, which is the one that we shall adopt in this report, consists in attempting a comparison between the European Union Member States from the point of view of equity, considering every country as a unit. This type of approach was adopted in another context by Demeuse, Crahay and Monseur (2001, 2005)[8]. The exercise is not purely academic; it is undertaken in the context of a wide debate at the European level and was the subject, notably,

---

[7]   It is necessary to clarify that the work undertaken by the research team does not consist in acquiring new data, but rather in identifying reliable and exploitable sources from the available data, with an eye to developing comparable equity indicators on the European level. Two types of indicators were not retained here: the experimental indicators concerning the students' perception and criteria of justice, as well as the indicators concerning education of the citizenry. Although the EGREES (EGREES, 2005, Meuret, 2001, Straeten, Demeuse, & Meuret, 2003, Baye, A., Gorard, S., & Smith, E., 2005) has insisted on the importance of such indicators, it is necessary to recognize that they are only available for a small number of countries, and that for these subjects there is no data more recent than those already presented. That is why they were not included within the framework of this work.

[8]   In the rest of this report, we shall identify each country with an educational system, considering these two terms as synonyms, even if we recognize that several European countries, such as Belgium, Germany, the United Kingdom or Spain, are composed of units having sometimes very great or even total autonomy from one another.

of a presentation during a meeting of the European Council of Ministers[9]. While education, and in particular compulsory education, remains under the jurisdiction of the Member States, international institutions, and the European Union in particular, are getting more and more involved in this area, notably via the common objectives which the 25 Member States have currently set themselves in terms of effectiveness and equity (Cytermann, 2005; Demeuse, Baye, Straeten, Nicaise, & Matoul, 2005).

From this perspective, it is necessary to come up with an assessment of the equity of the education systems, based on an examination of a certain number of disparities as measured by certain indicators. This comparison can be effected on the basis of a variety of theories of justice; which is to say, on one or another potential definitions of what is considered to be "fair", with some authors lending themselves more easily than others to an operationalisation of international comparisons[10]. The approach adopted in our analysis, drawing on the Rawlsian approach (Rawls, 1971; Meuret, 1999), is relatively syncretistic, in the sense that the disparities affecting internal results and the education process indicate an inequity in the education system that is all the greater given that:

1. *their consequences for the future life of the students are considerable (external results);*

2. *they must be attributed to the functioning of the education system (process) rather than to the social disparities themselves (economic, social and cultural context);*

3. *they are less in the service of the underprivileged; they strongly affect the opinion that citizens or users have of the fairness of the education system, which translates into a loss of confidence in the institutions and a reduced socio-political participation.*

This document is directly built around the four main questions that were the subject of the third part of the initial report, consisting of an interpretation of the equity indicators (EGREES, 2005). Thus, this report attempts a synthetic presentation, combining as it were the calculation of the data with interpretive commentaries. Indeed, its organization into annotated summary tables seems more relevant to its users. The concern for clarification and improvement with regard to the work presented in the first report is also addressed through a more systematic categorization of the indicators with respect to the manner in which they display disparities between individuals, groups or situations "below a threshold". This approach is consistent with respect to the principles of building a framework of equity indicators for the education systems, and potentially allows users to concentrate on the type of disparities considered the most inequitable in the various national contexts.

---

[9] Demeuse, M. (2005). Oral presentation. Council of Ministers for Education, Youth and Culture, Brussels, February 21st, 2005.

[10] In this report, we shall not redevelop the various possible interpretations of the indicators proposed by the EGREES, for example based on the theory of responsibility (Trannoy, 1999) or the works of Amartya Sen (1982, 1992).

2. Four questions on equity

The four questions tackled by EGREES, and which we try to answer again here, are the following:

1. *What is the extent of the inequalities within Europe's education systems? Are there differences – both between countries and within them – with respect to the degree of unfairness (and in particular, through the statistical distribution of the system's results)?*
2. *What are the benefits from education in the various European countries and what is the extent of social and economic (contextual) disparities linked to the level of education? Is the impact of education on certain areas, such as inter-generational social mobility or economic and social aspects of citizens' lives, significant?*
3. *Can European education systems have a role in amplifying or reducing contextual inequalities? If this is the case, are the education systems themselves responsible for the amplification or the reduction of certain inequalities?*
4. *To what extent do educational inequalities benefit the most disadvantaged populations, and encourage phenomena of upward social mobility, since it appears that education can help the most disadvantaged citizens, particularly by giving them educational resources that can be used on a daily basis and putting the skills of better-educated citizens at their service?*

For each of these questions, comparative data and analysis are offered, by positioning each country in relation to the other twenty-four EU Member States, when the data allows it[11]. The answers to each of these four questions depends on a significant number of indicators, derived from the 29 indicators initially proposed by the EGREES. As compared to the July, 2005 version, the bases which served for calculating the indicators sometimes had to be modified for practical reasons (availability of more recent data or data applying to more countries). Similarly, in order to improve one dimension or another, choices slightly different from the initial options were sometimes made by the authors of this report. Therefore, before trying to observe modifications in time of a country's position in relation to a given indicator, it is advisable to make sure that its definition has indeed not been affected by one or more changes in comparison to the initial EGREES report. The work undertaken by the EGREES as well as the extension proposed in this document still does not yet, according to the authors, constitute stabilized, routine solutions. Certain indicators are doubtless still perfectible and certain data are still lacking. Therefore, the answers to the four questions raised by the EGREES must neither be considered as definitive, nor as exhaustive.

To briefly locate our sources – a detailed presentation by data table is given further on – the answer to the first question, namely an estimate of the importance of the disparities in each of the educational systems, is based on indicators constructed from the *Labour Force Survey* (LFS), coordinated by EUROSTAT, which makes it possible to estimate the educational levels of adults, and from the data of the *Programme for International Student Assessment* (PISA), developed by the OECD member countries, which provide us with a portrait of the skills of young 15-year-olds in key cognitive areas.

---

[11] To the twenty-five Member States at the time this study was ordered (in September, 2005), the authors have added data pertaining to other countries that are negotiating their membership (Bulgaria, Romania, and Turkey) or participating in special agreements with the EU (Norway, Iceland and Liechtenstein).

The benefits attached to education, i.e. the answer to the second question, are estimated by means of indicators such as the advantages connected to having completed tertiary education for men and women, the probability of employment and professional status depending on the level of education, reading level and continuing education or children's cultural practices according to parental qualifications. In addition to the sources mentioned for the first question, we also cite the *International Adult Literacy Survey* (OECD & Statistics Canada).

The third question − the role of education in the reduction of inequalities − is examined through a re-analysis of study data making it possible to consider information such as class size or the assistance given by teachers according to the gender, competence, social or national origin of the students. For this question, in addition to the sources of previous data, the work linked to the survey entitled *Statistics on Income and Living Conditions* (SILC) by EUROSTAT were integrated, providing invaluable information permitting an assessment of certain instances of tremendous insecurity that exist in the member states.

The answer to the last question, concerning the potential compensatory effect of educational systems, is based on an analysis of social transfers, social mixing as well as practices and values in the area of solidarity. Here again, the availability of a European source of data, via the *European Social Survey* (ESS), helps to enrich the previous works.

The objective of the study is not to propose a list of winners, like the English *League Tables*, but to offer as enlightening a picture as possible of the state of European educational systems in order to facilitate discussion among policy-makers and citizens. The solution adopted − after long discussions with the national representatives from the twenty-five Member States involved in the project who met in Liège (Belgium) in June 2004 − is to develop maps designed to show the relative position of every country for each of the dimensions or questions being considered.

The results of this work highlight the complexity of the concept of equity and the necessity to consider a multidimensional approach. The study also emphasizes how difficult it is to rank countries according to some concept of fairness. Nevertheless, this exercise clearly indicates how important it is to take several dimensions into account when rethinking educational policies designed to bring about greater equity, and so avoiding falling into a simplistic approach towards this complex problem. This multidimensional approach also allows various models to be showcased, such as, for example, a Scandinavian model or a model unique to the countries in the central part of the Union. This typology is consistent with that previously identified by Monseur and Demeuse (2001) concerning the organization of learning groups within European educational systems.

For each of the four questions on equity and, question by question, for each of the selected analysis themes (disparities between individuals, between groups or individuals below a threshold), a table and a summary map have been produced showing the relative position of each country in relation to the others. The classification of countries that was adopted for the creation of the tables and summary maps was made in order to maintain a certain comparison with the data supplied in the EGREES report, published in July, 2005 concerning 15 Member States (EU15) (situation prior to May 1st, 2004). Therefore, the classification of the countries was performed in two steps.

1. From the EU15 Member States, three groups of countries were defined: the four Member States that are the top ranked with respect to the criterion (in light green in the tables and on the summary maps) and the four Member States that have the lowest ranking (in dark red)[12]. Other EU Member States are coloured in yellow to indicate their intermediate position on this criterion, as in the previous version (EGREES, 2005).

2. The position of the 10 new Member States was calculated from the rankings of the EU15: if one or more of the 10 Member States that joined the Union in 2004 rank among the four top-ranked EU15, they are added to the group indicated in green or, if they place among the four lowest ranked of the EU15, they are indicated in dark red. If they placed in an intermediate position, they are added to the group marked in yellow. The countries that have no data for a set of indicators in the same summary table are placed at the end of the table, without any particular colour. Those countries for which there is no data are indicated in grey on the summary maps. The countries that were negotiating EU membership when the report was being prepared (Bulgaria, Rumania, and Turkey) appear in grey in the tables. Data are also supplied for three countries in the *European Free Trade Association* that have signed the *European Economic Area* agreement (Liechtenstein, Norway and Iceland)[13].

Other than for comparison with the previous work (EGREES, 2005), another reason supports the decision to identify groups on the basis of the EU15 and not the 25 current Member States: the relative weakness of the statistical information for some of the new EU25 members. Indeed, despite significant research, it was sometimes very difficult to find harmonized data for some of the new Member States. The tables clearly indicate these deficiencies and the authors invite the reader to treat the relative position of the countries for which a large amount of data is missing with extreme caution (the number of available by country is presented in Annex 1). Therefore, it is essential, and this is indeed the point of the work related here, that everybody understand the importance of having sources of reliable harmonised data as soon as possible, and most especially by participating in the work of the international organisms that undertake this type of project. The lack of a large amount of data in certain countries led us to make the following decision: even when countries are represented in the tables and summary maps when there is at least one data for them, they are not mentioned in the comments unless there is a complete or almost complete data set, according to the tables.

---

[12] The order of the countries was established on the basis of the ranking calculated for each of the indicators of the same group. Thus, for each of the columns of a table, each of the countries receives a rank, than the average ranking for each country is calculated for all of the available indicators. For countries with missing data, their average rank is calculated for the only available data. In some cases, specifically for part of the 10 new Union Members, their relative position was thus calculated on a very weak basis (sometimes one or two data).

[13] Nevertheless, no ranking has been prepared for the three candidate countries, nor for the EFTA/EES countries. Indeed, we preferred to maintain a ranking of only the Member States, especially as the data are often incomplete, and especially in order to remain consistent with respect to the options selected in previous works (EGREES, 2005).

3. What is the size of the disparities within the European educational systems?

As far as cognitive skills are concerned, the disparities were measured using the results obtained within the framework of PISA 2000 & 2003 (OECD). School careers were estimated by means of the *Labour Force Survey* (EUROSTAT) with respect to diplomas, and data derived from *Education at a Glance* (OECD, 2005), with respect to the duration of schooling.

Fifteen indicators were constructed from this data: 3 are intended to measure the differences between individuals, 7 the differences between groups and 5, the characteristics of individuals who are located below the threshold of competence defined by our reference framework. These fifteen indicators make it possible to estimate the extent of the inequality of results within the European educational systems.

Insert 1 – *Definition of the indicators allowing use to estimate the extent of the differences in internal results*

Estimate of the differences between individuals [table 1a and figure 1a]
- Column 1*: Dispersion of the reading scores for 15-year-old students on the reading scale [source: PISA 2003, year of data collection: 2003].*

  The most equitable situation: the smallest differences, with the value closest to zero.

- Column 2*: Dispersion of the mathematics scores for 15-year-old students on the mathematics scale [source: PISA 2003, year of data collection: on 2003]*

  The most equitable situation: the smallest differences, with the value closest to zero.

- Column 3*: Percentage of 25-34 year-olds outside the modal diploma category [source: EUROSTAT, Labour Force Survey, special demand, year of data collection: 2004]*

  The most equitable situation: the smallest differences, with the value closest to zero.

Estimate of the differences between groups [table 1b and figure 1b]
- Column 1: *difference of reading scores between 15-year-old students from the most privileged families in terms of the social and occupational status of their parents (fourth quartile variable HISEI) and the least privileged students (first quartile variable HISEI) [source: PISA 2003, year of data collection: 2003] (*).*

  A value of 0.80 means that the average of the most privileged is superior by a standard deviation of 0.80 to that of the least privileged. A value of 0 means that there is no difference between the two groups.

  The most equitable situation: the smallest differences, with the value closest to zero.

- Column 2: *Difference of scores in mathematics between 15-year-old students from the least privileged families from the point of view of the social and occupational status of their parents (first quartile variable HISEI) and the other students [source: PISA 2003, year of data collection: 2003] (*)*

  A value of 0.80 means that the average of the most privileged is superior to a standard deviation by 0.80 to that of the least privileged. A value of 0 means that there is no difference between the two groups.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 3: *Difference of reading scores for 15-year-old students according to their place of birth (students having been born in the country of the test or having a parent born in this country as compared to the students born abroad or having both parents born abroad) [source: PISA 2003, year of data collection: 2003] (*)*

  A value of 0.80 means that the native students average is superior by a standard deviation of 0.80 to that of non-native. A value of 0 means that there is no difference between the two

groups. A negative value indicates that the average for non-native is superior to that of the native.

The most equitable situation: the smallest differences, with the value closest to zero.

- Column 4: *Difference of scores in mathematics for 15-year-old students according to their place of birth (students having been born in the country of the test or having a parent born in this country as compared to the students born abroad or having both parents born abroad) [source: PISA 2003, year of data collection: 2003] (*)*

    A value of 0.80 means that the native students average is superior by a standard deviation of 0.80 to that of non-native. A value of 0 means that there is no difference between the two groups. A negative value indicates that the average for non-native is superior to that of the native.

The most equitable situation: the smallest differences, with the value closest to zero.

- Column 5: *Difference of reading scores for 15-year-old students according to their gender [source: PISA 2003, year of data collection: 2003] (*)*

    A value of 0.80 means that the average for girls is superior by a standard deviation of 0.80 to that of boys. A value of 0 means that there is no difference between the two groups. A negative value indicates that the average for boys is superior to that of the girls.

The most equitable situation: the smallest differences, with the value closest to zero.

- Column 6: *Difference of scores in mathematics for 15-year-old students according to their gender [source: PISA 2003, year of data collection: 2003] (*)*

    A value of 0.80 means that the average for girls is superior by a standard deviation of 0.80 to that of boys. A value of 0 means that there is no difference between the two groups. A negative value indicates that the average for boys is superior to that of the girls.

The most equitable situation: the smallest differences, with the value closest to zero.

- Column 7: *Ratio between the school expectancy of women and men, multiplied by 100.* [Source: *Education at a Glance*, 2005, year of data collection: 2003]

    If the rate is superior to 100, women have school expectancy superior to that of men.

The most equitable situation: the smallest differences, with the value closest to one hundred.

(*) All the differences between averages are related to the national standard deviation for the index under consideration.

Estimate of phenomena affecting individuals below the threshold [table 1c and figure 1c]

- Column 1: *Percentage of students below level 2 of the reading scale [source: PISA 2003, year of data collection: 2003]*

    The most equitable situation: the smaller the ratio with the value closest to zero.

- Column 2: *Percentage of students below level 2 of the mathematics scale [source: PISA 2003, year of data collection: 2003]*

    The most equitable situation: the smaller the ratio with the value closest to zero.

- Column 3: *Difference between the average performances of students in the 1st decile of the distribution of scores on the reading scale and the average performances of the other students on the same scale [source: PISA 2003, year of data collection: 2003]*

    The most equitable situation: the smallest differences, with the value closest to zero.

- Column 4: *Difference between the average performances of students in the 1st decile of the distribution of scores on the mathematics scale and the average performances of the other students on the same scale [source: PISA 2003, year of data collection: 2003]*

    A value of 150 indicates that the average of the weakest students is 150 points below that of the other students.

    The most equitable situation: the smallest differences, with the value closest to zero.

- Column 5: *Percentage of 25-34 year-olds who do not possess at least a diploma of upper secondary education [source: EUROSTAT, Labour Force Survey, special demand, year of data collection: 2004]*

A value of 50 indicates that 50 % of 25-34 year-olds are below the upper secondary education level.

The most equitable situation: the smaller the ratio with the value closest to zero.

Tables (1a to 1c) and corresponding maps (figures 1a to 1c) summarise the results obtained. The first map (1a) is constructed from the values calculated for indicators presented in the first table. A first group (in green) is the one for which the differences are the least marked between the individuals (Latvia, Finland, Portugal, Poland, Slovak Republic, Denmark, Hungary and Ireland) while the second group, identified by the colour red, includes the countries for which the differences are the greatest (Germany, Greece, Italy and Belgium). On the basis of this ranking, the first group of countries can be identified as the group presenting the fewest disparities and thus considered to be the most equitable with respect to inter-individual disparities of results. The conclusion is the exact opposite for the second group of countries. Between these two groups, a set of countries presents an intermediate situation. Naturally, this approach, built around a simple classification, does not take into account the significance of the differences between countries, but it has to be recognised that it is very delicate in so complex a system, and operating in very different dimensions, to identify real metrics permitting an estimation of these differences in a precise manner, without having to resort to theoretical options requiring justification. Moreover, the ranking obtained is a function of the dimensions that were taken into account and, depending on the choice of variables, we can observe differences of rank. Nevertheless, the groups in both extremes of the distribution (in green and in red in the three tables) are generally made up of the same countries.

The ranking of countries according to the importance of the differences of results between groups (socio-economic profile, place of birth and gender) (table 1b) is not absolutely identical to the rankings obtained from the differences observed for the whole population, regardless of the groups under consideration: Poland, Czech Republic, Netherlands, Ireland, Spain and the United Kingdom are in a good position here, while at the other end, we find Austria, Finland, the Slovak Republic, Belgium and Germany. We can see, for example, that Finland, which belonged to the group of countries where individual differences are the lowest is located in the group of countries where the differences between groups of individuals are the strongest. This points to the importance of having of a set of equity indicators and not just a single number.

