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An Index of Child Well-being in the European Union

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Abstract

While the living conditions of children and young people in the European Union have gained increasing recognition across the EU, the well-being of children is not monitored on the European level. Based on a rights-based, multi-dimensional understanding of child well-being we analyse data already available for the EU 25, using series data as well as comparative surveys of children and young people. We compare the performance of EU Member States on eight clusters with 23 domains and 51 indicators and give a picture of children's overall well-being in the European Union. The clusters are children's material situation, housing, health, subjective well-being, education, children's relationships, civic participation and risk and safety.

Introduction

The living conditions of children and young people in the European Union have gained increasing recognition across the EU. Children in poverty for example have been named as target groups in the Common Outlines and Common Objectives of the National Action Plans and also in the March 2005 EU Presidency Conclusions. But while some Member States are strong on monitoring the well-being of children and the realisation of their rights, there are no processes of monitoring child well-being at the European level that would give a comparable picture of the progress made across the EU.

Among the so called Laeken Primary and Secondary indicators of social inclusion only one indicator with a child breakdown had been included (the proportion of children under 16 living in households with equivalent income before housing costs less than 60 per cent of the median and using the modified OECD equivalence scale). Although in the report by Professor Tony Atkinson and colleagues prepared for the Luxembourg Presidency (Atkinson 'et al' 2005) there was a proposal that children should be 'mainstreamed', it was suggested (by the Head of Eurostat) that only one child related indicator should be added to the Laeken Primary Indicators - on educational attainment!

This is clearly insufficient and even more so in view of the continuing enlargement of the EU. Many acceding and candidate countries currently report on the living conditions and/or well-being of children in the context of their Poverty Reduction Strategy Papers. For them, joining the EU and adjusting to EU social monitoring

standards would mean that they might no longer see the need to maintain their focus on children. Against this background it becomes even more important for the EU to raise their standards and improve the monitoring of child well-being.

This paper is a response to the cautious approach to indicator development of the Indicators Sub Committee of the EU Social Protection Committee. Our aspiration was to demonstrate that much more was possible using already available data. Drawing mainly on EU data and comparative studies with children and young people we give a picture of children's well-being across the European Union.

Conceptualisation of child well-being and deprivation

A rights-based approach

The UN Convention on the Rights of the Child (CRC) offers a normative framework for the understanding of children's well-being. Its four general principles fit closely in the discussions on how to conceptualise child well-being. *Non-discrimination* (art. 2) points to the need to capture the life situations and well-being of excluded groups of children like children with disabilities, children in institutions or refugee children and to disaggregate available data for age, gender, ethnic, geographic and economic background. The principle of the *best interest of the child* (art. 3) implies a child focus in all that is done with and for children and thus strengthens children's role as citizens in their own right. As a result in data on child well-being the unit of analysis should be the child. The complexity of children's lives is reflected in the principle of *survival and development* (art. 6). The CRC promotes a holistic view of the child, giving equal

weight to children's civic, political, social, economic and cultural rights, highlighting that they are interrelated, universal and indivisible. Concepts of child well-being accordingly need to be multi-dimensional and ecological. The principle of *respect for the view of the child* (art. 12) finally acknowledges children's right to be heard and to have their view taken into account in matters that affect them (Santos Pais 1999).

The CRC points to the double role of children as being citizens with right entitlements and at the same time as being dependant on their families. The discourse on child well-being is thus also one on well-becoming. From a political perspective child well-being is often mainly understood in terms of children's future, focusing on their education and future employability while losing sight of their life today. But the CRC makes it very clear that children's well-being today is important in its own right. Children's present life and development and future life chances thus need to be reconciled in the conceptualisation of well-being by looking both into the conditions under which children are doing well and child outcomes in a range of domains.

This rights based approach is in contrast to a definition of child and youth well-being that is based on empirical research on subjective well-being, including studies of subjective well-being of children. The latter approach was taken by Land and colleagues in research on the construction of a child and youth well-being index for measuring changes therein for the United States across time (Land et al 2001 and Meadows et al 2005). They have also done work comparing the well-being of children in the 50 US States (http://www.soc.duke.edu/~cwi/).

Creating well-being

Child well-being and deprivation represent different sides of the same coin. From a child rights perspective well-being can be defined as the realisation of children's rights and the fulfilment of the opportunity for every child to be all she or he can be. The degree to which this is achieved can be measured in terms of positive child outcomes, whereas negative outcomes and deprivation point to the denial of children's rights.

Child outcomes are however not static. They are the result of the interplay between resources and risk factors concerning the personal situation of the child, his or her family, friends, situation at school and the wider society. These factors are constantly changing and children – with their evolving capacities – create their well-being actively by mediating these different factors. Antonovsky (1987) describes this process in his concept of *salutogenesis*. He asks how people manage to survive and stay well despite being constantly confronted with hardship and stressful situations. According to this concept people move on a continuum between health and disease, balancing stress and resources. The creation of health and well-being is thus a process with outcomes depending on the personal background, the inner and outer situation, strengths and capacities of the individual.

Young children are highly dependent on a nurturing and loving environment and adequate economic and physical resources. Older children increasingly develop their own strategies to deal with the demands in their environment as they become more independent from their family by interacting with other social systems (e.g. school, peers).

Children's interaction with their environment

Children's capabilities have to be understood in the context of their development and well-being. These are dynamic processes that are influenced by a multitude of different factors. Children interact with their environment and thus play an active role in creating their well-being by balancing the different factors, developing and making use of resources and responding to stress. Bronfenbrenner's bioecological model of human development (Bronfenbrenner and Morris 1998) conceptualises child development on the basis of four concentric circles of environmental influence and time as an underlying factor, recognising both individual changes over time and the historic time. The child, with all his/her personal characteristics, interacts first and foremost with the family, but also a range of other people and systems: friends, neighbours, health care, child care, school etc. These direct interactions comprise the child's *microsystem* and this is the level with the strongest direct influence on children. Connections between the different structures within the microsystem, e.g. parents – school, are described as *mesosystem*. One level up the *exosystem* stands for the societal context in which families live, including among others parents' social networks, the conditions in the local community, access to and quality of services, parents' workplace and the media. The exosystem affects the child mainly indirectly by influencing the different structures within the microsystem. The *macrosystem* finally points to the wider societal context of cultural norms and values, policies, economic conditions and global developments. The different systems are dynamic and interdependent, influencing each other and changing over time (cf. Stevens 'et al' 2005; Lippman 2004).

In interacting with the different systems and subsystems children and their families encounter both barriers and facilitators. Social inclusion results from a good match between an individual with its abilities, resources and limitations and the environment with its infrastructure, demands and resources while a lacking fit triggers processes of exclusion.

Clusters of child well-being

We analyse children's well-being in eight clusters, covering 23 domains and 51 indicators. The clusters include topics that matter to children from their own point of view but also those that point to adults' responsibility for the well-being of children. Wherever possible indicators represent children's own experiences as expressed in surveys with young people. The eight clusters are:

- Material situation.
- Housing.
- Health.
- Subjective well-being.
- Education.
- Children's relationships.
- Civic participation.
- Risk and safety.

The conditions children find at home and in their neighbourhood have a strong impact on their development and well-being. Particularly their economic situation influences children's well-being and well-becoming in many dimensions. The cluster '*material situation*' therefore gives information on child income poverty, deprivation

and workless families while the cluster *'housing'* captures children's living conditions and housing problems.

Children play an active role in creating their own well-being. Thus children's personal resources –their '*health'* and '*subjective well-being*' – are simultaneously the most basic outcomes and the very basis of achieving well-being. As children get older, school becomes another major factor in children's life. *Education* is our fifth cluster, relevant for children's well-being today but also decisive for their future life chances. The domains here are educational attainment, participation in childcare and post-compulsory education and employment outcomes, while children's subjective well-being at school is included in the subjective well-being cluster.

The family situation and the quality of relationships within the family are crucial for children's well-being as are peer relationships. These are captured in the cluster '*children's relationships'*.

A different aspect of children's interaction with their environment is captured in the cluster *'civic participation'*, giving insight in children's commitment to civic activities and political interest.

The cluster '*Risk and safety*' finally captures conditions and behaviour that sets children and young people at risk. While data on young people's risk behaviour is widely available there are considerable gaps regarding comparative data on child protection so that we could only include the domains 'child mortality' and 'experiences of violence' within the peer group.

Methods

The objective of this article was to produce an index of child well-being for the EU25. In searching for data we were guided by our understanding of the concept of child well-being as multidimensional. However in the end the index has been data driven. As we shall see when we explore the clusters of well-being domains, there are some elements of child well-being which are not represented by any of the available comparable indicators. There are also many elements which are represented less than perfectly – either because the data is out of date, incomplete in its coverage of age groups, incomplete in its coverage of countries, or incomplete in the extent to which it represents a given domain of well-being. However the perfect has been the enemy of the good in previous efforts to represent child well-being. This article is not the last word on the subject - in fact it is more or less the first word.