If we continue to examine the criterion of the importance of the differences in results, but this time by identifying the extent of the groups considered below a certain threshold — for example, level 2 on the PISA reading and mathematics scales, i.e. very weak levels — the group of countries presenting the least number of very weak 15-year-old students includes Finland, Ireland, Denmark and the United Kingdom, while at the other extreme, we find Belgium, Germany, Greece and Italy (table 1c), which have a much greater proportion of very weak students. Here again, we see Finland in the group of the top-ranked countries. If we are interested in this particular case, we can interpret Finland's situation in the following way: this country seems to present individual differences in terms of results with relatively small distinctions. The groups of very weak students are also relatively limited as well, but on the other hand the differences are noticeably more pronounced when we take into account specific groups, while there are relatively few of them (such as students born abroad, when taking account of their competence in literacy) or the difference in school expectancy, which are particularly favourable to girls. As we can see, once again, a more extensive analysis must be performed if we wish to understand the position of each country, beyond a cursory glance

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems.* Report for the European Commission. Liège : Service de Pédagogie expérimentale.

at the rankings. On the other hand, some countries, such as Belgium or Germany present a homogeneous profile: the differences in the results are particularly pronounced, whichever way they are considered. Ireland also presents a homogeneous profile, but much more favourable.

Table 1a – *Internal results (differences between individuals).*

Country	Standard deviation on the PISA reading scale (PISA 2003)	Standard deviation on the PISA mathematics scale (PISA 2003)	Percentage of 25-34 year-olds outside the modal diploma category (2002)
	1	2	3
Slovenia	-	-	34.2
Latvia	90.4	87.9	37.1
Finland	81.0	83.7	48.6
Portugal	92.7	87.6	40.2
Poland	95.9	90.2	31.0
Slovakia	92.5	93.3	20.9
Denmark	88.3	91.3	46.7
Hungary	92.0	93.5	35.0
Estonia	-	-	39.5
Ireland	86.5	85.3	59.6
Czech Republic	95.5	95.9	19.1
United Kingdom	94.0	92.3	44.0
Austria	103.1	93.1	34.0
The Netherlands	84.8	92.5	55.2
Malta	-	-	40.5
Luxembourg	99.7	91.9	44.3
Sweden	95.6	94.7	42.8
Spain	95.4	88.5	61.6
France	97.0	91.7	57.7
Germany	109.1	102.6	37.7
Lithuania	-	-	47.0
Greece	104.5	93.8	48.7
Italy	100.7	95.7	49.3
Cyprus	-	-	57.3
Belgium	110.0	109.9	59.8
Bulgaria	-	-	45.5
Romania	-	-	32.5
Turkey	95.3	104.7	-
Norway	102.5	92.0	45.3
Liechtenstein	89.8	99.1	-
Iceland	98.3	90.4	59.4

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems.* Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Table 1b – *Internal results (differences between groups).*

Country	Differences in reading achievement, by socio-economical status (2003)	Differences in mathematics achievement, by socio-economical status (2003)	Differences in reading achievement, by place of birth (2003)	Differences in mathematics achievement, by place of birth (2003)	Differences in reading achievement, by gender (2003)	Differences in mathematics achievement, by gender (2003)	Ratio between men and woman school expectancy (2003)
	1	**2**	**3**	**4**	**5**	**6**	**7**
Latvia	0.58	0.65	0.11	0.03	0.43	-0.03	-
Poland	0.89	0.88	-0.85	-0.20	0.41	-0.06	105.99
Czech Republic	0.82	0.92	0.37	0.37	0.33	-0.16	101.82
The Netherlands	0.87	0.94	0.63	0.72	0.25	-0.06	98.85
Ireland	0.88	0.84	0.13	0.05	0.34	0.17	108.07
Spain	0.68	0.74	0.47	0.51	0.41	-0.10	104.82
United Kingdom	0.91	0.95	0.13	0.17	0.30	-0.07	114.21
Italy	0.77	0.75	0.48	0.23	0.39	-0.19	104.27
Hungary	0.97	1.06	0.00	0.05	0.34	-0.08	104.76
Sweden	0.72	0.79	0.58	0.67	0.38	-0.07	115.51
Greece	0.80	0.89	0.43	0.46	0.36	-0.21	103.70
Denmark	0.73	0.81	0.57	0.74	0.29	-0.18	107.39
Portugal	0.80	0.91	0.49	0.70	0.39	-0.14	104.85
France	0.93	0.98	0.57	0.59	0.39	-0.09	103.03
Luxembourg	0.98	1.03	0.58	0.42	0.33	-0.19	101.36
Austr'ia	1.01	0.88	0.73	0.66	0.46	-0.08	101.25
Finland	0.63	0.73	1.12	0.88	0.54	-0.09	107.37
Slovakia	0.94	0.97	0.48	0.69	0.35	-0.20	101.99
Belgium	0.97	1.04	0.90	0.91	0.34	-0.07	105.76
Germany	1.02	1.07	0.83	0.79	0.39	-0.09	98.84
Cyprus	-	-	-	-	-	-	-
Estonia	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-
Turkey	0.74	0.80	-0.06	0.32	0.35	-0.14	84.37
Norway	0.71	0.77	0.63	0.57	0.48	-0.07	109.04
Liechtenstein	1.07	1.06	0.57	0.51	0.19	-0.29	-
Iceland	0.35	0.46	0.63	0.39	0.59	0.17	110.99

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Table 1c – *Internal results (individuals below a threshold).*

Country	Percentage of low achievers in reading (2003)	Percentage of low achievers in mathematics (2003)	Difference between the very low achievers in reading and the other students (2003)	Difference between the very low achievers in mathematics and the other students (2003)	Percentage of 25-34 year-olds who do not possess at least a diploma of upper secondary (2004)
	1	**2**	**3**	**4**	**5**
Finland	5.7	6.8	151.3	149.7	10.6
Slovenia	-	-	-	-	9.9
Ireland	11.0	16.8	167.3	155.0	20.6
Denmark	16.5	15.4	167.6	166.5	11.8
United Kingdom	14.9	17.8	175.2	165.3	9.1
Poland	16.8	22.0	174.9	156.9	8.5
Estonia	-	-	-	-	11.1
Czech Republic	19.3	16.6	177.3	169.4	6.4
The Netherlands	11.5	10.9	153.0	170.2	20.6
Sweden	13.3	17.3	177.6	172.3	8.3
Latvia	18.0	23.7	156.3	156.2	17.4
Lithuania	-	-	-	-	11.9
Slovakia	24.9	19.9	165.9	170.1	6.5
Hungary	20.5	23.0	164.9	165.7	16.5
France	17.5	16.6	184.6	169.7	20.2
Austria	20.7	18.8	195.6	164.3	13.6
Portugal	21.9	30.1	172.4	154.7	59.8
Luxembourg	22.7	21.7	191.9	166.1	13.3
Spain	21.1	23.0	177.0	162.6	37.8
Belgium	17.9	16.5	223.2	218.4	20.2
Germany	22.3	21.6	211.4	195.3	14.7
Cyprus	-	-	-	-	18.9
Greece	25.3	38.9	188.5	162.1	24.1
Italy	23.9	31.9	192.4	170.2	34.8
Malta	-	-	-	-	59.5
Bulgaria	-	-	-	-	21.7
Romania	-	-	-	-	20.3
Turkey	36.8	52.2	148.5	158.0	-
Norway	18.1	20.8	189.3	163.3	5.9
Liechtenstein	10.4	12.3	162.2	194.4	-
Iceland	18.5	15.0	184.0	167.8	28.1

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Figure 1a – *Importance of the inequalities of results between individuals (cognitive skills and school careers).*

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.
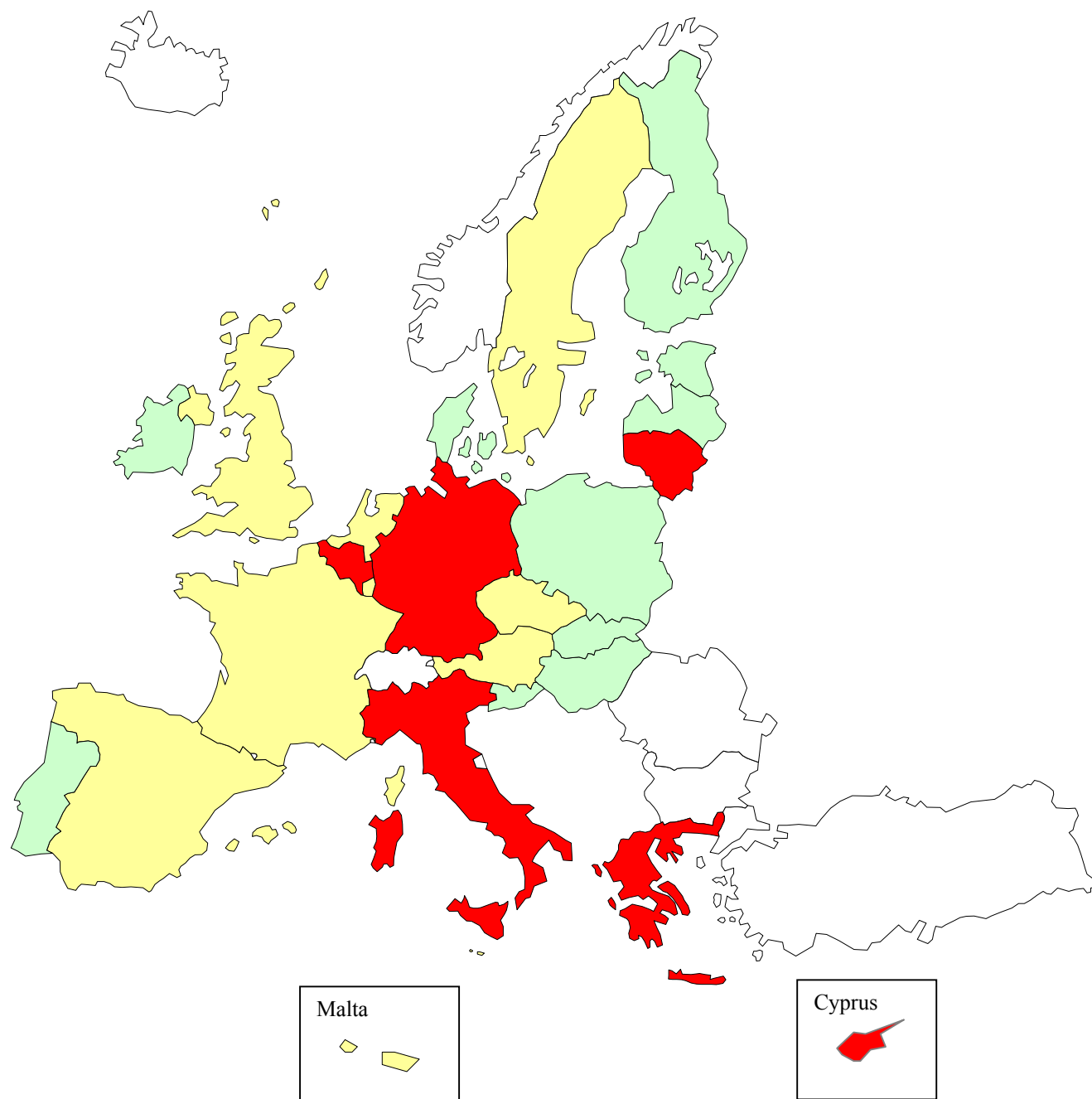
Figure 1b – *Importance of the inequalities of results between groups (cognitive skills and school careers)*[14]
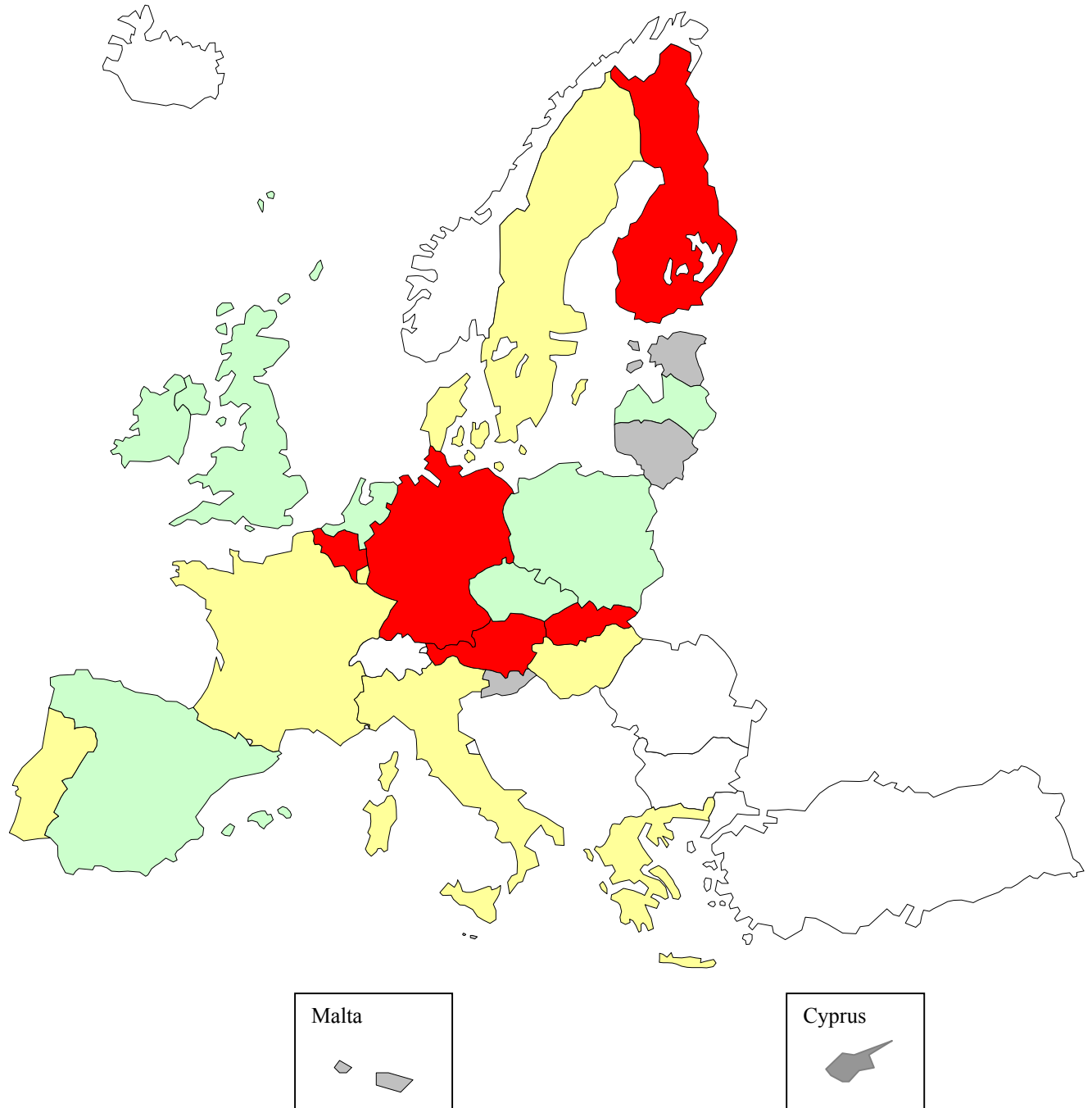
Figure 1c – *Importance of the inequalities of results for individuals below a threshold (cognitive skills and school careers)*

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.
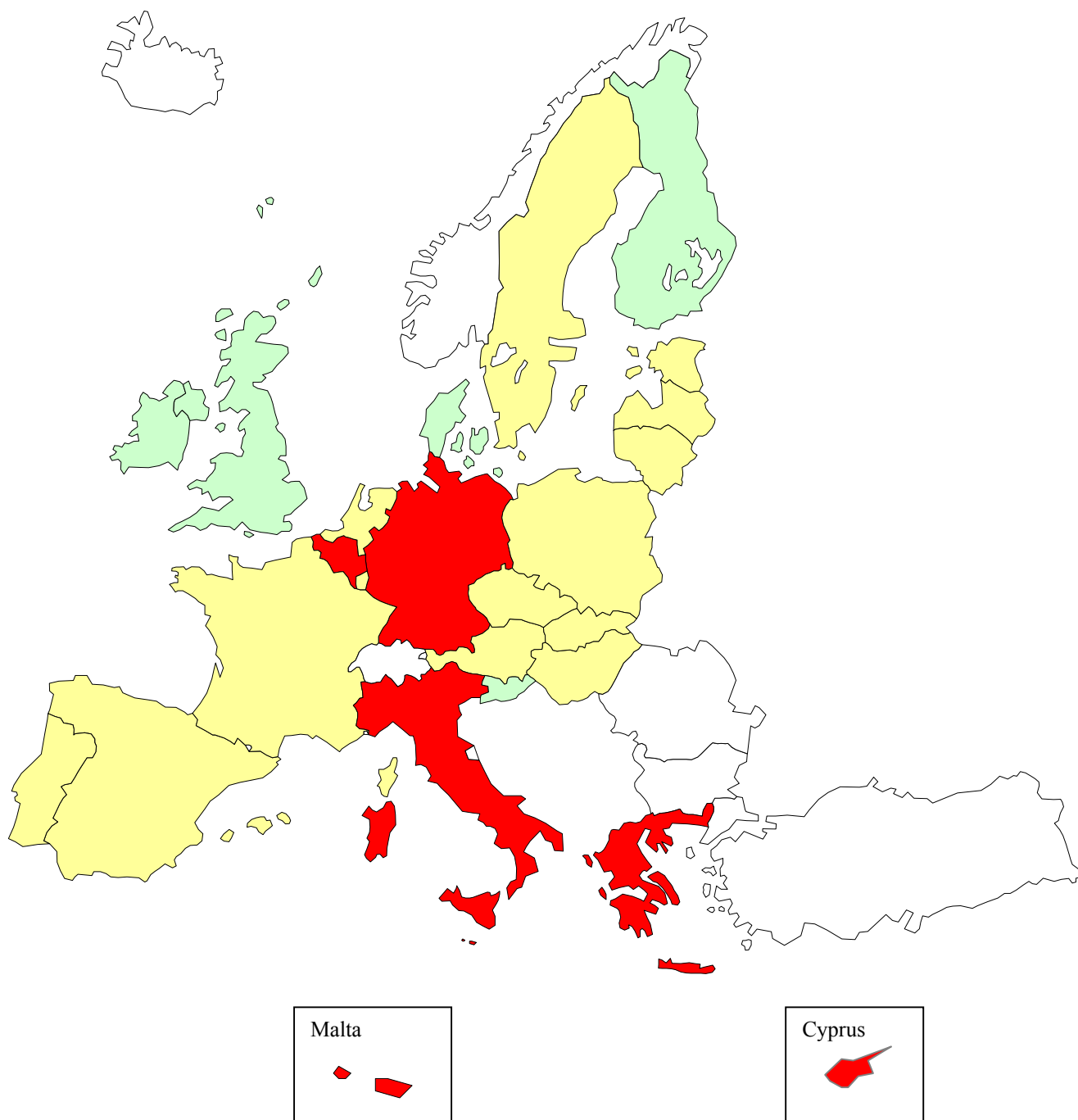
4. What benefits are connected with education in European countries and what is the importance of social and economic (contextual) inequalities connected with the level of education?

Certain benefits of an education can be easily expressed in financial terms. This is the case for the salary an individual receives according to his qualifications or the chances of obtaining employment or not, but there are other areas for which it is impossible to estimate the impact of education in the same way. For example, the cultural or social benefits, such as the possibility of obtaining a better social position or a more prestigious employment, to reduce the risks of personal accidents, to benefit from better health, from a longer life expectancy or to offer one's children a better education, are more difficult to calculate and compare.

The indicators that were used to answer this second question cover three main dimensions: the economic advantages, the social advantages and the advantages associated with the situation of the children and thus the following generation. The benefits obtained, not directly by the person, but by his children or within the context of his relationship with his children, were therefore also taken into account. This is an aspect of the benefits of education the importance of which Wolfe and Haveman (2000) have demonstrated.

Using meritocratic logic, important benefits linked to more education can be considered as fair. Nevertheless, in systems where education is not something which is fairly distributed, the weight of the benefits of education can be considered as a factor that is aggravating the inequity of the educational system, and, consequently, as a factor indicating the importance of greater equity.

Insert 2 – *Definition of the indicators allowing use to estimate the extent of the differences in advantages linked to education in the Member States.*

Estimate of the extent of the differences between privileged individuals and individuals below a threshold [table 2a and figure 2a]

- Column 1: *Reduction in the risk of unemployment for individuals from 25 to 49 years old who had obtained a tertiary level as the highest level of education (ISCED 5 or ISCED 6), as compared to individuals who only benefit from a lower secondary education or less (ISCED 0 to ISCED 2) [source: EUROSTAT, Labour Force Survey, year of data collection: first four months of 2005]*

    A value of 92 indicates that the reduction in the risk of unemployment from which the most educated benefit represents 92% of the risk of unemployment for the least educated. In other words, the risk of unemployment for the most educated represents 8% of the risk of unemployment for the least educated.

    The greater the benefit, the higher the value.

- Column 2: Average of the socio-economic status of the parents when both pursued tertiary studies (ISCED 5 or ISCED 6) multiplied by 100, divided by the average of the socio-economic status of the parents when both parents did not pursue studies above lower secondary education (ISCED 0 to ISCED 2) *[source: PISA 2003, year of data collection: 2003]*

    A value of 150 indicates that the professional status of the parents who followed tertiary studies is 1.5 times higher than that of the parents who have no diploma of upper secondary education.

    The greater the benefit, the higher the value.

- Column 3: *Average literacy score for 20-25 year olds that have a tertiary education diploma times 100, divided by the average score for 20-25 year olds that did not reach the 2nd cycle of secondary education [source: OECD, 2002, Study IALS, year of data collection: 1994 to 1998, according to the country under consideration]*

    A value of 120 indicates that the average literacy score for 20-25 year olds with higher education is 1.2

times higher than that of 20-25 year olds that have no diploma of upper secondary education.

The greater the benefit, the higher the value.

- Column 4: *Ratio between the rate of participation in formal and/or informal training for people aged from 25 to 64 years old with a level of tertiary education (ISCED 5 or ISCED 6) and that of people with at most a level of lower secondary education (ISCED 0 - 2) [source: OECD, Education at a Glance 2005, p. 343, Labour Force Survey, year of data collection: 2003]*

    A value of 8 indicates that the rate of participation in training of people with higher education is 8 times higher than that of people who have no diploma of upper secondary education

The greater the benefit, the higher the value.

- Column 5: *Average difference in the index of cultural practices (CULTACTV) of the students having two parents possessing a diploma of tertiary education (ISCED 5 or ISCED 6) as compared to children having at least one parent who does not have this level of education, in relation to the national standard deviation for this index [source: PISA 2000, year of data collection: 2000]*

    A value of 0.60 means that the average of the cultural practices index for students having two parents with a higher education is a 0.60 standard deviation higher than that of the students having parents with less education. A value of 0 means that there is no difference between the 2 groups.

The greater the benefit, the higher the value.

- Column 6: *Average difference in the cultural and social communication indexes (CULCOM + SOCCOM) of students having two parents possessing a diploma of tertiary education (ISCED 5 or ISCED 6) as compared to children having at least one of parent who does not possess this educational level, in relation to the national standard deviation for this index [source: PISA 2000, year of data collection: 2000]*

    A value of 0.60 means that the average of the cultural and social communication index for students having parents with higher education is a 0.60 standard deviation higher than that of the students with parents having less education. A value of 0 means that there is no difference between the 2 groups.

The greater the benefit, the higher the value.

- Column 7: *Differences between mean scores on the reading scale of 15-year-old students with both parents holding a higher education degree (ISCED 5 or ISCED 6) and children having at least one parent who has not attained this level of education [source: PISA 2003, year of data collection: 2003]*

    A value of 40 means that the mean in reading for students with two parents having higher education is 40 points higher than that of the students having parents with less education. A value of 0 means that there is no difference between the 2 groups.

The greater the benefit, the higher the value.

- Column 8: *Differences between mean scores on the mathematics scale of 15-year-old students with both parents holding a higher education degree (ISCED 5 or ISCED 6) and children having at least one parent who has not attained this level of education [source: PISA 2003, year of data collection: 2003]*

    A value of 40 means that the average in mathematics for students with two parents having higher education is 40 points higher than that of the students having parents with less education. A value of 0 means that there is no difference between the 2 groups.

The greater the benefit, the higher the value.

Estimate of the extent of the differences between groups, for men and women separately [table 2b and figure 2b]

- Column 1: *Returns of tertiary education [source: OECD, Education at a glance 2005, p. 146, year of data collection: 2002]*

    A value of 8 represents the income gain for a supplementary level of education in comparison to the income level corresponding to the previous level of education.

The greater the benefit, the higher the value.

- Column 2: *Returns of one additional year in education [source: Public Funding and Private Returns to Education 1995, year of data collection: variable according to the participating countries]*

    A value of 8 represents the income gain for one additional year in education.

The greater the benefit, the higher the value.

- Column 3: *Ratio between the rate of participation in formal and/or informal training for people aged from 25 to 64 years old with a level of tertiary education (ISCED 5 or ISCED 6) and that of people with at most a level of lower secondary education (ISCED 0 - 2) [source: OECD, Education at a Glance 2005, p. 343, Labour Force Survey, year of data collection: 2003]*

A value of 8 indicates that the rate of participation in training of people with higher education is 8 times higher than that of people who have no diploma of upper secondary education

The greater the benefit, the higher the value.

- Column 4: *100 times the difference of employment rates for people from 25 to 64 years of age with tertiary education (ISCED 5 or ISCED 6) as compared to those who did not go beyond lower secondary education (ISCED 0 - 2), divided by the employment rate of individuals in this second category [source: EUROSTAT, Labour Force Survey, year of data collection: first four months 2005, except for Luxembourg for which the reference period is the first four months of 2004]*

  A value of 600 indicates that the increase in the probability of employment for the most educated in relation to the least privileged represents 6 times the employment rate of the least educated.

  The greater the benefit, the higher the value.

- Column 5: *100 times the difference in income for individuals from 25 to 64 years of age with tertiary studies (ISCED 5 or ISCED 6) as compared to those who did not go further than lower secondary education (ISCED 0 - 2), divided by the income of the individuals in this second category [source: OECD, Education at a Glance 2005, p. 135, year of data collection: 2003, except Denmark, Finland, France, Italy, Luxembourg, the Netherlands, Norway, on 2002 and Spain, 2001]*

  A value of 600 indicates that the increase in the probability of employment of the most educated compared to the least privileged represents 6 times the employment rate of the least educated

  The greater the benefit, the higher the value.

All the indicators used here are presented in a way such that a high value is associated with a positive correlation between a rise in the educational level and obtaining a more significant advantage. The ranking of countries was established by taking into account the importance of the connection between educational level and advantages obtained. Regrettably, this dimension is the least robust of our model. Indeed, for a large number of the indicators selected, we have only a limited amount of information, including for those countries in the EU15, as we have already underlined in the previous report (EGREES, 2005).

Considering the limits of this approach (non-exhaustiveness of the criteria, disparities in the populations, the periods covered, etc.), it is advisable not to interpret this ranking (tables 2a and 2b) and the associated maps in a manner that is too peremptory or rigid.

It seems that in Greece, Finland and Sweden, the advantages associated with a better education are weaker for individuals (table 2a). They would be strongest in the United Kingdom or in Germany. In these last two countries, the equity of education would therefore represent a particularly critical stake.

Other lessons can be learnt from this analysis. Some countries have a rather homogeneous profile: their relative situation does not appear to differ from one criterion to another. This is the case for Sweden, which belongs, for almost all of the criteria, to the group of countries where benefits associated with education are the weakest or France, which does not stand out either positively or negatively for any of the selected criteria.

Other countries have a contrasting profile: in Italy notably, the benefits associated with education are particularly pronounced for one criterion (participation in continuous training by those with the highest diplomas), but weak for others (decreased unemployment for those with the highest diplomas).

Table 2a – *Importance of the benefits associated to more education (differences between privileged individuals and individuals below a threshold)[15].*

Country	Unemployment decrease (2005)	Occupational status (2003)	Reading level (1994-1998)	Continuous training (2003)	Cultural practices with children (2000)	Communication with children (2000)	Reading skills of the children (2003)	Mathematics skills of the children (2003)
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Slovakia	92.42	207.1	-	6.1	-	-	155.6	173.9
Poland	83.38	223	-	20.5	0.54	0.37	129.5	123.3
Malta	81.13	-	-	-	-	-	-	-
Lithuania	78.57	-	-	-	-	-	-	-
Czech Republic	94.28	196.2	-	7.8	0.46	0.23	126.3	144.7
Hungary	84.72	195.5	-	8	0.52	0.22	124.7	151.4
Luxembourg	(:)	180.1	-	7.4	0.57	0.24	74.1	69.6
Germany	77.51	157.9	123	5.4	0.59	0.38	111.4	116.1
Austria	68.57	162.5	-	4.7	0.63	0.3	95.9	67.7
United Kingdom	78.02	164.2	117	5.1	0.62	0.34	68.2	77.2
Slovenia	69.81	-	-	-	-	-	-	-
Italy	26.04	176.6	-	7.3	0.52	0.26	64.4	54.5
Spain	34.82	170.3	-	4.1	0.53	0.42	39.4	52.7
Belgium	75.34	167.6	119	4	0.43	0.14	76.3	81.7
Denmark	47.87	156.5	118	1.9	0.44	0.37	77.8	82.7
France	55.71	164.8	-	3.5	0.45	0.28	54.5	57.2
Portugal	33.33	154.4	127	7.1	0.51	0.41	8	24.4
Latvia	81.36	155	-	-	0.24	0.23	34.4	64.6
Ireland	73.24	166.3	130	3.8	0.2	0.22	56.4	64.3
Greece	31.53	181.7	-	1.7	0.22	0.23	61.9	69.5
The Netherlands	(:)	153.8	120	-	0.5	0.29	37.1	50.7
Finland	68.21	144.8	120	2.4	0.43	0.22	45.2	48.2
Cyprus	38.71	-	-	-	-	-	-	-
Sweden	57.58	142.5	117	2.1	0.3	0.19	40.7	44.2
Estonia	(:)	-	-	-	-	-	-	-
Bulgaria	78.45	-	-	-	0.33	0.33	-	-
Romania	61.68	-	-	-	0.48	0.19	-	-
Turkey	-	175.4	-	-	-	-	93.8	126.4
Norway	73.15	156.4	125	-	0.31	0.24	48.9	55.2
Liechtenstein	-	129.8	-	-	0.40	0.13	30.6	42.7
Iceland	(:)	148.2	-	-	0.40	0.23	41.6	53.7

---

[15] At the top of the table, countries where benefits from education are particularly high.

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems.* Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Table 2b – *Importance of the benefits associated to more education (differences between groups)[16].*

Country	Returns of tertiary education (2002)		Returns of one additional year in education		Continuous training (2003)		Rate of employment (2005)		Salaries (2003)	
	1		**2**		**3**		**4**		**5**	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
Estonia	-	-	-	-	-	-	228.89	339.89	-	-
Lithuania	-	-	-	-	-	-	212.59	335.35	-	-
Poland	-	-	-	-	19.5	43	231.94	340.76	-	-
Latvia	-	-	-	-	-	-	112.68	299.54	-	-
Slovakia	-	-	-	-	4.1	9	637.1	482.86	-	-
Hungary	-	-	-	-	7	9	172.62	181.72	230	167
Czech Republic	-	-	-	-	4.8	12	363.05	233.61	137	136
Slovenia	-	-	-	-	-	-	93.53	118.14	-	-
Malta	-	-	-	-	-	-	26.44	190.2	-	-
United Kingdom	-	-	9	8	4.8	5.1	54.05	97.23	107	157
Portugal	-	-	10	8	7.4	6.9	21.47	43.93	200	170
Germany	-	-	8 (old Länder)	7 (old Länder)	5.2	7.5	90.99	102.74	67	79
Luxembourg	-	-	-	-	6	9.8	44.13*	66.74*	88	77
Cyprus	-	-	-	-	-	-	38.27	107.18	-	-
Austria	-	-	7	7	4.3	5.9	64.13	85.4	-	-
Italy	7.6	8.3	6	5	7	7.7	31.48	140.19	119	88
Ireland	-	-	9	7	3.5	4	43.38	138.73	65	152
Finland	15.8	15.4	9	9	2.7	2.3	84.02	94.95	77	49
Belgium	6.1	8.1	-	-	3.8	4.9	64.17	149.4	47	63
Spain	-	-	7	6	3.9	4.4	16.98	89.2	75	95
France	8.3	7.2	8	6	3.1	4.2	43.6	67.48	81	80
Greece	-	-	6	4	4	1.6	25.77	118.5	-	-
The Netherlands	5.3	8	6	5	-	-	25.72	61.55	70	115
Sweden	8.6	7.2	4	3	2.2	2	47.36	70.39	60	45
Denmark	4.8	3.4	6	6	1.7	2	35.64	60.56	51	37
Bulgaria	-	-	-	-	-	-	190.10	252.14	-	-
Romania	-	-	-	-	-	-	107.67	142.36	-	-
Turkey	-	-	-	-	-	-	-	-	-	-
Norway	10.4	13.0	5	5	-	-	87.06	94.21	62	70
Liechtenstein	-	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	36.32	18.07	-	-

---

[16] At the top of the table, countries where benefits from education are particularly high.

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems.* Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Figure 2a – *Benefits associated to more education (differences between individuals)*[17]
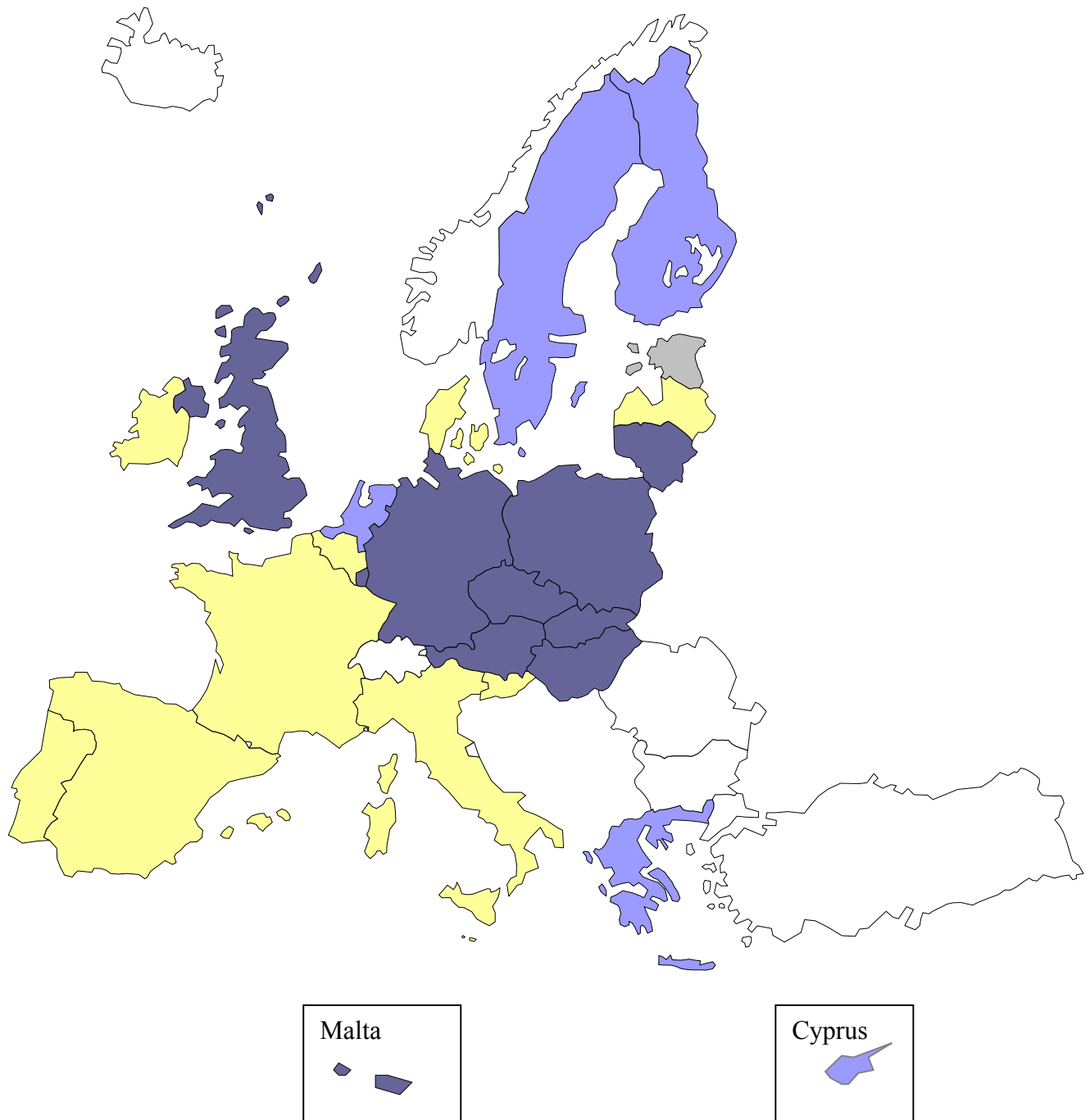
Malta