There are two main types of sources of information available on child well-being: sample surveys and indicators of various kinds collected routinely by international organisations. In our initial search for indicators we accumulated a data base containing 627 indicators relevant to child well-being. These were first organised into subject groupings which we call clusters. Then a selection was made of the most promising indicators to represent domains within these clusters. The principles governing this selection were to choose indicators:

- That best represented a constituent domain of the concept of child well-being.

- We used as far as possible the child as the unit of analysis, rather than the family or household.

- Where there was a choice we selected the most up to date indicator, though not the same year for all countries. The data from the PISA survey is for 2000 and 2003 and from the data from the HBSC survey is for 2001/02.

- We used data from the same source for a single variable on the grounds that data from different sources may risk comparability.

- Some perfectly satisfactory indicators had to be excluded because they were not available for enough countries. We tended to use a 75 per cent test. That is we used a variable when it was available for 75 per cent of the countries.

- Where variables for a domain were missing for a country we estimated domain averages for the variables we had.

- Four countries – Malta, Cyprus, Luxembourg and the Slovak Republic – suffered most from low response rates (less than 70 per cent overall), the affect their inclusion has had on the index position of others countries is dealt with through sensitivity analysis.

As has been explained above, the EU25 child well-being index employs

- 51 variables or indicators

- these are summarised into 23 domains, and

- the 23 domains are summarised into eight clusters.

- The 23 domains are summarised into an overall child well-being index.

The simplest way to summarise comparative data is to rank variables for countries and then to take the mean rank. In the concluding analysis below we present results

using that method and compare those with the results that have been obtained using our chosen method. The chosen method was to calculate z scores for each indicator and average the z scores to obtain an average score for a domain. Then the average z score for the domains were averaged to create a cluster average and the averages of the cluster z scores were averaged to obtain the overall index score. The advantage of using z scores instead of simple rank order is that z scores not only take account of rank order but also the degree of dispersion.

When we combine indicators to form domains, domains to form clusters and clusters to form the overall index, we have not imposed any weights. So for example to obtain the health from birth domain we have combined three variables – infant mortality rates (IMR), expectation of life at birth and rate of low birth-weight. We might have sought to argue that infant mortality should be given greater weight than the other two variables in the domain on the grounds that the death of a baby is a more devastating event, or even that IMRs are just a better or more reliable indicator of child health. However even if we had evidence to sustain such arguments there is still a question of how we decide what extra weight to give to infant mortality. In the absence of any theoretical or empirical justification for weighting we decided to treat each variable as having equal weight. Some domains are made up by more variables than others but all but one clusters have three domains. Regardless of this they are given equal weight.

There is an important distinction to be made between **cause** models and **effect** models (Bollen and Lennox 1991). If we had been using an **effect** model we would have expected that changes in a domain would have had an impact on all the

variables making up the domain. In an effect model they are dependent on the domain. With an effect model one would expect co-variance and one could determine the weighting of a variable in constructing a domain by assessing their contribution to the domain by a scalability test such as Cronbach's Alpha or by establishing the underlying domain by using factor analysis or principal component analysis.

However we have no justification for doing any of that because we are using a **causal** indicator model in developing this index. In a causal indicator model it is the indicators which determine the latent variable (the domain) rather than the reverse. We are assuming that the variables that make up the domain cause the domain. We would not expect a change in the domain to impact equally on our variables. Thus they can be considered independent contributors to our domain. We do not necessarily expect our variables to correlate with each other. If the variables in a domain do correlate highly we might consider dropping one, particularly if there was another variable in the domain that is not correlated with them - on the grounds that the correlated variables might be measuring the same thing and thus overweighting that thing in the domain. In the case of the health from birth domain, for example, we have selected three variables which we have decided all contribute something to that construct. The three are in fact statistically significantly correlated, but not closely enough not to believe that they are each contributing the same thing to the domain. Because we are using a causal model we are also not concerned that some of the variables in some of the domains are unrelated to each other. They are nevertheless making an independent contribution to the domain. We do need to ensure that all the variables that contribute to a domain have some relevance to the latent construct, but this does not mean that they have to be related to each other.

For these reasons we have not attempted to weight the variables making up a domain. However, given that, there is a problem inherent in using z scores. They have an implicit weight. The more dispersed the distribution of a variable, the bigger the difference from the mean, the higher the z scores are. Thus a more dispersed variable combined with a less dispersed variable gives more weight in the resultant construct (domain) to the dispersed variable, particularly at the ends of the distribution. For example in the health from birth domain the variable low birth-weight has the greatest dispersion, a range of 4.00 on z scores, compared to infant mortality 3.64. Thus when averaging the z scores low birth-weight would have slightly more weight in the composite than the infant mortality variable. However we control to some extent for the impact of this implicit weighting when we 'reset' the distribution when summarising variables into domains and domains into clusters. However because of these problems in the concluding analysis we have carried out sensitivity analysis of the domains, clusters and overall construction of the index in order to explore whether the results vary by the way in which we have combined the variables.

The next section of this article summarises each cluster in the index. More detailed working papers can be down-loaded from http://www-users.york.ac.uk/~jrb1/.

Material situation

Children's economic situation influences their well-being and well-becoming in many dimensions. Poverty and deprivation impact on child well-being both directly through the lack of economic resources and indirectly through strain on parents' well-being,

conflicts and necessary adjustments in the family's lifestyle. Poverty is associated with poor outcomes in many other dimensions of well-being (Bradshaw and Mayhew 2005).

There are three domains that represent children's material situation. They are:

- Relative child income poverty

- Child deprivation and

- Parental worklessness.

Relative child income poverty

Though there is general agreement that income poverty is an important element of child well-being, there is considerable disagreement about how child poverty should be represented empirically. These disagreements are concerned with the limitations of income data: relative thresholds, equivalence scales and the unit of analysis (see Bradshaw 2006). Ideally we would like to incorporate a range of different measures in order to represent child poverty. These might have included:

- Relative child poverty rate.

- Absolute child poverty rate.

- Poverty gaps for children.

- An indicator of persistent poverty for children.

- A subjective poverty measure.

However only two of those measures are available, the relative child poverty rate and the relative average poverty gap (the average gap between the incomes of households below the poverty threshold and the poverty threshold). The actual

threshold used for these relative measures are very different in different countries. It is therefore important to moderate these poverty measures with more direct measures of deprivation.

1. At risk of poverty rate (60 per cent of median equivalised income after social transfers): Less than 16 years, 2003 or most recent data (MRD).
The child poverty rates range from seven per cent in Slovenia and nine per cent in Denmark to 27 per cent in Portugal and 30 per cent in the Slovak Republic.

2. Relative poverty gap (60 per cent of median equivalised income): Less than 16 years, 2003 or MRD.
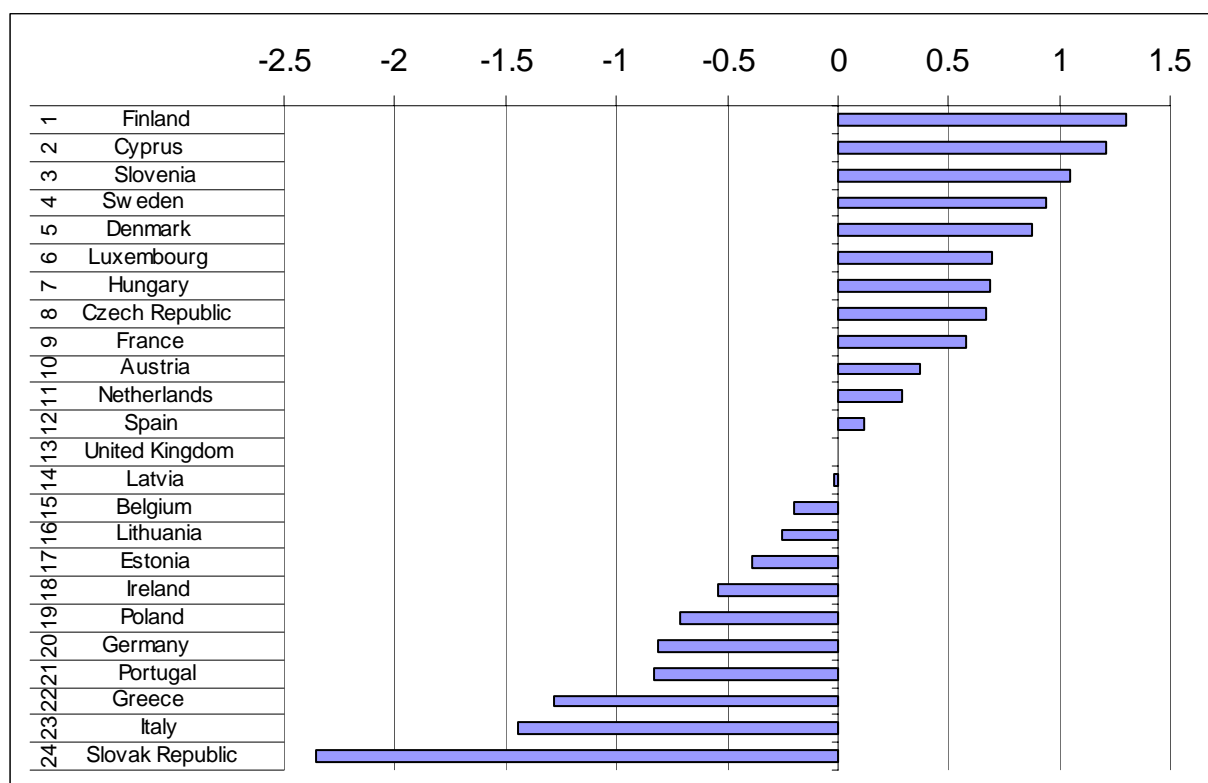The average poverty gap ranges from 12 per cent in Cyprus and Finland to 33 per cent in Italy and 40 per cent in the Slovak Republic.