Cyprus

Figure 2b – *Benefits associated to more education (differences between groups)[18]*
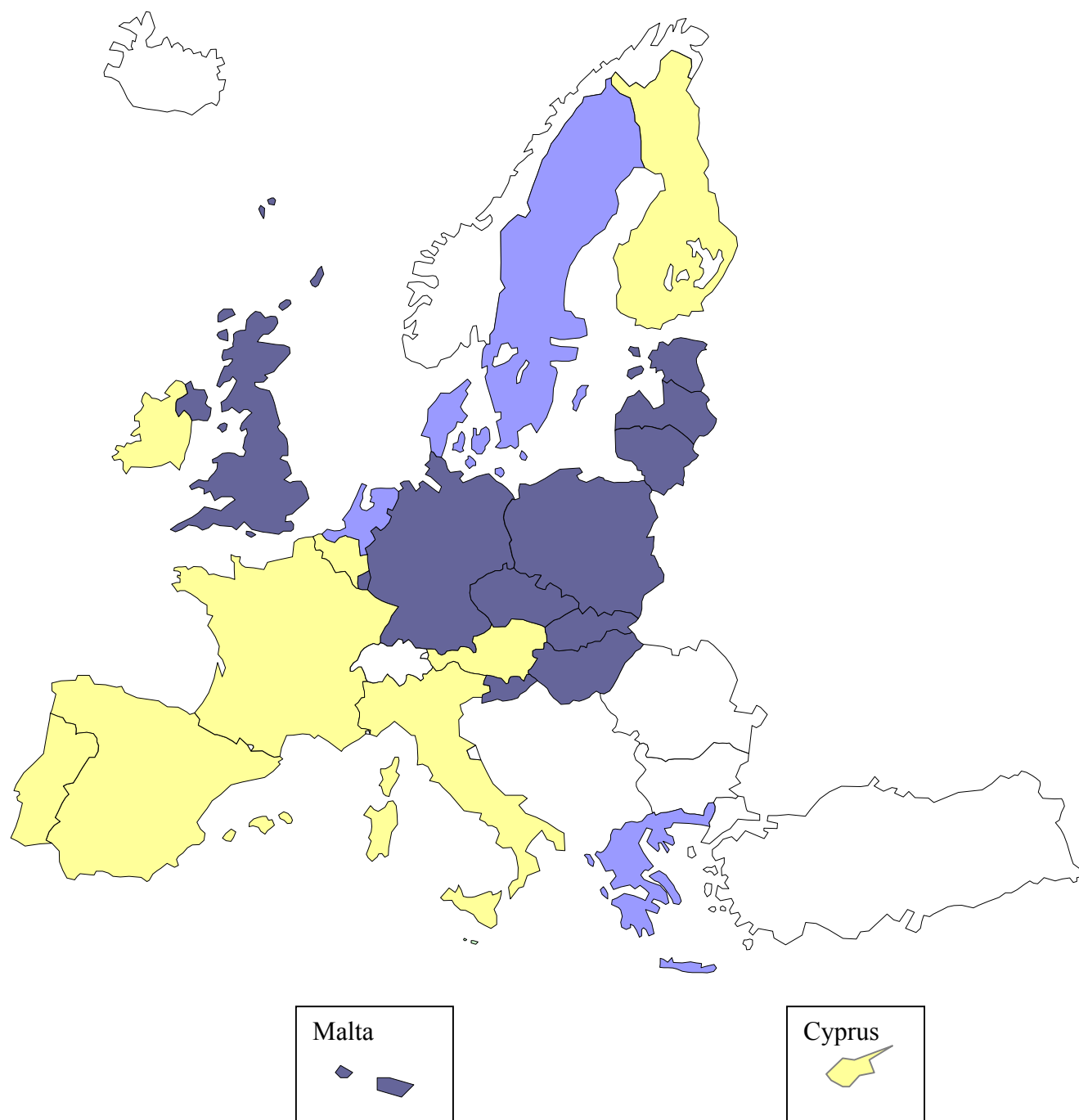
5. Can European education systems play a role in amplifying or reducing contextual inequalities?

School is not alone: it is part of a social and economic system and as such is subject to its influence yet, in return, it also contributes to the modification of social and economic disparities, by decreasing them or amplifying them. To understand the relations that exist between the school and its context, it is naturally important to describe this context correctly. It is for this reason that figures 3a, 3b and 3c present a summary of the context indicators developed by the EGREES (2005). The values of the variables that were used as the basis for developing these maps are presented in tables 3a to 3c. Two sets of indicators were used. The first one is called "social, economic and cultural context in which the educational systems operate" (tables 3a to 3c) and presents a group of macro variables, the first two of which are drawn from the *Luxembourg Income Study*, the third from the EUROSTAT's *Labour Force Survey (2000)*, the fourth from *Education at a Glance (OECD)*, and the last three from PISA 2000.

Insert 3 - *Definition of indicators making it possible to estimate the extent of the role of educational systems as an amplifier or reducer of contextual disparities.*

Social, economic and cultural context in which the educational systems operate

Differences between individuals [table 3a and figure 3a]
- Column 1: *Dispersion of household incomes (Gini coefficient) [source: EUROSTAT, year of data collection: 2003, except where otherwise indicated in the table]*

  The more equitable the situation,, the smaller the differences, with the value closest to zero.

- Column 2: *Dispersion of the cultural resources of households within the population of 15-year-old students (CULTPOSS) [source: PISA 2003, year of data collection: 2003]*

  A value of 0.60 means that the national standard deviation of the index is 0.60.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 3: *Dispersion of the cultural practices of households within the population of 15-year-old students (CULACT) [source: PISA 2000, year of data collection: 2000]*

  A value of 0.60 means that the national standard deviation of the index is 0.60.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 4: *Dispersion of professional aspirations of 15-year-old students (BTHR) [source: PISA 2000, year of data collection: 2000]*

  A value of 16 means that the national standard deviation of the index is 16.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

Differences between groups [table 3b and figure 3b]
- Column 1: Difference in family resources (WEALTH), by gender, for a population of 15-year-old students *[source: PISA 2000, year of data collection: 2000]*

  A negative value means that the index is higher for girls, whereas a positive value indicates that the index is more favourable for the boys.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 2: Difference in family resources (WEALTH), by social origin, for a population of 15-year-old students *[source: PISA 2000, year of data collection: 2000*

  A negative value means that the index is higher for the students from a privileged origin [> 1st quartile HISEI], whereas a positive value indicates that the index is more favourable for students from a modest origin [< 1st quartile HISEI].

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 3: Difference in family resources (WEALTH) between 15-year-old students born in the country of the test and having at least one parent who was also born there and other students (born abroad or having two parents who were born abroad) *[source: PISA 2000, year of data collection: 2000]*

  A negative value means that the index is higher for the native students, whereas a positive value indicates that the index is more favourable for the non-native.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 4: difference in family resources (WEALTH), by reading level, for a population of 15-year-old students *[source: PISA 2000, year of data collection: 2000]*

  A negative value means that the index is higher for students above level 2 on the reading scale, whereas a positive value indicates that the index is more favourable for the weaker students (below level 2 on the literacy scale).

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 5: *Ratio between the unemployment rate of women from 15 to 74 years of age and that of men in the same age bracket, times 100 [source: EUROSTAT, Labour Force Survey, year of data collection: 2004]*

  A value higher than 100 indicates a higher unemployment rate for women.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 6: *Ratio between the percentage of women from 25 to 64 years of age with tertiary education and that of men in the same age bracket that have the same educational level, times 100 [source: EUROSTAT, Labour Force Survey, year of data collection: 2004]*

  A value higher than 100 indicates a greater proportion of women with tertiary education than that of men in the same age bracket.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 7: Difference in the average (*) for the cultural resources index (CULTPOSS) between 15-year-old girls and boys *[source: PISA 2003, year of data collection: 2003]*

  A negative value means that the index is higher for girls, whereas a positive value indicates that the index is more favourable for boys

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 8: Average difference (*) in the cultural resources index (CULTPOSS) between 15-year-old students coming from the least privileged families, from the point of view of the social and occupational status of their parents, (first quartile HISEI) and the other students *[source: PISA 2003, year of data collection: 2003]*

  A negative value means that the index is higher for students from a privileged origin [> 1st quartile HISEI], whereas a positive value indicates that the index is more favourable for students from a modest origin [< 1st quartile HISEI].

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 9: Difference in the average (*) for the cultural resources index (CULTPOSS) between 15-year-old students born in the country of the test and from which at least one of the parents was also born there and the other students (born abroad or among whom both parents were born abroad) *[source: PISA 2003, year of data collection: 2003]*

  A negative value means that the index is higher for the native students, whereas a positive value indicates that the index is more favourable for the non-native.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 10: Average difference (*) in the cultural resources index (CULTPOSS) between 15-year-old students below level 2 on the combined mathematics scale and the other students *[source: PISA 2003, year of data collection: 2003]*

  A negative value means that the index is higher for students scoring over level 2 on the mathematics scale, whereas a positive value indicates that the index is more favourable for the weaker students (below level 2 on the mathematics scale).

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 11: Average difference (*) in the cultural practices index (CULTURACT) between 15-year-old boys and girls *[source: PISA 2000, year of data collection: 2000]*

A negative value means that the index is higher for girls, whereas a positive value indicates that the index is more favourable for boys.

The more equitable the situation, the smaller the differences, with the value closest to zero..

- Column 12: Average difference (*) in the cultural practices index (CULTURACT) between 15-year-old students coming from the least privileged families, from the point of view of the social and occupational status of their parents (first quartile HISEI), and the other students *[source: PISA 2000, year of data collection: 2000]*

    A negative value means that the index is higher for students from a privileged origin [> 1st quartile HISEI], whereas a positive value indicates that the index is more favourable for students from a modest origin [< 1st quartile HISEI].

The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 13: Average difference (*) in the cultural practices index (CULTURACT) between 15-year-old students born in the country of the test and having at least one parent who was also born there and the other students (born abroad or having both parents born abroad) *[source: PISA 2000, year of data collection: 2000]*

    A negative value means that the index is higher for the ‚native students, whereas a positive value indicates that the index is more favourable for the non-native.

The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 14: Average difference (*) for the cultural practices index (CULTURACT) between 15-year-old students below level 2 on the reading scale and the other students *[source: PISA 2000, year of data collection: 2000]*

    A negative value means that the index is higher for the students above level 2 on the reading scale, whereas a positive value indicates that the index is more favourable for the weaker students (below level 2 on the literacy scale).

The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 15: Average difference (*) for the professional aspiration index (BTHR) between 15-year-old boys and girls *[source: PISA 2000, year of data collection: 2000]*

    A negative value means that the index is higher for girls, whereas a positive value indicates that the index is more favourable for boys.

The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 16: Average difference (*) for the professional aspiration index (BTHR) between 15-year-old students coming from the least privileged families from the point of view of the social and occupational status of their parents (first variable quartile HISEI) and the other students *[source: PISA 2000, year of data collection: 2000]*

    A negative value means that the index is higher for students from a privileged origin [> 1st quartile HISEI], whereas a positive value indicates that the index is more favourable for the students from a modest origin [< 1st quartile HISEI].

The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 17: Average difference (*) for the professional aspiration index (BTHR) between 15-year-old students born in the country of the test and having at least one parent also born there and the other students (born abroad or having both parents born abroad) *[source: PISA 2000, year of data collection: 2000]*

    A negative value means that the index is higher for the native students, whereas a positive value indicates that the index is more favourable for the non-native.

The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 18: Average difference (*) for the professional aspiration index (BTHR) between 15-year-old students below level 2 on the reading scale and other students *[source: PISA 2000, year of data collection: 2000]*

    A negative value means that the index is higher for the students over level 2 on the reading scale, whereas a positive value indicates that the index is more favourable for the weak students (below level 2 on the literacy scale).

The more equitable the situation, the smaller the differences, with the value closest to zero.

(*)All the differences between averages are divided by the national standard deviation of the index under consideration.

Individuals below a threshold [table 3c and figure 3c]
- Column 1: *Rate of poverty risk (threshold: 60 % of the median equivalent income after social transfer) [source: EUROSTAT, SILC and national surveys, year of data collection: 2003, unless otherwise specified in the table]*

  A value of 8 indicates that the proportion of households under the poverty line is 8 %.

  The more equitable the situation, the smaller the rate, with the value closest to zero.

- Column 2: *Unemployment rate for individuals from 15 to 74 years of age [source: EUROSTAT, Labour Force Survey, year of data collection: 2004]*

  The more equitable the situation, the smaller the rate, with the value closest to zero.

- Column 3: *Proportion of adults from 25 to 64 years of age with a low educational level (ISCED 0 - 2) [source: EUROSTAT, Labour Force Survey, year of data collection: 2004]*

  The more equitable the situation, the smaller the rate, with the value closest to zero.

Disparities in treatment

Quantity of education received or facilities available [table 4a and figure 4a]
- Column 1: *Ratio of the cost of tertiary education (ISCED 5 and ISCED 6) / cost of primary education (ISCED) times 100 [source: OECD, Education at a Glance 2005, p. 181, year of data collection: 2002, except for Hungary, Italy and Portugal, 2001, Lithuania, 2000]*

  A value of 200 indicates that tertiary education is twice as expensive as primary education.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 2: Difference in computer equipment for the students' usage (difference between the number of students per computer for the best-equipped schools (percentile 75) and the number of students per computer for the least-equipped schools expressed in relation to the number of students per computer in the least equipped schools) *[source: OECD, Education at a Glance 2002, p. 331, year of data collection: 2000]*

  A value of 1.7 represents the proportion of the group of privileged students that we should add to the group of privileged students to obtain the number of underprivileged students.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 3: *Dispersion (standard deviation) of the size of the mathematics classes (15-year-old students, variable ST36Q01) [source: PISA 2003, year of data collection: 2003]*

  A value of 6 indicates that the standard deviation of the size of the mathematics classes is 6.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 4: *Class size of students coming from the least privileged families (average size of mathematics classes (ST36Q01) for the students coming from the least-privileged 25 % of families in terms of the social and occupational status of the parents (HISEI) as compared to the average size of mathematics classes for the other students [source: PISA 2003, year of data collection: 2003]*

  A value of 90 indicates that, if the size of the mathematics classes for privileged students (> 1st quartile HISEI) is 100, then that of the underprivileged students is 90. A value superior to 100 indicates that the underprivileged students are in classes with a greater number of students than are other students.

  The more equitable the situation, the more favourable the class size for the risk group, with the value the closest to zero.

- Column 5: *Class size of students born in the country of the test compared to those of students born abroad (average size of mathematics classes (ST36Q01) for students born in the country of the test or having a relative born in the country compared to the average size of mathematics classes for students born abroad or having parents who were born abroad) [source: PISA 2003, year of data collection: 2003]*

  A value of 90 indicates that, if the size of the mathematics classes for native is 100, then that for the non-native students is 90. A value greater than 100 indicates that the non-native

students are in larger classes than those of the other students.

The more equitable the situation, the more favourable the class size for the risk group, the bigger the value.

- Column 6: *Size of classes for girls and boys (average size of mathematics classes (ST36Q01) for girls compared to the average size of the classes for boys) [source: PISA 2003, year of data collection: 2003]*

    A value of 90 indicates that, if the size of the mathematics classes for boys is 100, then that for girls is 90. A value higher than 100 indicates that the girls are in classes that are larger than the boys' classes.

The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 7: *Size of the mathematics classes for weak students (average size of mathematics classes (ST36Q01) for students below level 2 on the mathematics scale compared to the average size of the class for other students) [source: PISA 2003, year of data collection: 2003]*

    A value of 90 indicates that, if the size of the mathematics classes for the "strong" students (> level 2) is 100, then that of the very weak students is 90. A value higher than 100 indicates that the very weak students are in classes that are larger than those of the other students.

The more equitable the situation, the more favourable the class size for the risk group, with the value closest to zero.

Homogeneity of education received [table 4b and figure 4b]

- Column 1: *Academic segregation according to the reading skills (percentage of the weakest students from the first decile on the reading scale that it would be necessary to relocate in order to have an identical percentage of weak readers in every school in the country) [source: PISA 2003, year of data collection: 2003]*

    A value of 38 indicates that 38% of the weak students would have to change school for the weak students to be distributed in equal proportion across all the schools.

The more equitable the situation, the smaller the ratio, with the value closest to zero.

- Column 2: *Academic segregation according to the reading skills (percentage of the weakest students, below level 2 on the reading scale that it would be necessary to relocate in order to have an identical percentage of weak readers in every school of the country [source: PISA 2003, year of data collection: 2003]*

    A value of 38 indicates that 38% of the weak students would have to change school for the weak students to be distributed in equal proportion across all the schools.

The more equitable the situation, the smaller the ratio, with the value closest to zero.

- Column 3: *Academic segregation according to the mathematics skills (percentage of the weakest students, from the first decile on the mathematics scale, that it would be necessary to relocate in order to have an identical percentage of weak mathematics students in every school of the country [source: PISA 2003, year of data collection: 2003]*

    A value of 38 indicates that 38% of the weak students would have to change school for the weak students to be distributed in equal proportion across all the schools.

The more equitable the situation, the smaller the ratio, with the value closest to zero.

- Column 4: *Academic segregation according to the mathematics skills (percentage of the weakest students, below level 2 on the mathematics scale, that it would be necessary to relocate in order to obtain an identical percentage of weak mathematics students in every school of the country [source: PISA 2003, year of data collection: 2003]*

    A value of 38 indicates that 38% of the weak students would have to change school for the weak students to be distributed in equal proportion across all the schools.

The more equitable the situation, the smaller the ratio, with the value closest to zero.

- Column 5: *Social segregation according to parents' profession (percentage of students whose parents (HISEI) belong in the first decile of the socio-professional scale that it would be necessary to relocate in order to obtain an identical percentage of students in this category in every school of the country [source: PISA 2003, year of data collection: 2003]*

    A value of 38 indicates that 38% of the underprivileged students would have to change school for the underprivileged students to be distributed in equal proportion across all the schools.

The more equitable the situation, the smaller the ratio, with the value closest to zero.

- Column 6: *Segregation according to the gender of the students (percentage of girls it would be necessary to relocate in order to obtain identical percentages of girls in every school of the country [source: PISA 2003, year of data collection: 2003]*

  A value of 38 indicates that 38% of the girls would have to change school for girls to be evenly distributed across all the schools.

  The more equitable the situation, the smaller the ratio, with the value closest to zero.

- Column 7: *Segregation according to the students' linguistic origin (percentage of students that claim to speak a language at home other than the language of the test that it would be necessary to relocate in order to obtain an identical percentage of this category in every school of the country [source: PISA 2003, year of data collection: 2003]*

  A value of 38 indicates that 38% of the students speaking a foreign language at home would have to change school for students speaking a foreign language at home to be evenly distributed across all the schools.

  The more equitable the situation, the smaller the ratio, with the value closest to zero.

- Column 8: *Segregation according to the place of birth of the parents (percentage of students having at least one parent born outside the country of the test that it would be necessary to relocate to obtain an identical percentage of this category in every school of the country [source: PISA 2003, year of data collection: 2003]*

  A value of 38 indicates that 38 % of the students with parents born abroad would have to change school for students with parents born abroad to be evenly distributed across all the schools.

  The more equitable the situation, the smaller the ratio, with the value closest to zero.

- Column 9: *Percentage of students with particular educational needs that are schooled separately as compared to the total school population [source: Eurydice, Key Data on Education in Europe 2005, p. 130, year of data collection: between 2002 and 2004, depending on the country]*

  The more equitable the situation, the smaller the ratio, with the value closest to zero.

Quality of education received [table 4c and figure 4c]

- Column 1: *Dispersion (standard deviation) for the values of the "disciplinary climate in the classes" index (DISCLIM) [source: PISA 2003, year of data collection: 2003]*

  A value of 0.60 means that the national standard deviation of the index is 0.60.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 2: *Average difference between the weakest students, below level 2 of the mathematics scale, and the other students on the "disciplinary climate in classes" index (DISCLIM) [source: PISA 2003, year of data collection: 2003]*

  A negative value means that the index is higher for the students above level 2 on the mathematics scale, whereas a positive value indicates that the index is more favourable for the weakest students (below level 2 on the mathematics scale).

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 3: *Average difference on the "disciplinary climate in classes" index (DISCLIM) between boys and girls [source: PISA 2003, year of data collection: 2003]*

  A negative value means that the index is higher for girls, whereas a positive value indicates that the index is more favourable for boys.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 4: *Average difference on the "disciplinary climate in classes" index (DISCLIM) according to parents' profession (average difference on the index between students whose parents' profession (HISEI) falls in the first quartile on the socio-professional scale and other students [source: PISA 2003, year of data collection: 2003]*

  A negative value means that the index is higher for students from a privileged origin [> 1st quartile HISEI], whereas a positive value indicates that the index is more favourable for the students from a modest origin [< 1st quartile HISEI].

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 5: *Average difference on the "disciplinary climate in classes" index (DISCLIM) according to whether the student was born in the country of the test or at least one parent was born in the country of the test or whether both parents were born abroad [source: PISA 2003, year of data collection: 2003]*

    A negative value means that the index is higher for the native students, whereas a positive value indicates that the index is more favourable for the non-native.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 6: *Dispersion (standard deviation) of values on the "Teacher Support" index (TEACHSUP) [source: PISA 2003, year of data collection: 2003]*

    A value of 0.60 means that the national standard deviation of the index is 0.60.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 7: *Average difference on the "Teacher Support" index (TEACHSUP) between the weakest students, below level 2 of the mathematics scale, and the other students [source: PISA 2003, year of data collection: 2003]*

    A negative value means that the index is higher for students above level 2 on the mathematics scale, whereas a positive value indicates that the index is more favourable for the weakest students (below level 2 on the mathematics scale).

  The more equitable the situation, the more favourable the support for the group at risk, and the bigger the value.

- Column 8: *Average difference on the "Teacher Support" index (TEACHSUP) according to the students' gender [source: PISA 2003, year of data collection: 2003]*

    A negative value means that the index is higher for girls, whereas a positive value indicates that the index is more favourable for boys.

  The more equitable the situation, the smaller the differences, with the value closest to zero.

- Column 9: *Average difference on the "Teacher Support" index (TEACHSUP) according to the parents' profession (average difference between the students for whom the parents' profession (HISEI) falls in the first quartile on the socio-professional scale and the other students [source: PISA 2003, year of data collection: 2003]*

    A negative value means that the index is higher for the students from a privileged origin [> 1st quartile HISEI], whereas a positive value indicates that the index is more favourable for the students from a modest origin [< 1st quartile HISEI].

  The more equitable the situation, the more favourable the support for the group at risk, and the bigger the value.

- Column 10: *Average difference on the "Teacher Support" index (TEACHSUP) between students born in the country of the test or having at least one parent born in the country of the test and students with both parents born abroad [source: PISA 2003, year of data collection: 2003]*

    A negative value means that the index is higher for the native students, whereas a positive value indicates that the index is more favourable for the non-native.

  The more equitable the situation, the more favourable the support for the group at risk, and the bigger the value.

The second set of indicators is called "social, economic and cultural disparities linked to individual variables" (tables 4a and 4b). These indicators are calculated for the same areas (family wealth, unemployment rate, educational level, cultural resources and practices, professional aspirations), but another variable is introduced in order to estimate the impact of the contextual disparities for certain categories of individuals. Therefore, for example, we shall be looking at cultural practices whether they concern boys or girls, young people born in the country or not, those who are socio-economically privileged or not and those who belong to the most competent or least competent reading groups.

Table 3a – *Social, economic and cultural context (differences between individuals).*

Country	Differences between individuals			
	Dispersion of household incomes (2003)[19]	Dispersion of cultural resources (2003)	Dispersion of cultural practices (2000)	Dispersion of professional aspirations (2000)
	1	**2**	**3**	**4**
Slovenia	22	-	-	-
The Netherlands	28	0.91	0.96	16.54
Czech Republic	25	0.94	0.88	16.92
Hungary	24	0.92	0.93	18.38
Greece	35	0.91	0.88	16.73
Austria	27	0.98	1.02	15.45
Cyprus	27	-	-	-
France	27	0.96	0.94	18.09
Denmark	25	0.99	0.9	18.5
Sweden	22	1	0.97	17.3
Ireland	31	0.97	0.9	17.28
Germany	28	1	0.96	16.67
Italy	29	0.99	0.97	16.64
Finland	26	1.02	0.94	18.69
Portugal	37	0.98	0.94	16.54
Belgium	29	0.98	0.97	17.92
Poland	31	0.87	1.03	17.71
Slovakia	31	0.94	-	-
Luxembourg	28	1.01	1.03	16.82
Spain	31	0.96	0.97	18.14
Lithuania	30	-	-	-
Latvia	34	0.92	0.97	19.68
Malta	30	-	-	-
United Kingdom	35	1.05	0.99	16.72
Estonia	34	-	-	-
Bulgaria	26	-	-	17.54
Romania	30	-	-	17.99
Turkey	46	0.94	-	-
Norway	26	1.06	0.95	18.08
Liechtenstein	-	0.97	0.90	16.77
Iceland	-	0.82	0.93	19.22

[19] 2002 for France, Latvia, Lithuania, Hungary, The Netherlands, Poland, Slovenia, Sweden, Bulgaria, Romania and Turkey, 2001 for Italy and Portugal, 2000 for Malta.

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Table 3b – Social, economic and cultural context (differences between groups). *[in bold letters : non significant differences, $\alpha \leq 0.05$]*

Country	Family wealth (2000)				Relative rate of unemployment (by gender) (2004)	Relative education level (by gender) (2004)	Cultural resources (2003)				Cultural practices (2000)				Professional aspirations (2000)			
	by gender	by social origin	by place of birth	by reading level			by gender	by social origin	by place of birth	by math. level	by gender	by social origin	by place of birth	by reading level	by gender	by social origin	by place of birth	by reading level
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Ireland	3.44	-11.68	**0.18**	-3.4	79.59	84.54	-0.23	-0.36	0.35	-0.37	-0.47	-0.22	**0.07**	-0.22	-0.2	-0.35	0.2	-0.9
Finland	5.05	-10.68	-3.95	-2.39	102.3	86.31	-0.26	-0.49	-0.2	-0.41	-0.46	-0.27	0.45	-0.22	-0.09	-0.43	0.26	-0.66
Latvia	9.59	-9.63	**-1.95**	**-1.43**	111.96	71.81	-0.36	-0.48	**0.11**	-0.54	-0.23	-0.19	-0.23	-0.21	-0.35	-0.37	-0.06	-0.68
Portugal	4.9	-21.37	**-0.98**	-9.4	128.81	95.42	-0.12	-0.55	**-0.1**	-0.56	-0.17	-0.26	**-0.01**	-0.34	-0.08	-0.5	0.17	-0.8
Lithuania	-	-	-	-	109.71	78.67	-	-	-	-	**-**	-	**-**	-	-	-	-	-
Malta	-	-	-	-	120.29	109.81	-	-	-	-	-	-	-	-	-	-	-	-
The Netherlands	6.47	-7.13	-3.99	**-0.19**	111.63	126.52	**-0.06**	-0.52	-0.34	-0.46	-0.35	-0.35	**-0.12**	-0.4	0.12	-0.44	0.16	-0.85
Germany	5.03	-11.09	-12.28	-5.74	120.69	158.4	-0.13	-0.46	-0.22	-0.4	-0.16	-0.44	-0.22	-0.47	-0.11	-0.41	0.04	-0.75
Sweden	5.55	-11.07	-10.75	-4.26	93.85	77.6	**-0.03**	-0.59	-0.36	-0.58	-0.23	-0.28	0.14	-0.17	-0.2	-0.37	0.32	-0.72
Italy	5.37	-15.93	-3.4	-2.53	164.06	99.22	-0.18	-0.48	**-0.16**	-0.44	-0.23	-0.3	0.36	-0.24	-0.42	-0.42	-0.53	-0.57
Greece	5.58	-14.29	-3.79	-3.81	245.45	106.5	-0.13	-0.59	-0.55	-0.55	-0.17	-0.1	-0.27	-0.1	-0.18	-0.35	-0.26	-0.8
United Kingdom	8.01	-17.65	-2.35	-4.84	82.35	141.46	-0.15	-0.47	**-0.03**	-0.43	-0.27	-0.4	0.13	-0.36	-0.06	-0.46	0.43	-0.77
Spain	4.55	-17.94	**-1.1**	-6.14	185.19	100.74	-0.18	-0.47	-0.47	-0.49	-0.26	-0.41	**0.02**	-0.58	-0.15	-0.38	-0.04	-0.91
France	2.6	-15.54	-6.92	-6.62	121.59	112.2	-0.22	-0.53	-0.24	-0.67	-0.16	-0.27	-0.13	-0.35	-0.21	-0.51	0.12	-0.78
Luxembourg	7.21	-16.03	-15.18	-9.37	206.06	126.55	-0.19	-0.53	-0.23	-0.39	-0.2	-0.32	-0.37	-0.37	0.16	-0.26	0.1	-0.49
Austria	4.55	-14.36	-8	-5.2	122.73	169.39	-0.22	-0.46	-0.34	-0.54	-0.24	-0.31	-0.12	-0.42	-0.17	-0.5	-0.07	-0.83
Slovakia	-	-	-	-	113.53	176.04	-0.22	-0.37	**0.03**	-0.51	-	-	-	-	-0.2	-0.51	-0.24	-0.86
Denmark	6.51	-12.97	-8.62	-3.9	111.76	117.95	-0.16	-0.57	-0.61	-0.66	-0.26	-0.31	**0.05**	-0.4	-0.18	-0.52	0.46	-0.71
Poland	6.61	-12.01	7.07	**-1.85**	109.44	116.34	-0.28	-0.54	1.27	-0.46	-0.15	-0.4	**0.37**	-0.38	-0.44	-0.53	-0.01	-1.18
Belgium	7.34	-15.78	**-0.56**	-3.31	125.71	100.83	-0.15	-0.58	-0.31	-0.62	-0.3	-0.43	-0.22	-0.6	-0.22	-0.67	0.01	-1
Hungary	5.84	-15.87	**0.74**	-5.92	103.45	138.46	-0.32	-0.58	**0.07**	-0.78	-0.27	-0.39	**0.11**	-0.36	-0.28	-0.53	0.3	-0.92
Czech Republic	10.02	-16.6	**-1.3**	-3.53	139.44	226.87	-0.21	-0.4	-0.44	-0.52	-0.31	-0.34	**-0.07**	-0.46	-	-	-	-
Slovenia	-	-	-	-	114.29	137.14	-	-	-	-	-	-	-	-	-0.62	-0.43	0.46	-0.81
Cyprus	-	-	-	-	157.5	119.87	-	-	-	-	-	-	-	-	-	-	-	-
Estonia	-	-	-	-	78.64	70.45	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	7.47	-6.90	**0.74**	-3.40	94.26	95.86	-	-	-	-	-	-	-	-	-0.36	-0.48	1.07	-0.59
Romania	2.11	-14.56	**0.92**	-6.89	71.95	152.63	-	-	-	-	-	-	-	-	-	-	-	-
Turkey	-	-	-	-	92.38	-	-0.26	-0.33	**0.01**	-0.40	-	-	-	-	-0.10	-0.49	0.36	-0.80
Norway	6.27	-8.57	-5.66	**-1.83**	83.33	102.38	-0.16	-0.57	-0.33	-0.55	-0.20	-0.25	0.21	-0.29	0.10	-0.42	-0.10	-0.88
Liechtenstein	**-0.02**	-3.26	**-1.29**	**-1.84**	-	-	**-0.01**	-0.36	**0.02**	**-0.22**	**-0.22**	-0.35	**-0.16**	-0.43	0.03	-0.35	0.09	-0.61
Iceland	5.92	-5.96	**-0.26**	1.08	-	143.33	**-0.07**	-0.34	-0.84	-0.38	-0.47	-0.43	**0.17**	-0.36	-0.06	-0.60	-0.02	-0.77

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Table 3c – *Social, economic and cultural context (individuals below a threshold).*

Country	Individuals below a threshold		
	Proportion of households under the poverty line (2003)[20]	Rate of unemployment (2004)	Proportion of adults with low education level (2004)
	1	**2**	**3**
Czech Republic	8	8.3	11
Denmark	12	5.4	17
Sweden	11	6.3	17.1
Austria	13	4.8	19.8
Hungary	10	5.9	24.9
Slovenia	10	6	20.7
The Netherlands	12	4.6	29.9
Luxembourg	10	4.8	38.4
Finland	11	8.8	23.4
Cyprus	15	5	34.4
Germany	15	9.5	16.1
United Kingdom	18	4.7	29.6
Estonia	18	9.2	11.1
Latvia	16	9.8	16
Lithuania	17	10.8	13.3
Ireland	21	4.5	37
France	12	9.7	34.9
Belgium	16	7.8	36.4
Poland	17	18.8	16.6
Malta	15	7.3	77
Slovakia	21	18	13.4
Portugal	19	6.7	74.7
Italy	19	8	51.1
Greece	21	10.5	41.3
Spain	19	11	54.6
Bulgaria	13	11.9	28.4
Romania	18	7.1	28.8
Turkey	25	10.3	-
Norway	10	4.4	12.7
Liechtenstein	-	-	-
Iceland	-	(:)	32.8

---

[20] 2002 for The Netherlands, Sweden, France, Hungary, Latvia, Lithuania, Poland, Slovenia, Bulgaria, Romania and Turkey ; 2001 for Italy, 2000 for Malta.

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Figure 3a – *Inequalities of social, economical and cultural context (differences between individuals)*

Malta

Cyprus

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems.*
Report for the European Commission. Liège : Service de Pédagogie expérimentale.
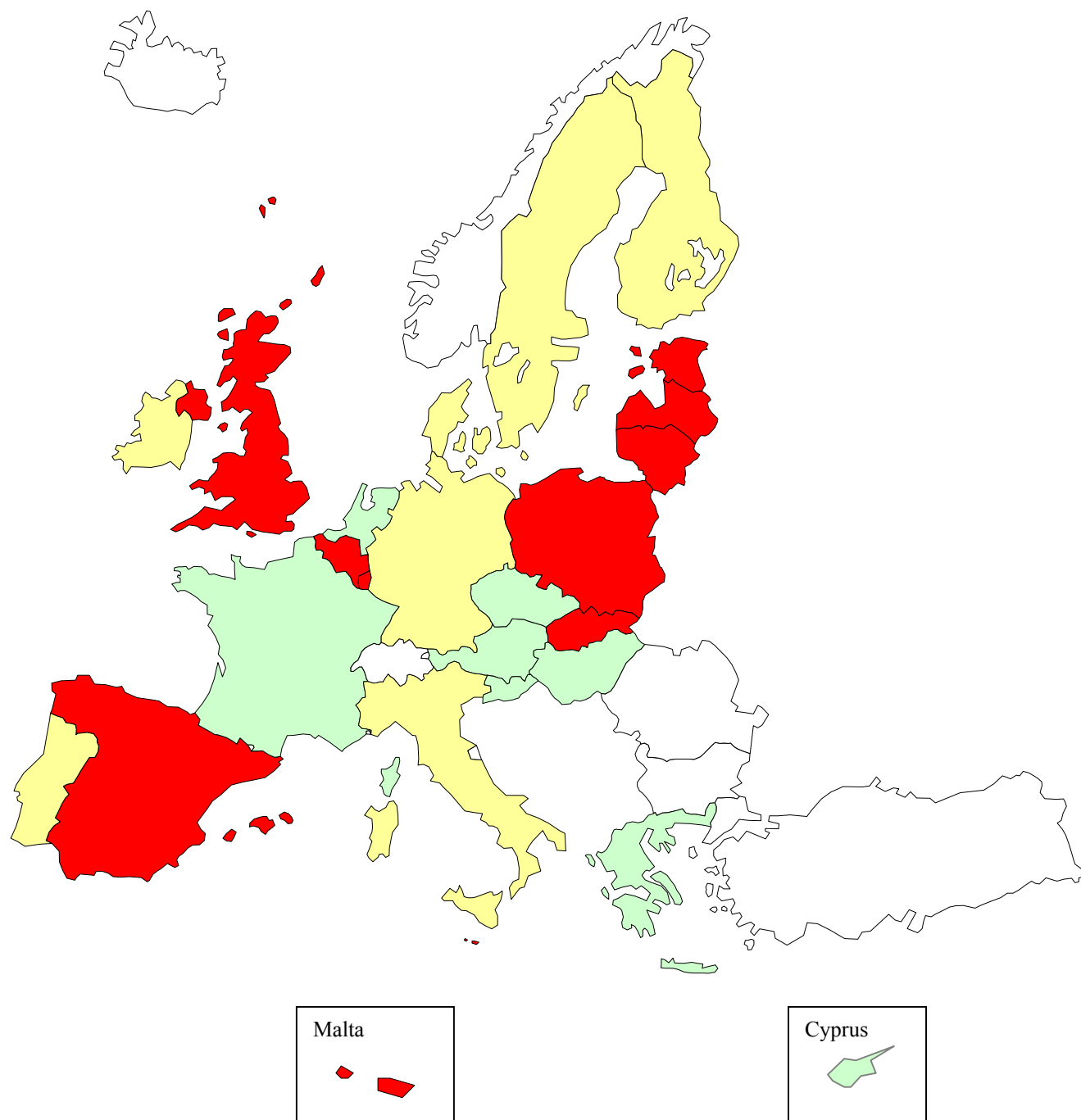
Figure 3b – *Inequalities of social, economical and cultural context (differences between groups)*