There is a positive correlation between these two variables (r=0.7, p<0.00).

Figure 1 below combines these variables and presents a child poverty league table. Finland, Cyprus and Slovenia have the lowest child poverty and Greece, Italy and the Slovak Republic have the highest.

Figure 1

		-2.5	-2	-1.5	-1	-0.5	0	0.5	1	1.5
1	Finland									
2	Cyprus									
3	Slovenia									
4	Sweden									
5	Denmark									
6	Luxembourg									
7	Hungary									
8	Czech Republic									
9	France									
10	Austria									
11	Netherlands									
12	Spain									
13	United Kingdom									
14	Latvia									
15	Belgium									
16	Lithuania									
17	Estonia									
18	Ireland									
19	Poland									
20	Germany									
21	Portugal									
22	Greece									
23	Italy									
24	Slovak Republic									

Deprivation

Data on deprivation gives a more direct measure of children's economic situation than income and overcomes the problems of using relative income data alone. We include three indicators of children's deprivation.

1. Percentage of children reporting low family affluence (HBSC) 2001/02

The HBSC Family Affluence Scale (FAS) is derived by identifying the percentage of children from each country who self report low levels of wealth based upon 'family item' ownership of a car, van or truck, whether they have their own bedroom, the number of family holidays in the last twelve months, and the number of computers owned by the family. With positive answers adding to a possible score of eight, the percentage of children in each nation scoring three points or below on the FAS scale

is used as the indicator of deprivation (Currie 'et al' 2004: 15). Scores range from nine per cent in the Netherlands to 56 per cent in Latvia.

2. Percentage of children reporting less than six educational possessions (PISA) 2003

The educational deprivation indicator identifies the percentage of children aged 15 in each country with less than six (the EU25 median) educational items (out of eight). The eight items include: a desk to study at, a quiet place to study, a computer for school work, educational software, an internet connection, their own calculator, a dictionary, and school text books (OECD/PISA 2005c: 11). Results range from 15 per cent in Luxembourg to 62 per cent in Greece.
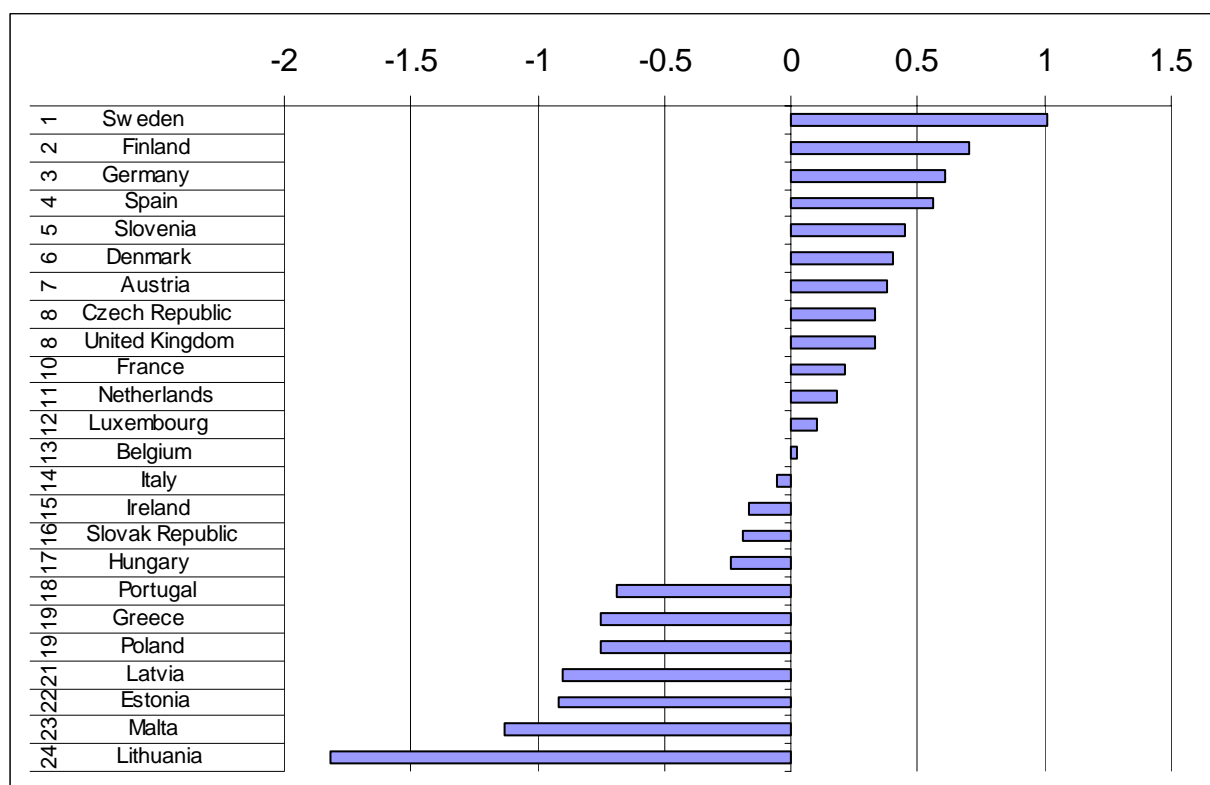
3. Percentage of children reporting less than ten books in the home (PISA) 2003

This variable is also from PISA and the results range from two per cent in the Czech Republic and 13 per cent in Portugal.

There is a fairly strong association between low family affluence and educational deprivation. However there is no significant association between ownership of less than ten books and the other deprivation indicators.

Figure 2 below represents the league table resulting from combining these variables. Sweden, Finland and Germany have the lowest child deprivation and Estonia, Malta and Lithuania the highest.
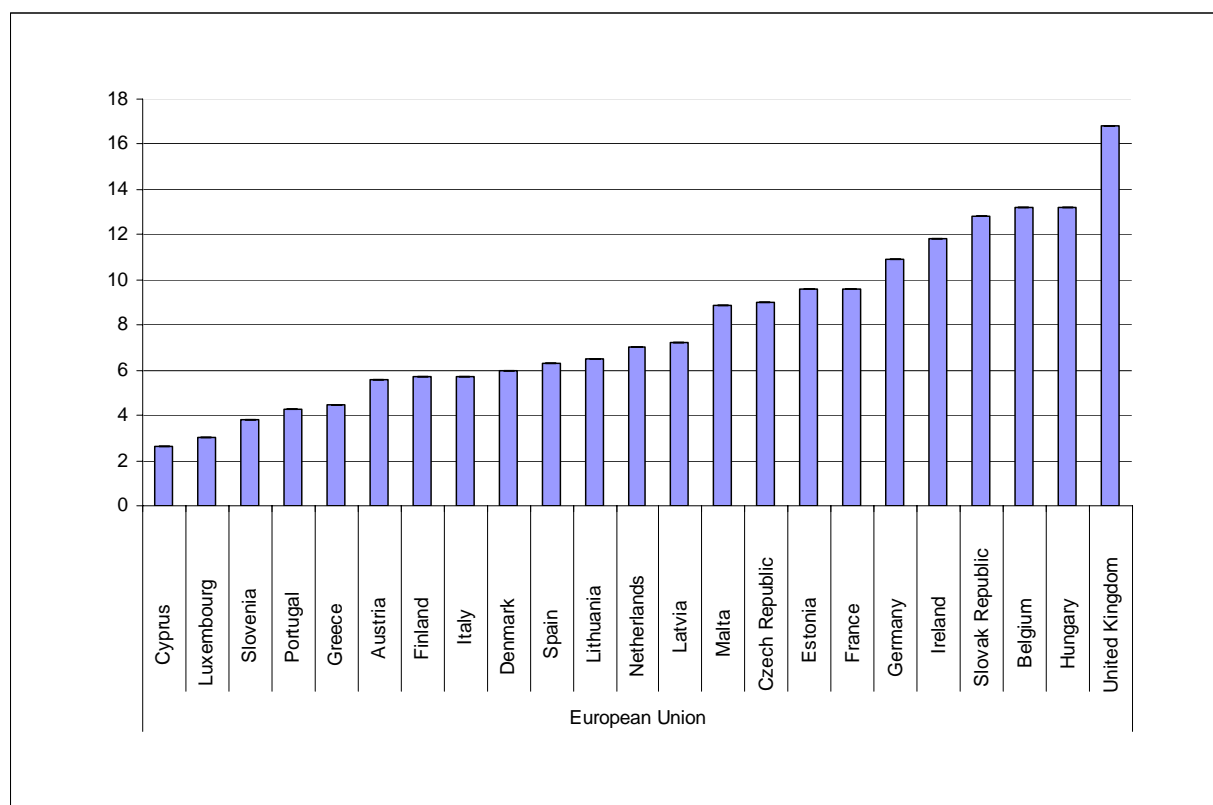
Figure 2

1	Sweden	
2	Finland	
3	Germany	
4	Spain	
5	Slovenia	
6	Denmark	
7	Austria	
8	Czech Republic	
8	United Kingdom	
10	France	
11	Netherlands	
12	Luxembourg	
13	Belgium	
14	Italy	
15	Ireland	
16	Slovak Republic	
17	Hungary	
18	Portugal	
19	Greece	
19	Poland	
21	Latvia	
22	Estonia	
23	Malta	
24	Lithuania	

Children living in workless families

Living in a workless household is associated with a very high poverty risk, particularly
if this situation persists for several years.

*1. Children aged 0-17 living in jobless households: share of persons aged 0-17 2004
(Eurostat)*

The proportions range from three per cent in Luxembourg to 17 per cent in the United
Kingdom (see Figure 3).

Figure 3

Unsurprisingly levels of children in poverty in the EU correlate with deprivation (r=0.5*), however there are no significant associations between the parent's worklessness and either of the other two composite variables. Figure 4 presents the summary league table distributed around the mean of 100 (standard deviation of 10) for all countries. The best performing countries are Cyprus and Sweden. Poland, Malta and the Slovak Republic do worst.

Figure 4
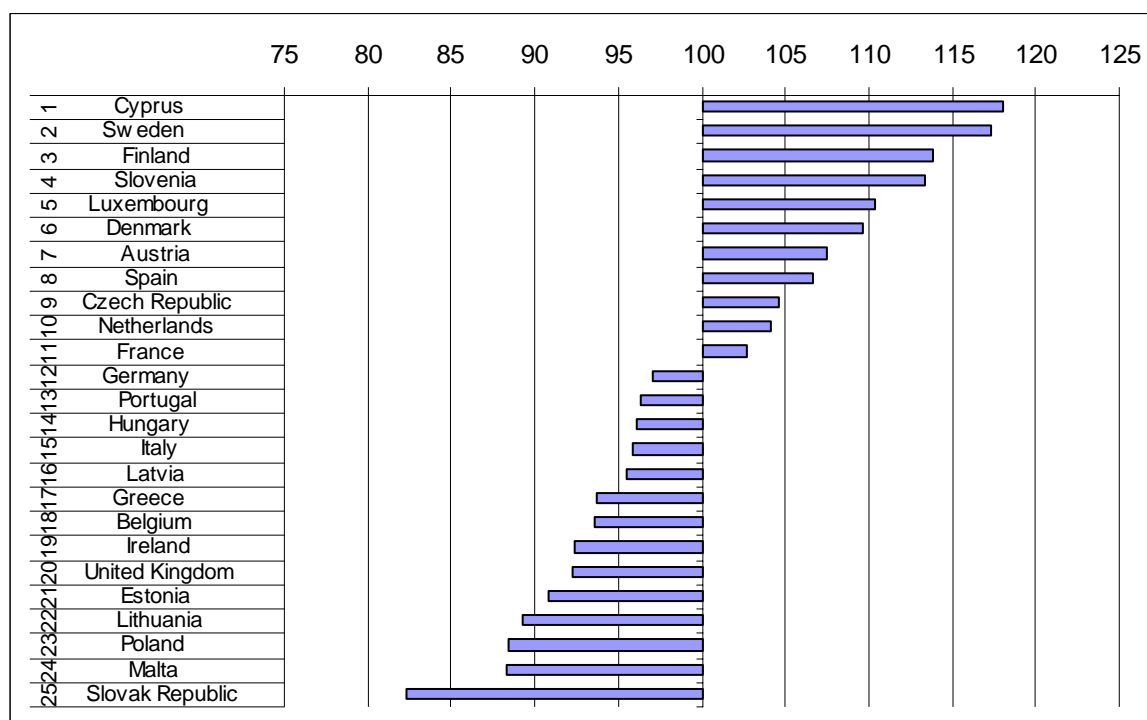
Child health

Children's health is represented by three domains covering:

- Health at birth.

- Immunisation.

- Health behaviour.

Health at birth

Health at birth is of fundamental importance for children's physical, cognitive and psychosocial development. We have combined two variables to represent this domain:

1. Infant mortality rate (WDI 2003): Infant mortality rates are widely used as a basic

indicator for health inequalities between countries, as there are associations between

the standard of living and infant mortality (Ferguson 'et al' 2006; Cantanero 'et al'

2005). Infant mortality rates range from 3.1 per 1000 in Sweden and Finland to 10.0

per 1000 in Latvia.

2. Low birth weight (OECD Health Data 2003 or most recent): Low birth weight is

linked to a high risk of problems in the later cognitive and physical development

(Klebanov 'et al' 1994; McCarton 'et al' 1997). Low birth weight in EU countries varies

from 4.0 per cent in Estonia and Lithuania to 8.7 per cent in Hungary.

There is no association between infant mortality rates and rates of low birth weight.

Figure 5 is the composite league table of health at birth. Finland and Sweden do best

and Latvia and Hungary do worst.