Malta

Cyprus
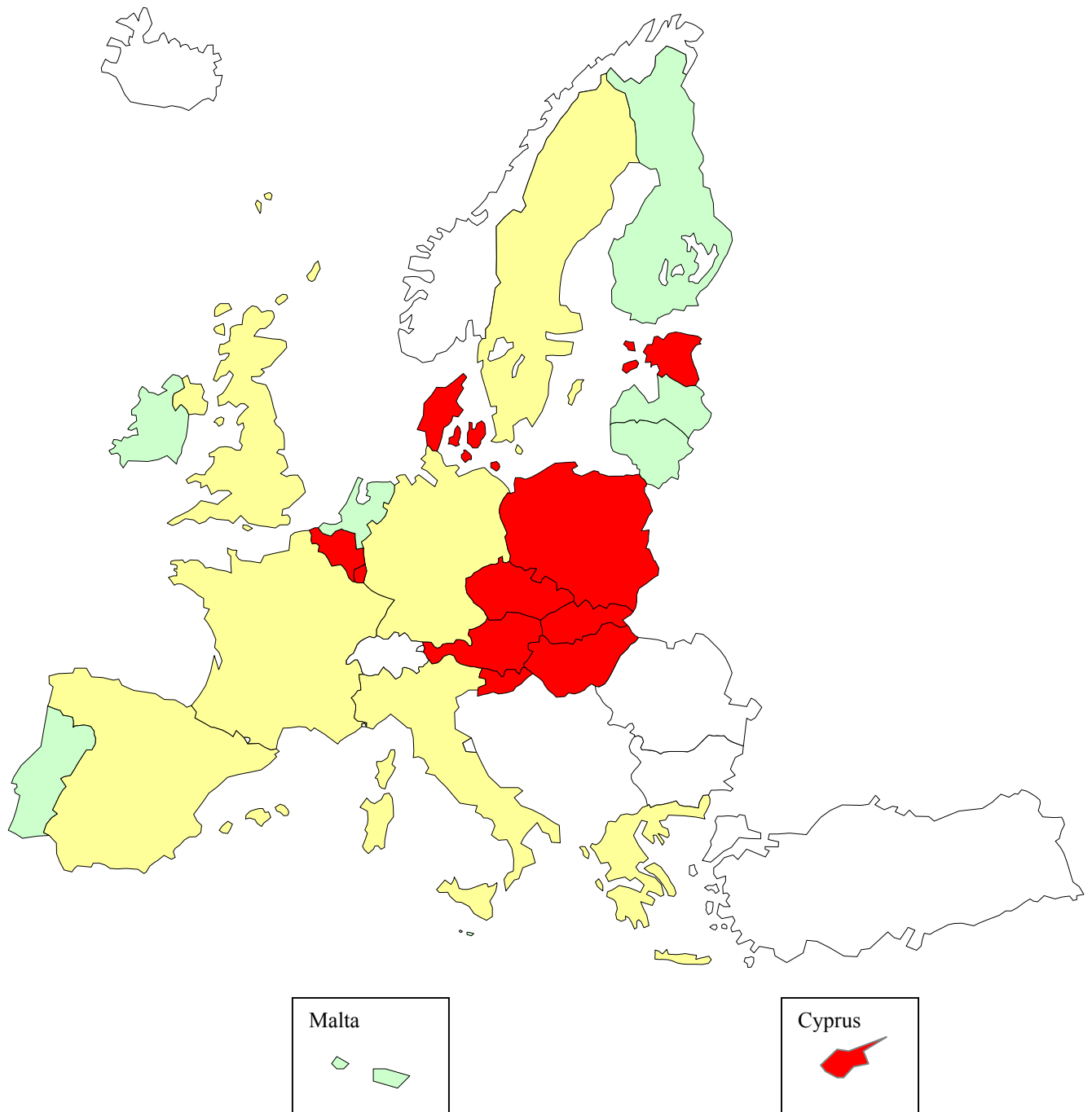
Figure 3c – *Inequalities of social, economical and cultural context (individuals below a threshold)*

Malta

Cyprus

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

The economic, social and cultural context in which the British, Latvian, Spanish, Luxembourgian, Polish and Belgian educational systems operate seems severe, from the point of view of individual differences than in the other countries; it seems more favourable in France, Austria, Greece, Hungary, Czech Republic or in the Netherlands (table 3a and figure 3a).

This set of indicators also provides information about the disparities affecting the different categories of individuals. These are the people from a modest socio-economic origin, whose competence in reading is low who are the most underprivileged in a general way. According to the data supplied in table 3b, Hungary, Belgium, Poland, Denmark, Austria and Luxembourg make up the list of countries in which the disparities between individuals are the most marked, when taking into account their social background, place of birth or gender. Ireland, Finland, Latvia, Portugal and Netherlands are, on the other hand, the countries in which these disparities are least evident. When looking at the situation of individuals below a certain threshold (the proportion of families below the poverty line, the unemployment rate or the proportion of adults with low level of education), it becomes possible to identify a group of countries in the South of Europe (Portugal, Italy, Greece and Spain) where the situation is rather unfavourable, whereas a group of countries situated in the North (the Netherlands, Sweden and Denmark) or in central and eastern Europe (Slovenia, Hungary, Austria and the Czech Republic) present a much more favourable situation.

To answer the question concerning the role of the educational systems in the reduction or in the increase of social disparities, it is also important to take the processes implemented at the school level into account. The process indicators which were integrated into the framework of indicators make it possible to identify the mechanisms of school segregation, but also to identify the differences in learning conditions (for example, the perception by students of the help supplied by the teachers or their perception of a school climate more or less favourable to learning) (table 4a for the "disparities in the educational process, quantity of education received"; table 4b for the "disparities in the educational process, homogeneity of education received"; and 4c for the "disparities in the educational process, quality of the education received").

Table 4a - *Inequalities in education process (quantity of education received).*

Country	Quantity of education received						
	Ratio cost of tertiary education/cost of primary education (2002)	Differences in computer equipment between schools (2000)	Dispersion of the size of the mathematics classes (2003)	Classes size			
				For students from the least privileged families (2003)	For students born abroad or having parents born abroad (2003)	By gender (2003)	For low achievers in mathematics (2003)
	1	2	3	4	5	6	7
Lithuania	163.41	-	-	-	-	-	-
Luxembourg	-	0.38	4.8	92.3	90.4	104.7	86.9
Sweden	220.02	0.43	6.0	92.7	96.6	102.1	81.3
Belgium	212.16	1.57	5.5	88.7	91.6	103.8	79.3
Spain	174.67	1.07	6.9	93.5	88.9	100.1	93.6
Denmark	196.5	0.83	4.1	99.3	95.3	100.8	96.1
Finland	231.31	1	4.3	94.6	98.9	102.4	85.5
France	184.31	1.5	6	89.6	96.9	105.3	79
The Netherlands	235.71	1.33	5.4	92.8	98.6	102.5	79.2
Ireland	234.69	0.9	6.5	94.1	96.7	103.2	82.6
Germany	242.42	1.21	5.3	92.5	98.7	103.4	85.9
Latvia	146.9	2	6.6	91.3	112.2	102.9	86.6
Portugal	109.89	4	4.9	94.7	105.4	101.2	97.7
Poland	180.81	4.63	4.4	98.1	97.1	100.5	97.8
Austria	177.44	2	7.3	93.9	93.2	105.3	83.7
Italy	124.15	1.71	4.9	94.1	103.0	104.8	93.9
Slovakia	323.21	-	6.1	92	92.0	104.1	87.1
Greece	151.84	4.93	5.1	96.6	101.9	101.8	93.3
United Kingdom	235.84	2.17	6.2	96.1	96.8	102.9	77.3
Cyprus	218.1	-	-	-	-	-	-
Czech Republic	300.22	2.11	4.9	98.3	92.7	103.9	91.9
Hungary	-	2	8.2	107.5	100.4	96.9	105.3
Malta	272.1	-	-	-	-	-	-
Estonia	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-
Bulgaria	273.84	-	-	-	-	-	-
Romania	-	-	-	-	90.4	-	-
Turkey	-	-	12.6	99.1	96.6	101.8	92.4
Norway	182.98	1.25	6.1	96.4	91.6	101.0	96.8
Liechtenstein	276.38	1.84	3.8	96.2	88.9	101.3	93.2
Iceland	122.02	0.86	6.5	89.6	95.3	104.6	81.6

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Table 4b - *Inequalities in education process (homogeneity of education received)*

Country	Segregation								
	by reading skills (10% weakest) (2003)	by reading skills (below level 2) (2003)	by mathematics skills (10% weakest) (2003)	by mathematics skills (below level 2) (2003)	by socio-professional status of the parents (2003)	by gender (2003)	by linguistic origin (2003)	by place of birth of the parents (2003)	Proportion of students with special needs schooled separately (2002-2004)
	1	2	3	4	5	6	7	8	9
Cyprus	-	-	-	-	-	-	-	-	0.5
Sweden	31.4	26.8	32.3	24.5	29.3	8.5	57.9	31.6	1.5
Luxembourg	39.6	32.7	39.3	32.9	21.2	13	26.2	14.2	1.5
Denmark	38.3	30.5	36.5	29.7	29.2	9.4	60.9	34.1	2.3
Lithuania	-	-	-	-	-	-	-	-	1.2
Malta	-	-	-	-	-	-	-	-	1.3
Finland	25	32.9	27.7	33.7	30.8	7.5	65.4	45.3	3.6
United Kingdom	38.4	33.7	40.7	32.8	33.9	14.9	64.5	32.4	1.1
Latvia	39	30.2	40.9	28.5	28.8	9.1	86.7	37	3.4
Greece	50.3	36.2	51	28.2	31.1	10.5	70.2	37.7	0.6
Spain	42.6	30.5	43.7	30.3	30.9	11.4	74.7	38.6	0.4
Portugal	54.3	41.5	52.5	34	29.4	9.2	71.5	35	0.5
Poland	34.5	27.7	31.8	23.3	42.5	7.8	95.5	93.9	1.8
Ireland	40.8	39.8	37.4	30.5	30.9	28.3	83.1	21.6	1.8
Slovenia	-	-	-	-	-	-	-	-	1.6
France	56.3	48.3	57.5	50.4	30.8	15	57	31	2.2
Slovakia	52	37	52.4	40.8	35.9	17.4	81.3	32.4	3.6
The Netherlands	56.2	54.2	56.6	55.9	33.9	10.8	55.8	33.9	1.9
Austria	59.9	50.4	55.9	47.7	31.5	28.3	47	34.6	1.6
Italy	56.5	43.6	57.6	38.1	33.6	23.5	72.2	38	0.5
Germany	64.7	48.7	62.9	49.8	36.8	12.4	52.3	37.9	4.8
Czech Republic	55.3	42.6	55	46.1	40	18.8	83.7	36.8	5
Belgium	61.1	49.9	59.2	50.4	38.4	17.9	55.8	34.7	4.6
Hungary	60.2	47	60.6	44.9	36	18.5	84.2	39.3	3.9
Estonia	-	-	-	-	-	-	-	-	4
Bulgaria	-	-	-	-	-	-	-	-	2.2
Romania	-	-	-	-	-	-	-	-	1.2
Turkey	50.8	30.6	49.5	22.9	24.9	13.0	85.0	67.5	-
Norway	31.8	24.1	29.9	21.1	26.6	8.4	51.0	35.7	0.4
Liechtenstein	63.0	62.9	63.6	61.8	32.8	5.9	17.6	16.2	1.7
Iceland	26.2	19.3	26.1	21.5	35.4	8.4	63.5	30.7	0.7

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems.* Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Table 4c - *Inequalities in education process (quality of education received) [in bold letters: non significant differences].*

Country	Quality of education received									
	Disciplinary climate in classes (2003)					Teachers' support (2003)				
	Standard deviation	for low achievers in mathematics	by gender	by social origin	by place of birth	Standard deviation	for low achievers in mathematics	by gender	by social origin	by place of birth
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Finland	0.91	-0.27	-0.06	**-0.07**	0.16	0.87	**0.04**	**0.02**	**-0.04**	**0.13**
The Netherlands	0.92	-0.21	-0.11	**-0.05**	-0.04	0.89	**0.05**	0.06	**-0.03**	**0.08**
Denmark	0.89	-0.19	-0.08	**-0.05**	-0.02	0.86	**-0.07**	0.05	**-0.05**	**-0.13**
Sweden	0.9	-0.24	-0.04	-0.09	-0.09	0.91	**-0.02**	0.06	**-0.03**	**0.01**
Greece	0.82	-0.18	-0.23	-0.1	-0.03	0.93	0.15	**0.04**	**0.06**	0.33
Latvia	0.99	-0.34	-0.16	-0.09	0.06	0.81	0.12	**0**	0.08	**-0.05**
Italy	1.04	-0.22	-0.29	-0.09	-0.18	1.06	0.37	**0.01**	0.23	**0.14**
Slovakia	0.92	-0.3	-0.19	-0.09	-0.11	0.96	0.3	0.15	0.22	**0.13**
Luxembourg	1.09	-0.31	-0.06	-0.14	-0.06	1.13	0.33	**0.04**	0.19	0.13
Hungary	0.98	-0.36	-0.15	-0.18	0.13	1	0.1	**0.03**	**0.04**	**0.14**
France	1.1	-0.26	**-0.05**	-0.18	-0.12	0.99	0.18	**0.03**	**0.06**	**0.01**
Poland	1.01	-0.31	-0.29	**0.02**	-0.68	0.93	0.1	-0.09	0.09	**-0.34**
Spain	0.98	-0.36	-0.24	**-0.06**	-0.17	1.02	**0.08**	-0.8	**0**	**0.02**
United Kingdom	1.12	-0.51	-0.07	-0.2	0.09	1.04	-0.16	**0.01**	**-0.03**	0.12
Ireland	1.15	-0.4	-0.16	-0.14	-0.12	1.09	0.19	**-0.02**	0.08	**0.13**
Portugal	0.89	-0.43	-0.28	-0.12	-0.39	1.02	0.14	-0.13	0.1	**-0.02**
Czech Republic	0.99	-0.38	-0.22	-0.15	-0.25	0.92	0.15	**0.08**	0.07	**-0.08**
Germany	1.14	-0.48	-0.18	-0.11	-0.26	1.05	0.32	0.14	0.2	0.18
Belgium	1.06	-0.48	-0.15	-0.2	-0.26	1.01	0.22	**-0.05**	0.07	**0.05**
Austria	1.16	-0.42	-0.17	-0.16	-0.37	1.02	0.25	0.26	0.11	0.15
Cyprus	-	-	-	-	-	-	-	-	-	-
Estonia	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-	-
Turkey	0.92	-0.42	-0.14	-0.09	-0.17	1.03	**-0.06**	-0.13	**-0.04**	**-0.03**
Norway	0.84	-0.26	**-0.04**	**-0.04**	0.07	0.90	-0.25	0.08	**-0.07**	**-0.06**
Liechtenstein	1.16	-0.75	**-0.10**	-0.43	-0.26	0.99	**0.20**	0.33	**0.08**	0.28
Iceland	0.87	-0.27	-0.15	**-0.04**	-0.30	0.91	**-0.14**	**-0.07**	**0.01**	**0.01**

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems.* Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Figure 4a – *Inequalities in education process (quantity of education received)*

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Figure 4b – *Inequalities in education process (homogeneity of education received)*

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Figure 4c – *Inequalities in education process (quality of education received)*

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

The effects of school segregation (table 4b) were measured with data coming from PISA 2003. To these indicators (segregation according to competence in reading and in mathematics, according to parents' profession, gender, social origin or place of birth), we also added the proportion of students with specific educational needs and schooled separately from the other students (data taken from *Key Data on Education in Europe 2005*, Eurydice). The rankings we obtained highlight a set of countries where the effects of segregation seem to be weak: Sweden, Denmark, Finland, but also Greece. On the other end of the scale, we find Italy, Austria, Hungary, the Czech Republic, Germany and Belgium.

It would seem that systems practising little between schools segregation record low social differences and relatively similar results between schools. The more segregationist systems, however, tend to increase the differences in results between social groups. From this point of view, and without having to sacrifice effectiveness for equity – quite to the contrary – it seems that Finland, where average results are quite high with little dispersion, can be juxtaposed against Germany, where the average results are relatively weaker with a marked dispersion.

An examination of the differences in process can be followed up with a review of spending on education (table 4a). It is generally rather difficult, at least in industrial nations, to find a simple relation between overall spending on education and school results. It is nevertheless interesting, in the matter at hand, to raise the question of the relative allocation of means within each of the systems: who, in fact, benefits from these? Do the priorities go to compulsory, basic education for all, or to tertiary education?

Another approach consists in analysing the distribution of means for a given school level, and in particular, for compulsory education. This is what the PISA data also allow. From this, it emerges that Austria and Hungary are characterized by a strong dispersion of teacher-student ratios (class size) between the various schools frequented by 15-year-old students. Finland and Denmark are distinguished, on the contrary, by a more equal distribution. However, class size can be examined in greater detail, for example by taking account of particular categories. In that case, outside Hungary, classes are smaller for children from an underprivileged social environment, in particular in France or in Belgium where specific arrangements exist (priority educational areas, positive discrimination) in favour of schools that teach a less privileged public. It is not surprising that we observe the same type of reduction in class size for the weak students. The phenomenon is particularly noticeable not only in France and Belgium, but also in the United Kingdom and in the Netherlands.

Apart from material conditions, class atmosphere constitutes a factor that is often cited among the variables that can influence school results. It is through the questionnaire sent to the students that this factor was studied through the PISA results. A series questions were sent to the students in the sample about the possibilities of working well, in a relatively quiet environment, without wasted time or negative behaviour by other students. Boys, more than girls, reported an atmosphere that was not conducive to work. Nevertheless, it is difficult to assess what part is played by their perhaps lower sensitivity to classroom vicissitudes, as opposed to attending classes that actually are less disrupted – which would be somewhat surprising in supposedly mixed systems. When significant differences are present, they also lead to the conclusion that the students of immigrant origin, as well as students who are socio-economically less well placed, but especially the weakest students, benefit from an atmosphere that is less conducive to work.

The support provided by the teachers, at least as perceived by the students, can also be an important element. The weak mathematics students, but also those from a modest origin or having parents who were born abroad, are generally more positive than the other students

about the support received. However, for the last two categories of students, the differences are generally insignificant from a statistical point of view. In the United Kingdom, the weakest students think that they receive significantly less support than the other students do.

Table 5 provides an overall understanding of the results presented in tables 3a, 3b and 3c (differences in the socio-economic context for individuals, groups, or individuals below a certain threshold) and in tables 4a, 4b and 4c (quantitative and qualitative process differences and segregation). Thus, we can see that there are contrasting situations that are more or less favourable. We can point out Estonia's situation, which is hardly favourable, either in terms of context or of process.

Sweden's situation seems, in contrast, more favourable in terms of context, but especially in terms of process. Next to these rather homogeneous situations, there are also less clear-cut situations in which certain countries are relatively well placed with respect to certain criteria and much less well placed with respect to others. This once again leads us to apply a degree of caution to the possibility of deriving unambiguous general conclusions. This first attempt to graphically summarize a large number of indicators is naturally a little bit unpolished. The authors' goal here is to try to approach the reality, in an overall sense, so as to foster discussion, both at the level of policy makers as well as the general citizenry. Naturally it is advisable to return to the analytical data in order to have a more detailed discussion. Nevertheless, we believe that this introduction, if not limited to establishing an honours list, is an interesting way of stimulating dialogue on the equity of educational systems and the in-depth analysis of the mechanisms in play at the school and societal levels.

49

Table 5 – *Relationships between context and process*.