Figure 5
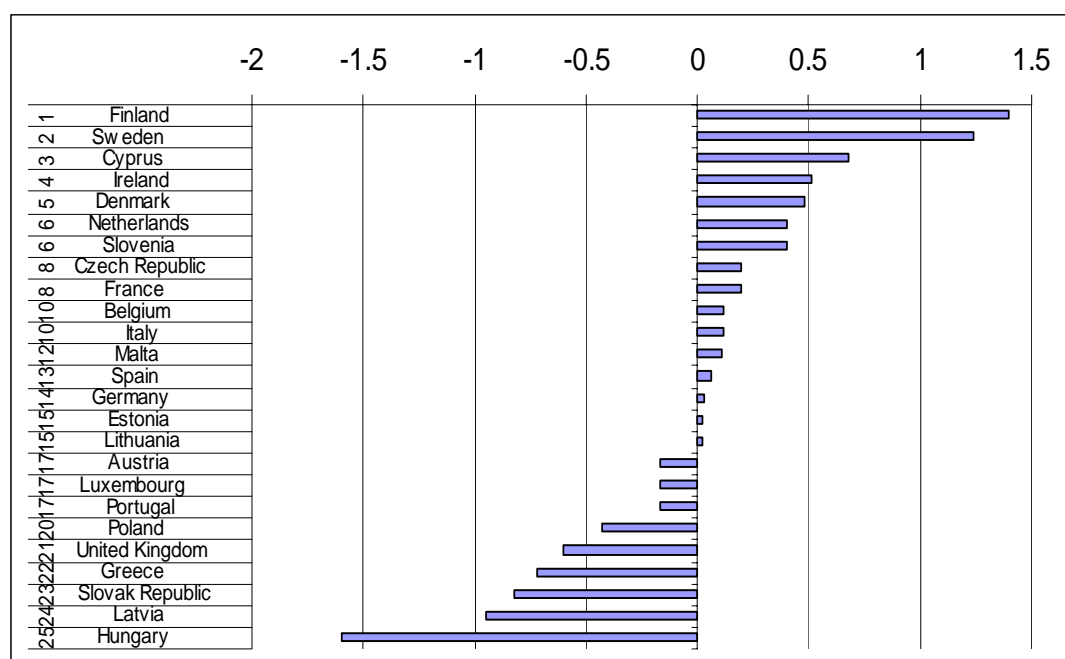
Immunisation

Children's immunisation rates represent preventative measures and health promotion in early childhood. There is evidence that immunisation take-up is linked to families' social status (Neuberger 1997; Schone 'et al' 1997). However, in some European countries there has been negative publicity in recent years regarding the safety of child immunisations, particularly the MMR vaccination. Lowered vaccine coverage threatens herd immunity so that the risk of an outbreak and spread of infectious diseases rises (Beresford 'et al' 2005). We have combined three variables:
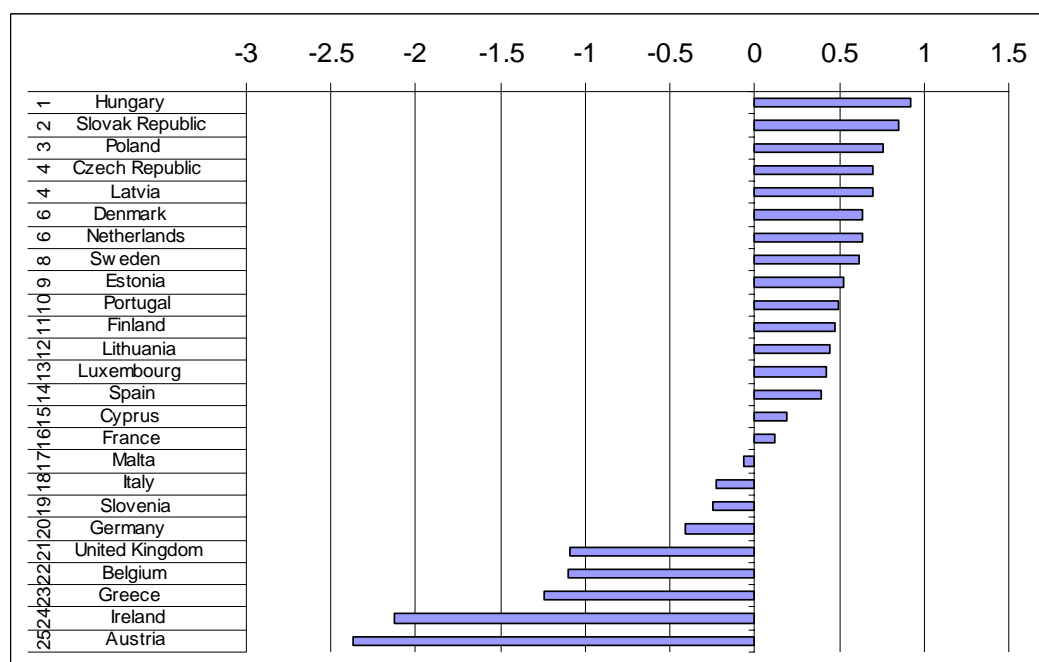
1. Measles (WDI 2003): Measles immunisation coverage tends to be lower than that for DPT3 or Pol3. Rates range from 75 per cent in Belgium to 99 per cent in Hungary, Latvia and the Czech and Slovak Republics.

2. DPT3 (HNP 2002): DPT3 is the final dose in a series of immunisations that can prevent diphtheria, pertussus, and tetanus. Immunisation rates range from 83 per cent in Austria to 99 per cent in Poland, Hungary and the Slovak Republic.

3. Pol3 (HNP 2002): Pol3 is the final dose in a series of immunisation that can prevent against Polio. Pol3 immunisation rates range from 82 per cent in Austria to 99 per cent in Hungary and Sweden.

There are strong positive correlations between the rates of measles and DPT3 immunisations (r=0.71, p<0.00), polio and DPT3 immunisations (r=0.91, p<0.00) and polio and measles immunisation (r=0.63, p<0.00). Figure 6 presents the combined rankings for the immunisation domain.

Figure 6

|		-3	-2.5	-2	-1.5	-1	-0.5	0	0.5	1	1.5
1	Hungary										
2	Slovak Republic										
3	Poland										
4	Czech Republic										
4	Latvia										
6	Denmark										
6	Netherlands										
8	Sweden										
9	Estonia										
10	Portugal										
11	Finland										
12	Lithuania										
13	Luxembourg										
14	Spain										
15	Cyprus										
16	France										
17	Malta										
18	Italy										
19	Slovenia										
20	Germany										
21	United Kingdom										
22	Belgium										
23	Greece										
24	Ireland										
25	Austria										

Health behaviour

Children's health behaviour has both short-term and long-term impacts on young

people's health and is also a predictor for health behaviour in adulthood (Currie 'et al'

2004; Astrom 2004). Positive health behaviour is thus important for children's well-

being and a crucial aspect of prevention. We have combined the following variables

from the HBSC 2001/02:

1. Young people who brush their teeth more than once a day.

2. Young people who eat fruit every day.

3. Young people who eat breakfast every school day.

4. Mean number of days when young people are physically active for one hour or

more of the previous/typical week.

5. Young people who are over weight according to BMI.

Figure 7 is the composite of the health behaviour domain. Overall Poland and the Netherlands have the best health behaviour and Malta, Finland and Greece the worst.
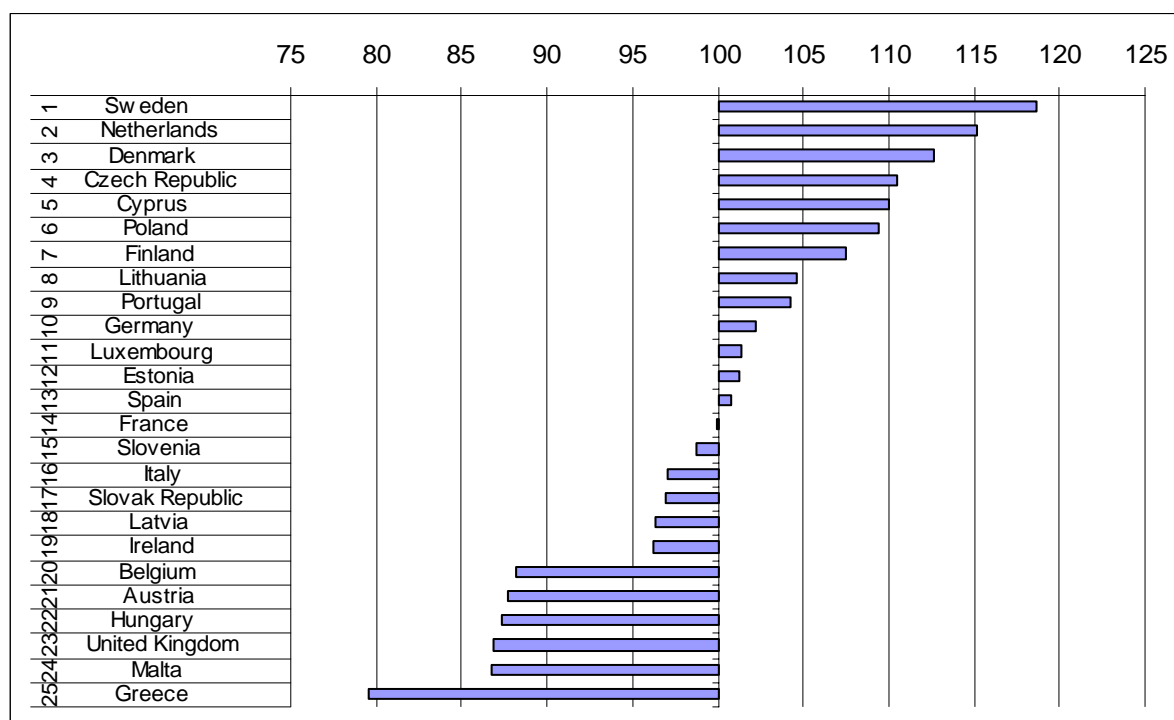
Figure 7
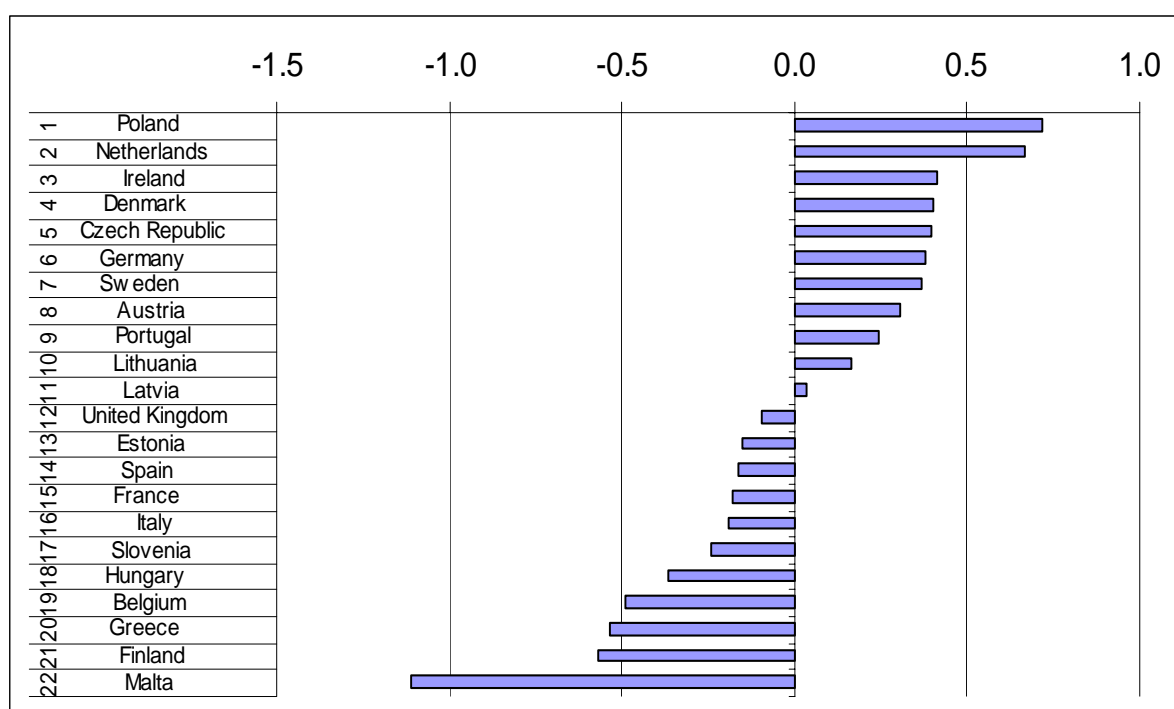
There are no associations between the three domains making up the health cluster. Figure 8 presents a final child health league table distributed around the mean of 100 (standard deviation of 10) for all countries. Sweden, the Netherlands, Denmark and the Czech Republic are at the top of the table and the United Kingdom, Malta and Greece have the worst child health.