Country	Context			Process		
	Differences between individuals	Differences between groups	Threshold	Quantitative differences	Segregation	Qualitative differences
Germany	yellow	yellow	yellow	yellow	red	red
Austria	green	red	green	red	red	red
Belgium	red	red	yellow	green	red	red
Cyprus	green	red	yellow	red	green	grey
Denmark	yellow	red	green	yellow	green	green
Spain	red	yellow	red	green	yellow	yellow
Estonia	red	red	yellow	grey	red	grey
Finland	yellow	green	yellow	yellow	green	green
France	green	green	green	yellow	yellow	yellow
Greece	green	yellow	red	red	yellow	yellow
Hungary	green	red	green	red	red	yellow
Ireland	yellow	green	yellow	yellow	yellow	yellow
Italy	yellow	yellow	red	red	red	yellow
Latvia	red	green	yellow	yellow	yellow	yellow
Lithuania	red	green	yellow	green	green	grey
Luxembourg	red	red	yellow	green	green	yellow
Malta	red	green	yellow	red	green	grey
The Netherlands	green	green	green	yellow	yellow	green
Poland	red	red	yellow	yellow	yellow	yellow
Portugal	yellow	green	red	yellow	yellow	red
Slovakia	red	red	yellow	red	yellow	yellow
Czech Republic	green	red	green	red	red	red
United Kingdom	red	yellow	yellow	red	yellow	yellow
Slovenia	green	red	green	grey	yellow	grey
Sweden	yellow	yellow	green	green	green	green

Just as table 5 presents a summary of the context and process indicators, table 6 offers a summary of the context and results indicators, to provide an answer to the third question pertaining to the amplifying or reducing effect of the differences attributable to the educational systems. Any interpretation that it is possible to make is therefore dependent on a thorough understanding of the preceding tables. Thus, we can juxtapose Germany's relatively average position for the context difference with its rather poor position with respect to differences in results. If we refer back to the previous table, which identified the process differences, we can thus venture to make an "amplification of context differences by educational system" type of interpretation. Belgium's starting position, from the point of view of context, seems worse than that of Germany's, but the results seem to move along the same lines. We would therefore be tempted to say that, in this country, school does not succeed in improving the situation given by the context. On the other hand, the same type of analysis seems more favourable in the case of Poland where the differences in results seem less marked at the school level than at the level of the national socio-economic context. Luxembourg's situation, although less favourable in terms of results, seems to go in the same direction (better results than the context would suggest). Naturally, once more, the analysis has to take into account the complexity of the situation, beyond the simplified vision offered

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

by the proposed system of indicators, but this approach very certainly allows the educational systems to be examined in an interesting way.

Table 6 – *Relationships between context and results*.

Country	Context			Results		
	Differences between individuals	Differences between groups	Threshold	Differences between individuals	Differences between groups	Threshold
Germany	yellow	yellow	yellow	red	red	red
Austria	green	red	green	yellow	red	yellow
Belgium	red	red	yellow	red	red	red
Cyprus	green	red	yellow	red	grey	red
Denmark	yellow	red	yellow	yellow	yellow	green
Spain	red	yellow	red	yellow	green	yellow
Estonia	red	red	yellow	green	grey	yellow
Finland	yellow	green	yellow	yellow	red	green
France	green	yellow	yellow	yellow	yellow	yellow
Greece	green	yellow	red	red	yellow	red
Hungary	green	red	yellow	yellow	yellow	yellow
Ireland	yellow	green	yellow	green	green	green
Italy	yellow	yellow	red	red	yellow	red
Latvia	red	green	yellow	green	green	yellow
Lithuania	red	green	yellow	red	grey	yellow
Luxembourg	red	green	yellow	yellow	yellow	yellow
Malta	red	green	green	yellow	grey	red
The Netherlands	green	green	green	green	green	yellow
Poland	red	red	yellow	green	green	yellow
Portugal	yellow	green	red	green	yellow	yellow
Slovakia	red	red	yellow	green	red	yellow
Czech Republic	green	red	green	yellow	green	yellow
United Kingdom	red	yellow	yellow	green	green	green
Slovenia	green	red	green	green	grey	green
Sweden	yellow	yellow	green	yellow	yellow	yellow

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

6. To what extent can educational disparities benefit the most underprivileged populations and encourage the phenomena of upward social mobility?

Traditionally, the term "underprivileged" is associated with students who benefit less than others do from social, cultural or economic resources, or who belong to social categories subject to discrimination that handicaps them in the usage that they could make of available resources (Meuret, 2003). According to the Rawlsian theory of justice, the disparities can be justified provided that they are put to the service of the underprivileged.

Initially, we tried to establish whether, in some countries more than in others, the professional activities of the most educated were performed for the benefit of the poorest. This index is based on the following principle: all things being equal elsewhere, in particular the disparity of equal chances, an educational system is all the more equitable when the most qualified put the skills they've acquired at the service of the underprivileged, if not of all. This attempt however failed. On one hand, sufficient data collection was not possible within the scope of this project; on the other hand, this endeavour ran into conceptual problems. Indeed, while there might be very clear cases, to which we could very well decide to limit an indicator, and which generally concern some "occupations" (lawyers, architects, doctors, and teachers), the others are less clear: A business lawyer who works for an automotive company also works for the less fortunate customers and the least qualified workers of the company. More generally, any economic agent who contributes to growth can claim, certainly with more or less honesty, that the results of this growth always eventually spread out and that his activity then benefits the most underprivileged.

We designed five types of indicators to try to answer the fourth question. These indicators are presented in Insert 4.

Insert 4 - *Definition of indicators making it possible to estimate the impact of the disparities in favour of the most underprivileged within the European educational systems.*

Estimate of the competence of the weakest students [table 7]
- Column 1: *Average for the weakest students on the reading scale (1st decile of the distribution) [source: PISA 2003, year of data collection: 2003]*
  The more equitable the situation, the higher the competences, and the greater the value.
- Column 2: *Average for the weakest students on the mathematics scale (1st decile of the distribution) [source: PISA 2003, year of data collection: 2003]*
  The more equitable the situation, the higher the competences, and the greater the value.

Contribution of education to an increase in wealth
- Column 3: *Contribution of education to the growth of the GDP per capita from one decade to another [source: OECD 2003, year of data collection: 1990 and 2000]*
  The more equitable the situation, the higher the competences, and the greater the value.

Social Transfers
- Column 4: *Reduction in the percentage of poor people due to social transfers [source: EUROSTAT, SILC and national surveys, year of data collection: 2003, unless otherwise specified]*
  The more equitable the situation, the higher the competences, and the greater the value.

Living together

- Column 5: *Proportion of 15-year-olds having one parent with a diploma of tertiary education (ISCED 5 or ISCED 6) and the other parent with a profession in the least prestigious quartile [source: PISA 2003, year of data collection: 2003]*
  The more equitable the situation, the higher the competences, and the greater the value.
- Column 6: *Relative chance for a child coming from an educated family (with at least one of the parents having undertaken tertiary studies) of attending a privileged school (frequented by a majority of students having both parents in privileged occupations, that is, in the upper half of the distribution of the HISEI variable) as compared to the chance for a child coming from a less educated family attending the same type of school [source: PISA 2003, year of data collection: 2003]*
  The more equitable the situation, the higher the competences, and the greater the value.

Values and solidarity practices by the most educated

- Column 7: *Proportion of adults with a tertiary education diploma who agree with the statement that "the Government should reduce the level of differences of income" [source: European Social Survey, year of data collection: 2002-2003]*
  The more equitable the situation, the higher the proportion, and the higher the value.
- Column 8: *Proportion of adults with a tertiary education diploma who claim to have been a member of at least one humanitarian organization during the last 12 months [source: European Social Survey, year of data collection: 2002-2003]*
  The more equitable the situation, the higher the proportion, and the higher the value.

The first index reflects the competence of the weakest students. Here we attempt to establish whether the system brings the weakest students up to a relatively good level, by the end of full-time compulsory education (15 years). From this perspective, the countries with the most positive record are Finland, the Netherlands and Ireland; whereas those with the most negative record are Italy, Germany and Greece (in reading). In mathematics, the results are more or less the same.
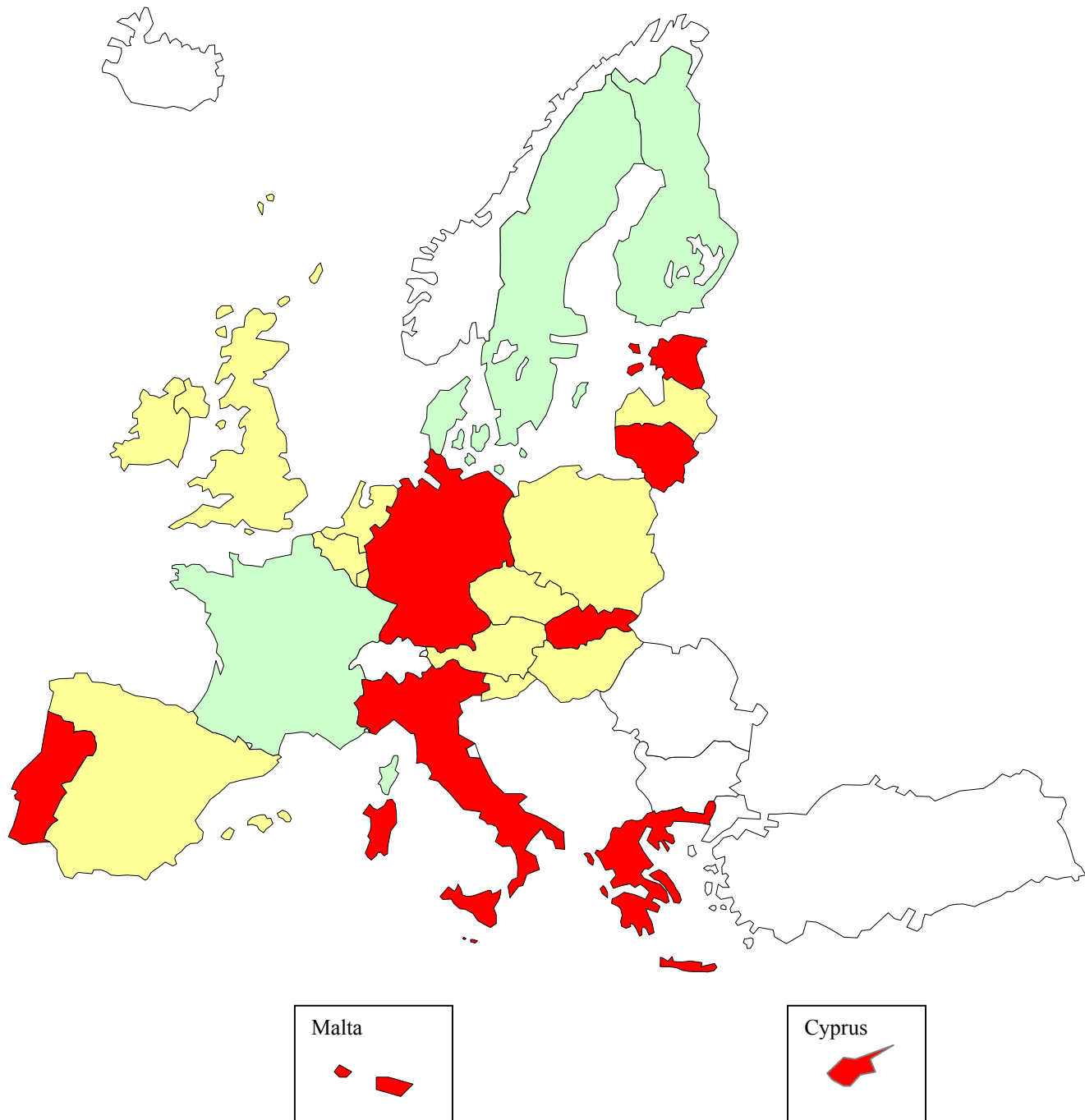
The second index attempts to show whether the educational system contributes to an increase in national wealth. Here, France, Spain and Italy stand out more favourably; at the opposite end of the scale we find Denmark, Switzerland and Norway.

A reduction in poverty can be brought about through financial redistribution mechanisms. We used an index here of the measure with which, in every country, social transfers decrease the proportion of people with low incomes – assuming that the most educated are among the contributors to these transfers, because they have better salaries. In Denmark, Finland and the Czech Republic, the effect of these transfers is the strongest, and in Greece, Italy and in Spain it is the lowest. A ranking of countries by these effects can be seen in table 7. This table summarises the contribution of the educational system to the situation of the most underprivileged and, as in the previous tables, lists the educational systems in order, from the country where the contribution of the system to the situation of the most underprivileged is the most pronounced to that where it is the least pronounced.

Table 7 – *Contribution of the education systems to the situation of the most underprivileged.*

Country	Skills of the weakest students (2003)		Contribution of education to economical growth (1990-2000)	Social transfers (2000-2003)	Living together (2003)		Values and practices of the most educated (2002)	
	Means of the lowest deciles in reading	Means of the lowest deciles in mathematics	Contribution of education to the growth of the GDP per capita from one decade to another	Reduction of the percentage of poor people due to social transfers	Proportion of young people having one very educated parent and the other "underprivileged"	Relative chance of attending a privileged school for students having both parents well educated	Proportion of answers referring to solidarity	Proportion of members of solidarity associations
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Finland	407.3	409.7	0.46	61	27.3	1.12	23.5	4.4
Denmark	341.2	364.4	0.18	66	22.3	1.12	7.5	22.2
France	331.2	358.7	0.5	54	18.4	1.18	32	7.2
Sweden	353.8	353.3	0.31	47	25.2	1.04	9.9	20.6
The Netherlands	375.1	384.3	-0.17	45	15.3	1.13	9.3	16.9
Austria	314.1	358	-	46	19	1.14	28.8	15
Czech Republic	329.1	364.3	-	62	9.9	1.28	11.3	-
Ireland	364.6	363.4	0.03	30	19.7	1.08	15.3	11.9
Luxembourg	306.6	343.6	-	57	13.7	1.28	16.3	19.3
United Kingdom	349.2	360.4	0.85	31	21	1.12	10.6	8.2
Slovenia	-	-	-	38	-	-	26.9	7.5
Belgium	306.7	332.3	-	43	19.6	1.24	12.7	13.4
Hungary	333.7	341.3	-	33	12.9	1.33	33	2.3
Latvia	350.2	342.3	-	33	23.4	1.07	-	-
Spain	321.4	338.9	-	14	13.4	1.36	23.6	11.3
Poland	338.9	349.3	-	47	7.9	1.2	14.2	2.2
Portugal	323	326.4	1.34	27	14.4	1.11	36.1	7.3
Italy	301.7	310.8	0.58	14	14.6	1.29	21.2	8.3
Germany	301.3	326.8	0.01	38	19.3	1.15	10.5	8.7
Greece	302.7	299.7	-	13	13.8	1.27	36.3	4.4
Slovakia	319.8	344.8	-	25	9.6	1.19	-	-
Lithuania	-	-	-	29	-	-	-	-
Estonia	-	-	-	28	-	-	-	-
Malta	-	-	-	25º	-	-	-	-
Cyprus	-	-	-	17	-	-	-	-
Bulgaria	-	-	-	24	-	-	-	-
Romania	-	-	-	22	-	-	-	-
Turkey	307.5	280.8	-	19	4.2	1.78	-	-
Norway	329.2	348.1	0.20	-	23.1	1.08	11.2	26.1
Liechtenstein	378.6	360.4	-	-	19.3	1.22	-	-
Iceland	326.9	364.2	-	(:)	18.0	1.16	-	-

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

Figure 5 – *Contribution of the education systems to the situation of the most underprivileged.*

Baye A., Demeuse M., Monseur C., Goffin C. (15.02.2006). *A set of indicators to measure equity in 25 European Union Education Systems*. Report for the European Commission. Liège : Service de Pédagogie expérimentale.

To understand social mixing, we were interested in cohabitation: if the most educated live in the same neighbourhoods as the poorest, they demonstrate more of their common humanity, they pull the aspirations of young people in these neighbourhoods upward, and they are more like equals. We were interested in two aspects of cohabitation for which the data are available at the international level[21]: when "more educated" and "underprivileged" individuals have children together and when such children are placed in the same schools. The results are strongly polarized from a geographical perspective. The most educated live more often with the most underprivileged in Sweden, Finland and Denmark than in Greece, Luxemburg, Portugal, Spain, Poland or the Slovak Republic.

For the fifth indicator, we looked into the values of the most educated. The idea is that the more the most educated people claim to share values of solidarity, the more they are supposed to support solidarity mechanisms or to participate in solidarity actions.

To measure this, we used data from the *European Social Survey* (ESS) of 2002. An inconsistency appears between the declared values and actual practices, at least those that are measured by the ESS (and which were already noted in the EGREES 2005 report, which was based on the *European Value Survey* of 1999).

With respect to values, France, Greece and Portugal are in the leading group, while Denmark, Sweden and the Netherlands take up the rear. On the other hand, when the issue is whether the most educated belong to solidarity associations, it is in Denmark, Sweden and Luxemburg that we find the strongest proportions, whereas in Germany, Spain, Italy, Portugal, France and Greece we find the lowest.

A possible interpretation is that, in the countries that are more equitable according to values rather than according to the practices, the support of the values of solidarity would be more especially rhetorical. Another interpretation is that, in these countries, one tends to count on action being taken by the State, possibly directed by the social movement, and not on one's own practice and behaviour to create a more just society.

To summarize and thus try to identify the contribution of the educational system to the situation of the underprivileged, a score was calculated for every country according to the number of times the selected indexes were high, average or low. Thus, the more often the score obtained is low, the more the contribution of the educational system to the situation of the underprivileged can be considered significant.

Obviously, these scores must be interpreted not as true measures making it possible to accurately rank the countries, but as a convenient way of amalgamating measures that are both imperfect and partial. First of all, for certain countries, not all the data are available; and the data presented here only partially represent the dimensions it would have been necessary to take into consideration in order to truly measure the effects of relations between the educated and the underprivileged. For example, we have no measure of the feeling of superiority, which the first might possibly feel towards the second, or a feeling of inferiority towards the educated that the underprivileged might suffer from. We also have no measure of urban segregation, nor any measure of the political affinity between the educated and the discriminated, etc.

---

[21] In the PISA data, which means that they pertain to the parents of young 15-year-olds.

The ranking thus obtained showcases Finland, Denmark, France and Sweden, where the educational system seems to better serve the needs of the most underprivileged more than it does in Germany, Greece, Italy and Portugal.

7. Conclusion

From the preceding analysis, it would seem that disparities are present in a relatively homogeneous way in certain systems and, in particular, are relatively pronounced in Germany and in Belgium. In contrast, Finland, Sweden and Ireland are characterized both by a more favourable situation as regards disparities between individuals, between groups and in the case of individuals placed below a threshold considered unacceptable. However, these three criteria often present divergent results for the other countries, according to the dimensions considered. Regardless of the aspect considered, some countries mostly occupy an intermediate place, and do not present a particularly favourable or, to the contrary, unfavourable situation.