Figure 8

Chart data (horizontal bar chart, scale 75 to 125):

#	Country
1	Sweden
2	Netherlands
3	Denmark
4	Czech Republic
5	Cyprus
6	Poland
7	Finland
8	Lithuania
9	Portugal
10	Germany
11	Luxembourg
12	Estonia
13	Spain
14	France
15	Slovenia
16	Italy
17	Slovak Republic
18	Latvia
19	Ireland
20	Belgium
21	Austria
22	Hungary
23	United Kingdom
24	Malta
25	Greece

Education

Three domains make up the education cluster.

- Educational attainment.

- Educational participation.

- Youth labour market outcomes from education.

Educational attainment

Children's educational attainments are indicators of both their well-being today and their future life chances. In many countries the educational chances of children are still linked to their social background (Peters and Mullis 1997; Lipman and Offord 1997). This domain includes data on reading literacy, mathematical literacy and

scientific literacy, all drawn from the OECD/PISA 2003 survey. Cyprus, Estonia, Lithuania, Malta and Slovenia are not in PISA and the UK data is unreliable because of low response rates.
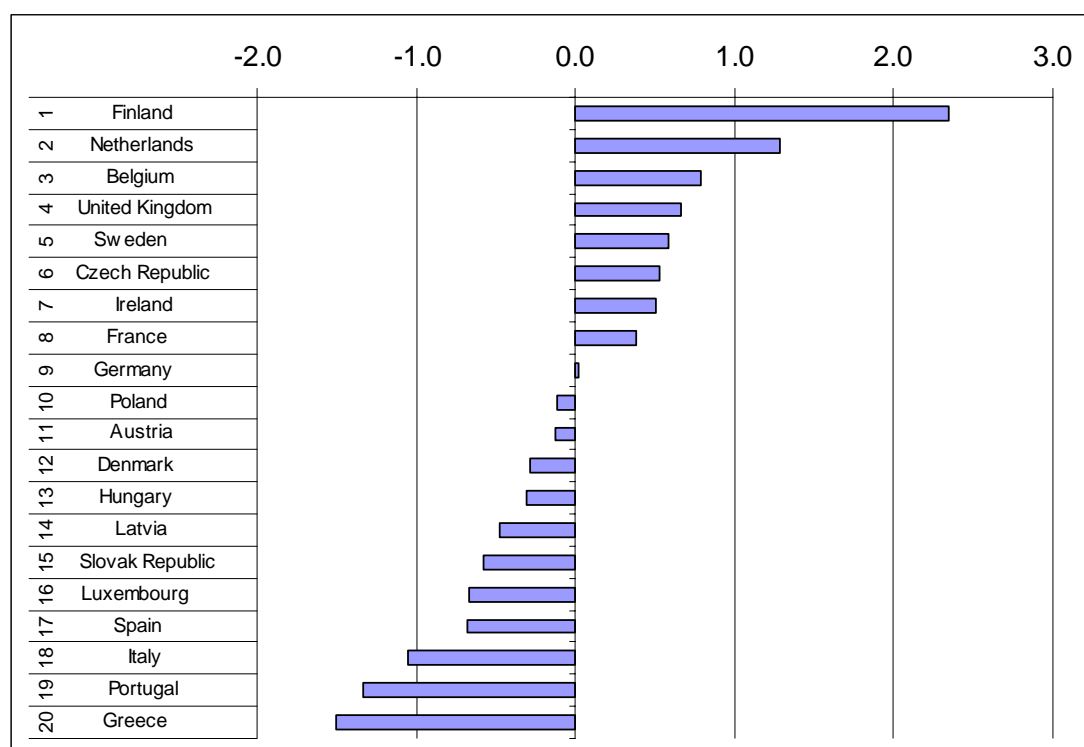
1. Reading literacy attainment: PISA scores are constructed on a points scale with an average of 500 across all students in all countries. Reading literacy scores range from 469 in the Slovak Republic to 543 in Finland.

2. Mathematics literacy attainment: Mathematic literacy scores vary from 445 in Greece to 544 in Finland.

3. Science literacy attainment: Science literacy is lowest in Portugal 468 and again highest in Finland 548.

There are strong positive associations (r=0.8, p<0.00 for all) between scores on these three attainment indicators. Figure 9 presents the standardised educational attainment composite showing that Finland has the highest overall educational attainment levels by some margin and the Southern EU countries have the lowest levels of educational attainment.

Figure 9

Chart showing values for countries ranked 1-20:

	Country	Value
1	Finland	~2.35
2	Netherlands	~1.3
3	Belgium	~0.8
4	United Kingdom	~0.65
5	Sweden	~0.55
6	Czech Republic	~0.5
7	Ireland	~0.5
8	France	~0.35
9	Germany	~0.0
10	Poland	~-0.1
11	Austria	~-0.15
12	Denmark	~-0.35
13	Hungary	~-0.4
14	Latvia	~-0.5
15	Slovak Republic	~-0.6
16	Luxembourg	~-0.7
17	Spain	~-0.7
18	Italy	~-1.0
19	Portugal	~-1.4
20	Greece	~-1.5

Educational participation

Children and young people's participation in education indicate their well-becoming rather than necessarily their well-being. While primary and secondary enrolment in school is compulsory and universal across the OECD there are considerable differences in participation in childcare/pre-school on the one hand and further education on the other hand. We use two indicators of educational participation.

1. Children aged 0-2 in registered childcare most recent year (OECD)

This OECD data (Immervoll and Barber 2005) is a somewhat limited indicator of preschool participation in childcare because it does not cover the provision of childcare and nursery education for the important pre statutory school entry years.

The participations rate varies from 65 per cent in Sweden to only one per cent in the Czech Republic.

2. Percentage of 15-19 year olds in education 2003 (OECD)

Participation in post-compulsory education is linked to better employment prospects and thus to higher incomes and lower rates of unemployment. There is also evidence for increased labour force participation (Bloendal 'et al' 2002). The proportion of full and part-time students in public and private (educational) institutions varies from 71 per cent in Portugal to 94 per cent in Belgium.

Figure 10 shows the league table of the standardised z scores for educational participation. Sweden, Denmark, and Belgium are at the top of the league and Luxembourg, Portugal, Italy and Spain are at the bottom.