When the three areas of analysis are considered (differences between individuals, between groups, and individuals below a threshold), in none of the 25 EU Member States do we observe a stable favourable situation, neither with respect to context, school processes, nor internal results. Certain countries are among those where the educational disparities are the least significant for at least two criteria. This is the case for Finland, the Netherlands and Denmark. Moreover, the importance of the advantages of education is also relatively insignificant for these countries, which gives them another more favourable relative position because the differences seem less marked and moreover, with respect to school differences, they seem to have fewer repercussions on life outside school.

Most of the countries place sometimes more negatively, sometimes more positively, and even in an intermediate position.

At the end of this report, an amalgamated presentation of the various maps allows us to come up with a preliminary synthesis with respect to the equity of European educational systems. The countries are represented in a particular tint, according to whether they have a more equitable situation (in light green), intermediary (in light yellow), or little or less equitable situation (in dark red) for each of the aspects considered in the analysis performed.

This general view of the various "rankings" obtained for each of the questions posed reveals three distinct groups of countries.

The first group includes those countries where the educational disparities seem the most pronounced: Germany, Belgium, Italy and Greece. Moreover, the Belgian and German educational systems, if we compare the context and the results obtained, would tend to play a role in amplifying the disparities. If, in Italy, the impact of education seems relatively low, it is not the same in Germany, where the advantages of a superior education are more evident.

The second group includes countries that, for at least three of the aspects considered, have intermediate positions: France, the United Kingdom and to a lesser extent Portugal. France seems to be in an intermediate position for a majority of the parameters taken into account.

Finally, a third group of countries emerges that includes those countries which, over the course of the rankings, appeared to be the most equitable: Sweden, Ireland, Denmark and Finland.

The analysis performed in the preparation of this report reveals that, in certain educational systems, the educational disparities are homogeneous, in the sense that they are strong – in Germany and Belgium – or weak – in Sweden, Finland and Ireland – according to three initial criteria: inter-individual disparities, disparities between groups and the proportion of

individuals or groups below a threshold. However, it can also happen that these criteria give divergent results, which shows that it really concerns different dimensions. From this perspective, Finland's position with respect to differences between groups is unique, in its overall profile.

More information can be drawn from the maps. For example, the importance of the advantages connected to a more complete education is shown in the central European countries (Germany, Austria, the United Kingdom, Poland, the Baltic States, the Czech Republic, and the Slovak Republic). Western and southern Europe (France, Spain, Portugal, Italy and Ireland) occupy an intermediate position and the North (including the Netherlands) demonstrates the reverse: advantages of education are reduced there.

Indicators other than those presented in this report could be used, of course. More importantly, other methods of interpreting these indicators could be designed. These would, for example, pay more attention to similarities, while the approach chosen by the EGREES was more comparative and contrastive.

However, two general results seem to emerge: there are certainly differences in equity between the educational systems: some seem more or less equitable than others with respect to a vast majority of criteria. However, for many, the judgment on equity varies, sometimes quite strongly, depending on how the indicators are read. It is therefore essential to use the indicators in the way they were intended when they were developed: to allow for discussion between decision-makers and citizens, by nourishing the debate and by trying to confront the perceptions of the actors with the data, which often surpass them.

Indeed, the wish of the designers of this set of indicators is not to provide a ranking which would only serve to sterilize any discussion, but rather to offer as objective information as possible leading to discussion about the place of school in society, its role in the field of education or, regrettably, in exacerbating social disparities... Naturally, we are not interested in accusing schools and their participants, but rather in offering them the possibility of interpreting their results from a perspective greater than their own four walls, without wanting to fall into blaming or excusing. By bringing together information from various sources in the same document, the authors hope to have provided a tool that, while no doubt still quite complex, nonetheless stimulates thought by providing a broader perspective. It is now up to the various actors to use it and develop it, even to perpetuate it by periodically updating it, with new surveys, centres of interest or new objectives. Doubtless, for example, some will be interested in expanding the exercise, by focusing also on the issue of equity in higher education. They should know that in so doing they will be encountering one of the current concerns of the present authors.
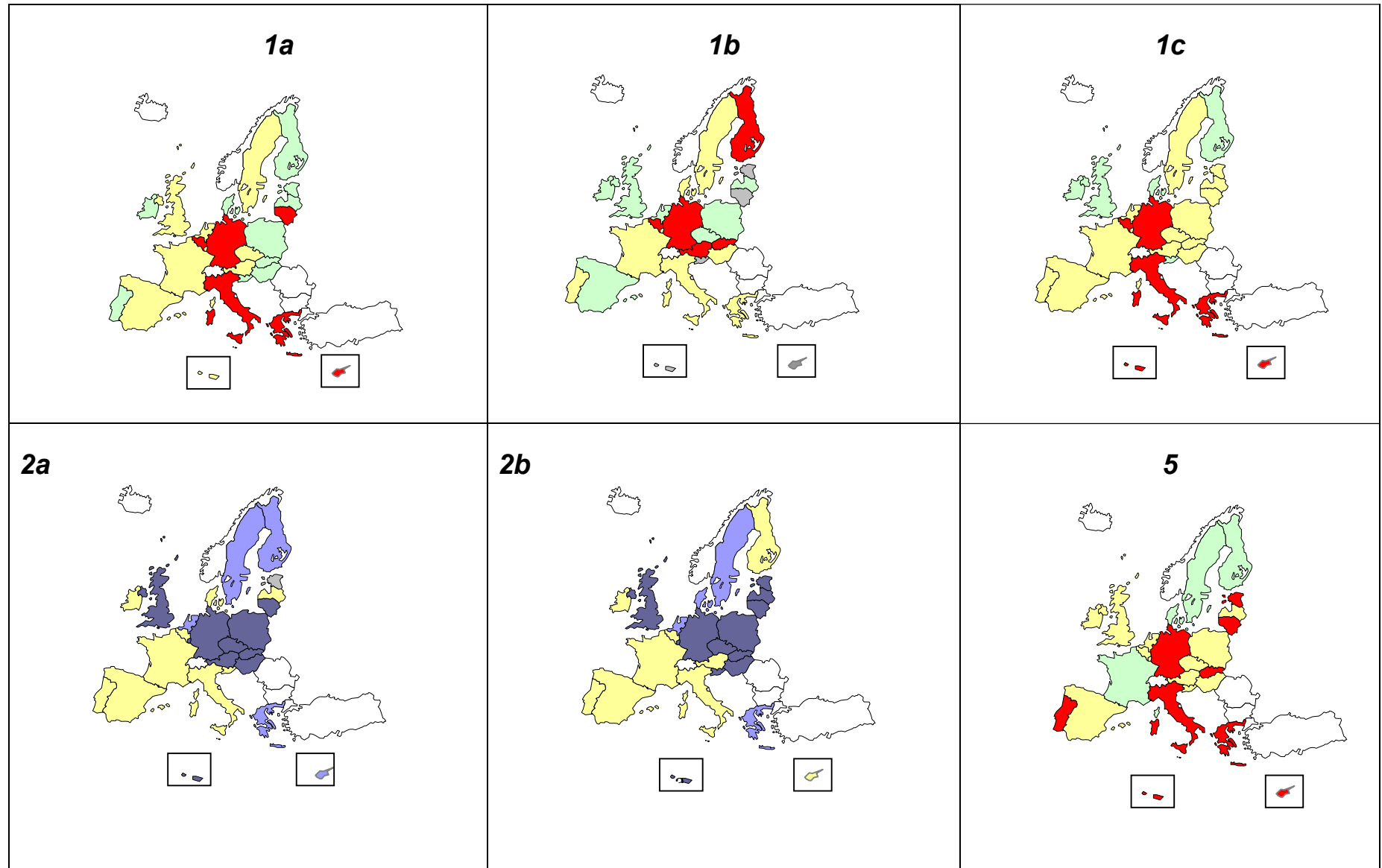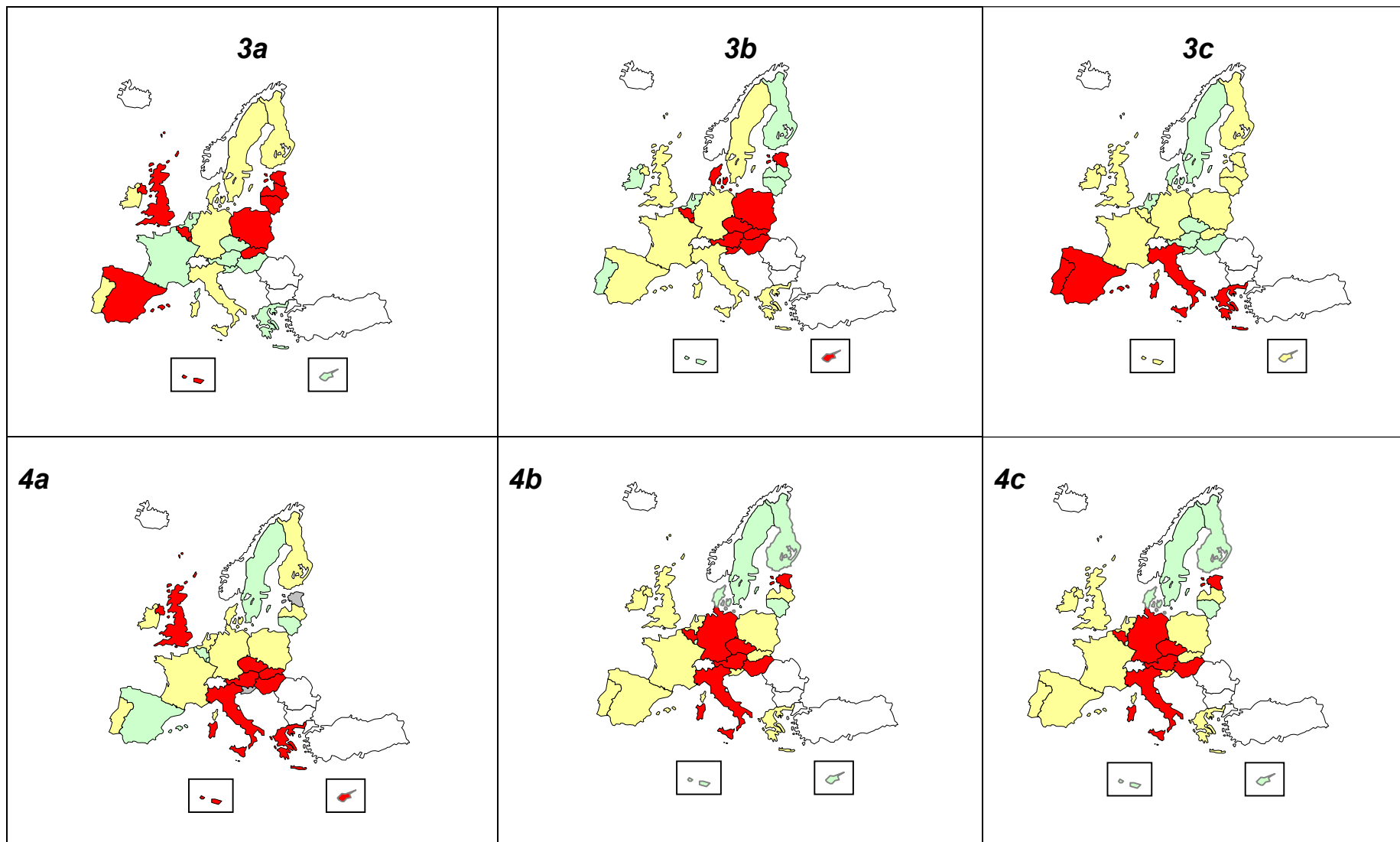
References

Baye, A., Benadusi, L., Bottani, N., Bove, G., Demeuse, M., García de Cortazar, M., Giancola, O., Gorard, S., Hutmacher, W., Matoul, A., Meuret, D., Morlais, S., Nicaise, J., Ricotta, G., Smith, E., Straeten, M.-H., Tiana-Ferrer, A., & Vandenderghe, V. (2005a). *Equity in European Education Systems. A set of indicators*. Liège: Department of Theoretical and Experimental Education.

Baye, A., Benadusi, L., Bottani, N., Bove, G., Demeuse, M., García de Cortazar, M., Giancola, O., Gorard, S., Hutmacher, W., Matoul, A., Meuret, D., Morlais, S., Nicaise, J., Ricotta, G., Smith, E., Straeten, M.-H., Tiana-Ferrer, A., & Vandenderghe, V. (2005b). *L'équité des systèmes éducatifs européens. Un ensemble d'indicateurs*. Liège: Department of Theoretical and Experimental Education.

Baye, A., Gorard, S., & Smith, E. (2005). *Feelings of Justice at School: Results of a Survey Among 8th Graders in Europe.* Paper presented to the Division L - Educational Policy and Politics, American Educational Research Association Annual Meeting (Montréal, April 11-15, 2005).

European Commission, DG Education and Culture, Eurydice, Eurostat (2005). *Key Data on Education in Europe 2005*. Luxembourg: Office of publications of the European Communities.

Crahay (1996). *Peut-on lutter contre l'échec scolaire?* Bruxelles: De Boeck.

Crahay (2000). *L'école peut-elle être juste et efficace?* Bruxelles: De Boeck.

Cytermann, J.R. (2005). La convergence des systèmes éducatifs européens. *Les Cahiers de l'Éducation. Mars 2005, n°43,* 4-7.

Demeuse, M. (2004). A set of Equity Indicators of the European Education Systems. A summary. In L. Moreno Herrera & G. Francia (eds). *Educational Policies. Implications for Equity, Equality and Equivalence.* Örebro (Sweden): Örebro University, Reports from the Department of Education.

Demeuse, M., Crahay, M., & Monseur, C. (2001). Efficiency and Equity. In W. Hutmacher, D. Cochrane, N. Bottani. *In Pursuit of Equity in Education. Using international indicators to compare equity policies*. Dordrecht: Kluwer.

Demeuse, M., Crahay, M., & Monseur, C. (2005). Efficacité et équité dans les systèmes éducatifs. Les deux faces d'une même pièce ? In M. Demeuse, A. Baye, M.H. Straeten, J. Nicaise, & A. Matoul (Eds). *Vers une école juste et efficace. 26 contributions sur les systèmes d'enseignement et de formation.* Bruxelles: De Boeck, Collection "Economie, Société, Région".

Demeuse, M., Baye, A., Straeten, M.H., Nicaise, J., & Matoul, A. (Eds). *Vers une école juste et efficace. 26 contributions sur les systèmes d'enseignement et de formation.* Bruxelles: De Boeck, Collection "Economie, Société, Région".

Duru-Bellat, M., Mons, N., & Suchaut, B. (2004). Caractéristiques des systèmes éducatifs et performances des jeunes de 15 ans. L'éclairage des comparaisons entre pays. *Cahier de l'IREDU, 66.*

GERESE (2005) Equity of the European Educational Systems. A set of indicators. *European Educational Research Journal, 4(2).*

Meuret, D. (2001). A System of Equity Indicators for Educational Systems. In W. Hutmacher, D. Cochrane, N. Bottani (eds). *In Pursuit of Equity in Education. Using international indicators to compare equity policies.* Dordrecht: Kluwer.

Meuret, D. (2003). Les inégalités d'éducation sont-elles au bénéfice des défavorisés? *Cahiers du Service de Pédagogie expérimentale, 15-16, 649-662.*

Meuret, D. (2005). *Key Principles for Measuring the Equity of Education Systems.* Paper presented to the Division L - Educational Policy and Politics, American Educational Research Association Annual Meeting (Montréal, April 11-15, 2005).

Monseur, C., & Demeuse, M. (2001). Gérer l'hétérogénéité des élèves. Méthode de regroupement des élèves dans l'enseignement obligatoire. *Cahiers du Service de Pédagogie expérimentale, 7-8*, 25-52.

Nicaise, J., Straeten, M.H., Baye, A., & Demeuse, M. (2005). Comment développer un système d'indicateurs d'équité au niveau européen? In M. Demeuse, A. Baye, M.H. Straeten, J. Nicaise, & A. Matoul (eds). *Vers une école juste et efficace. 26 contributions sur les systèmes d'enseignement et de formation.* Bruxelles: De Boeck, Collection "Economie, Société, Région".

OECD (2002). *Education at a Glance. The OECD indicators*. Paris: OECD

OECD (2005). *Education at a Glance. The OECD indicators*. Paris: OECD

Rawls, J. (1971). *A theory of justice.* Oxford: University press.

Sen, A. (1982). Quelle égalité? In *Ethique et Economie*, 1993. Paris: PUF.

Sen, A. (1992). *Inequality re-examined.* Oxford: Oxford University Press.

Straeten, M.H., Demeuse, M., & Meuret, D. (2003). Les normes, sentiments et critères de justices des élèves. Une enquête européenne auprès des élèves du 8e grade. *Cahiers du Service de Pédagogie expérimentale, 15-16, 663-670.*

Trannoy (1999). L'égalisation des savoirs de base, l'éclairage des théories économiques de la responsabilité et des contrats. In D. Meuret (Ed.). *La justice du système éducatif.* Bruxelles: De Boeck.

Wolfe, B. & Haveman, R. (2000). *Accounting for the social and non-market benefits of education.* University of Wisconsin-Madison.

URL database references

- *Labour Force Survey [EUROSTAT]*

  http://epp.eurostat.cec.eu.int > Population and social conditions > Data > Labour Market > Employment and Unemployment

- *European Social Survey (ESS) [Norwegian Social Science Data Services]*

  http://ess.nsd.uib.no/

- *PISA 2000 - PISA 2003 [OCDE]*

  http://pisaweb.acer.edu.au/oecd/oecd_pisa_data_s1.html

- *Public Funding and Private Return to Education*

  http://www.etla.fi/PURE

- *Survey on Income and Living Conditions (SILC) [EUROSTAT]*

  http://epp.eurostat.cec.eu.int > Population and social conditions > Data > Living Conditions and Welfare > Household Budget Survey > Income and Living Conditions > Main Indicators > Laeken Indicators

Annex 1 – *Number of available data, by country.*

	Available data	Total of used data	Available data (%)
Estonia	12	92	13%
Malta	14	92	15%
Lithuania	14	92	15%
Cyprus	14	92	15%
Slovenia	20	92	22%
Romania	21	92	23%
Bulgaria	25	92	27%
Turkey	56	92	61%
Liechtenstein	66	92	72%
Slovakia	67	92	73%
Island	73	92	79%
Latvia	78	92	85%
Poland	84	92	91%
Luxembourg	84	92	91%
Hungary	85	92	92%
Czech Republic	85	92	92%
Austria	86	92	93%
Greece	86	92	93%
The Netherlands	88	92	96%
Spain	88	92	96%
Norway	88	92	96%
Germany	89	92	97%
Belgium	89	92	97%
Portugal	90	92	98%
Ireland	90	92	98%
United Kingdom	90	92	98%
France	91	92	99%
Italy	91	92	99%
Finland	92	92	100%
Denmark	92	92	100%
Sweden	92	92	100%

Table of contents