Figure 10
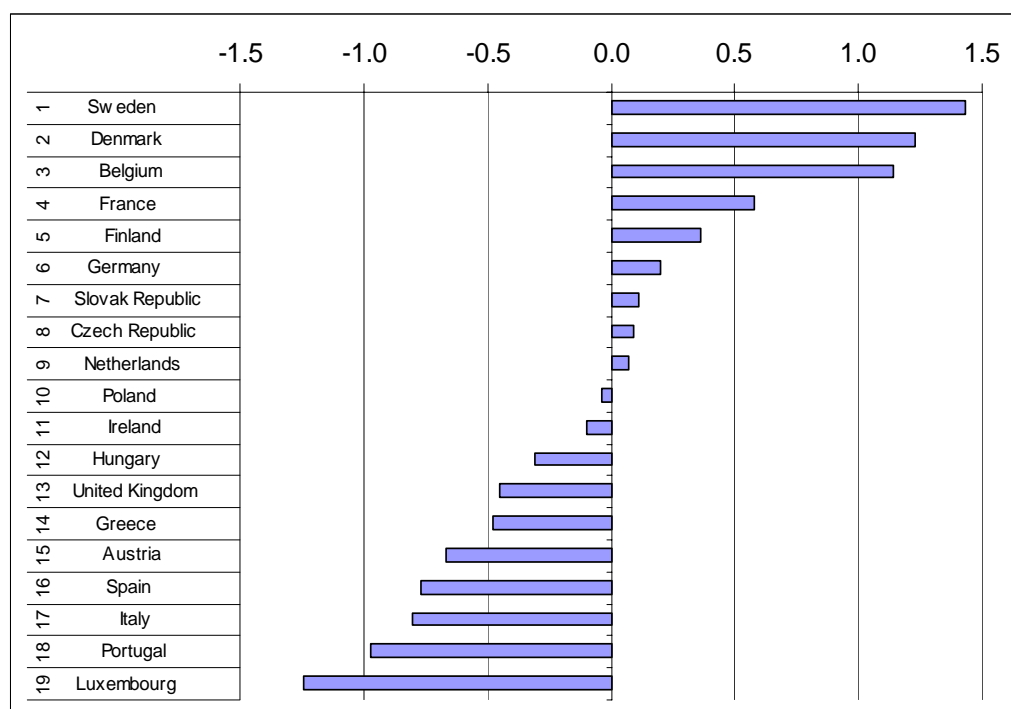
Youth labour market outcomes from education

Young people's chances on the labour market are crucial for their inclusion in society and their economic and social well-being. How well young people manage the transition from school to the labour market is much influenced by their educational attainments and qualifications but also by structural factors, i.e. the education, training and employment opportunities for young people. We have used two indicators of outcomes from education

1. Percentage of the youth population not in education and not employed aged 15-19 2003 (OECD)

The lowest rates of young people not in education or employment can be found in Denmark and Sweden. France has the highest proportions of 15-19 NEET levels by some margin.

2. Percentage of pupils aged 15 years aspiring to low skilled work 2000 (PISA)

The smallest proportion of young people aspiring to low skilled work is in Poland while France and the Czech Republic have the highest proportions.

There is no association between these two educational outcome measures. Figure 11 shows that when they are combined Poland and Denmark are at the top of the league table and Austria, the United Kingdom and France at the bottom – the latter by a long way.

Figure 11
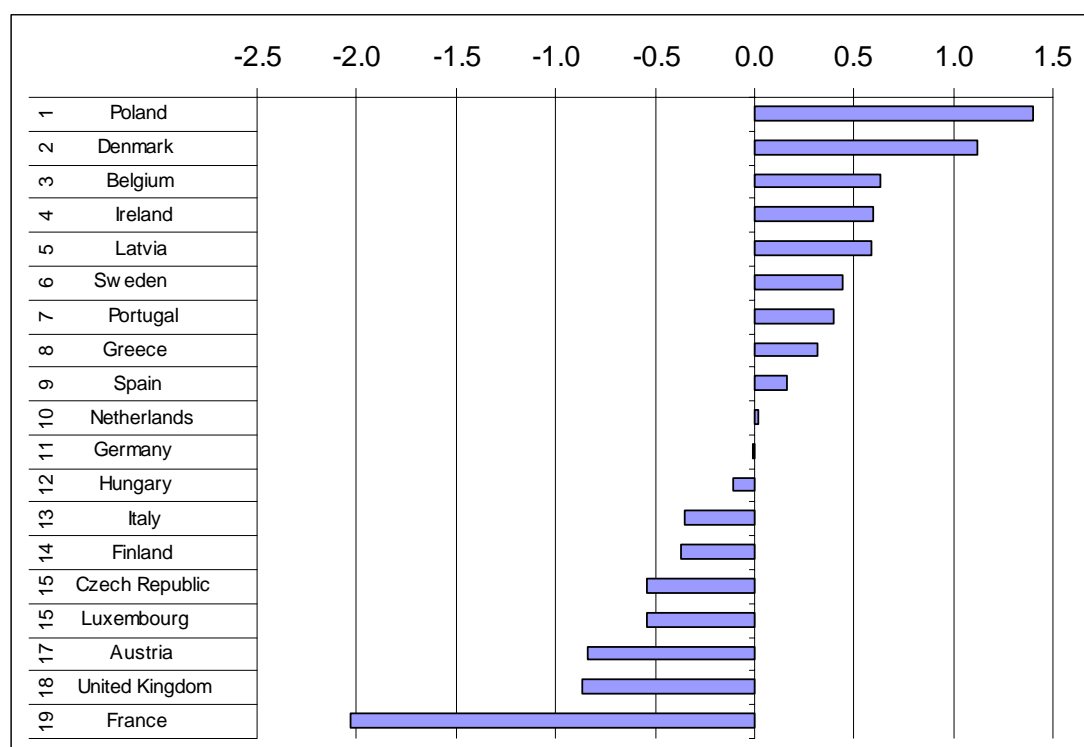
There is a significant correlation between educational attainment and educational participation (r=0.52, p<0.05) but education outcomes are not associated with the other domains. Figure 12 presents a final education league table distributed around the mean of 100 (standard deviation of 10) for all countries, Belgium, Sweden, Denmark and Finland do best on this cluster. Luxembourg, Italy Portugal and Austria do worst.

Figure 12
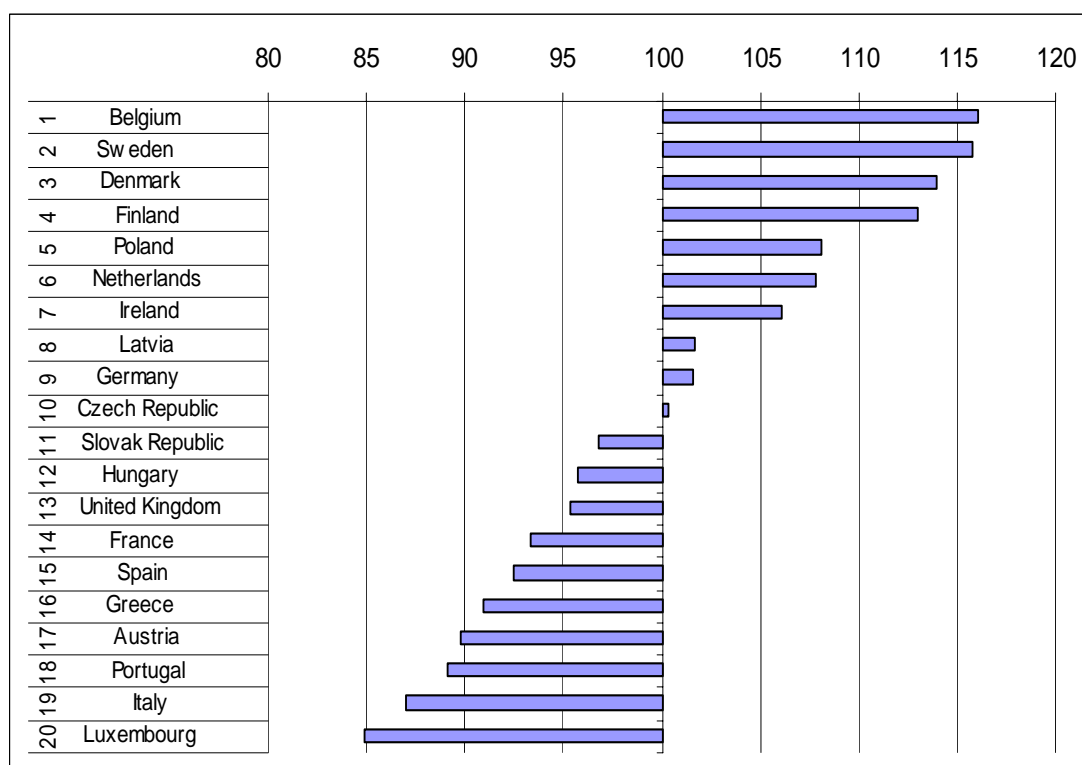
Housing and environment

Children's housing and environment is represented by three domains covering:

- Overcrowding.

- Local environment and space.

- Housing problems.

Overcrowding

1. Rooms per person in households with children 2003 (EQLS)

Poland, Hungary and Latvia have the most overcrowding and Belgium, Luxembourg

and the UK the least, the latter by some margin (see Figure 13).

Figure 13

		-2.0	-1.0	0.0	1.0	2.0	3.0	4.0
1	United Kingdom							
2	Belgium							
3	Luxembourg							
4	Denmark							
5	Netherlands							
6	Germany							
6	Ireland							
8	Sweden							
9	Malta							
10	France							
11	Cyprus							
12	Austria							
13	Spain							
14	Finland							
15	Portugal							
16	Italy							
17	Czech Republic							
18	Greece							
19	Slovak Republic							
20	Slovenia							
21	Estonia							
22	Lithuania							
23	Latvia							
24	Hungary							
25	Poland							
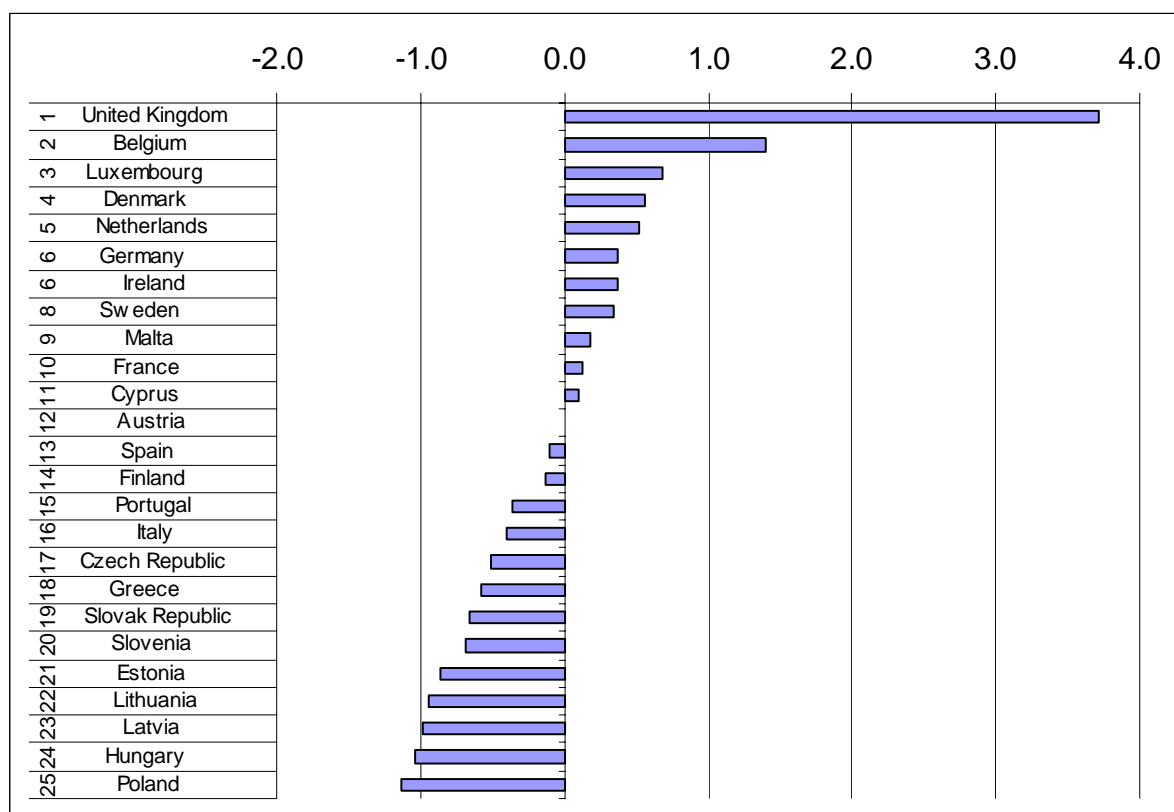
Quality of the local environment

This domain includes two variables from the EQLS:

1. Percentage of households with children that think it is unsafe or very unsafe to walk around in their area at nigh 2003t.

The proportions vary from 2.5 per cent in Austria to 60.4 per cent in Lithuania.

2. Percentage of households with children under 15 scoring six or more on a scale of physical environment problems 2003

The proportions vary from seven per cent in Denmark to 64 per cent in Italy.

There is a positive correlation between these tow variables (r=0.62, p<0.00)

Figure 14 is a summary league table of these two variables. Denmark and Sweden do best and Lithuania and Latvia do worst.

Figure 14

Chart showing values ranging from -2.5 to 2.0:
Denmark (1), Sweden (2), Finland (3), Austria (4), Netherlands (5), Belgium (6), Slovenia (7), Germany (8), Ireland (9), Luxembourg (10), Poland (11), Cyprus (12), France (13), United Kingdom (14), Spain (15), Czech Republic (16), Hungary (17), Greece (18), Slovak Republic (19), Malta (20), Portugal (21), Estonia (22), Italy (23), Latvia (24), Lithuania (25)
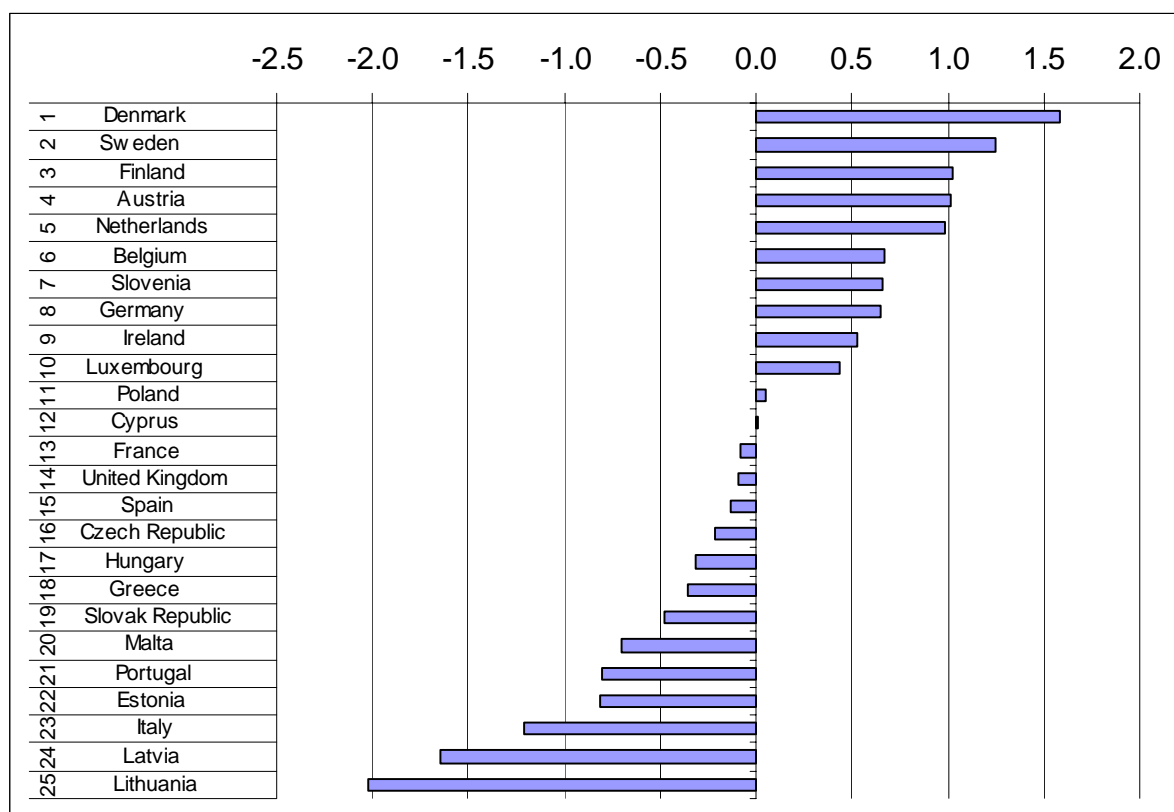
Housing problems

1. Percentage of households with children under 15 reporting at least two housing problems 2003

The housing problems recorded in the EQLS are shortage of space, rot in windows, floors or doors, damp/leaks, and lack of an indoor flushing toilet. The proportion ranges from nil per cent in Luxembourg and Malta to 41 per cent in Latvia and 44 per scent in Estonia. Figure 15 presents the ranking of countries.

Figure 15
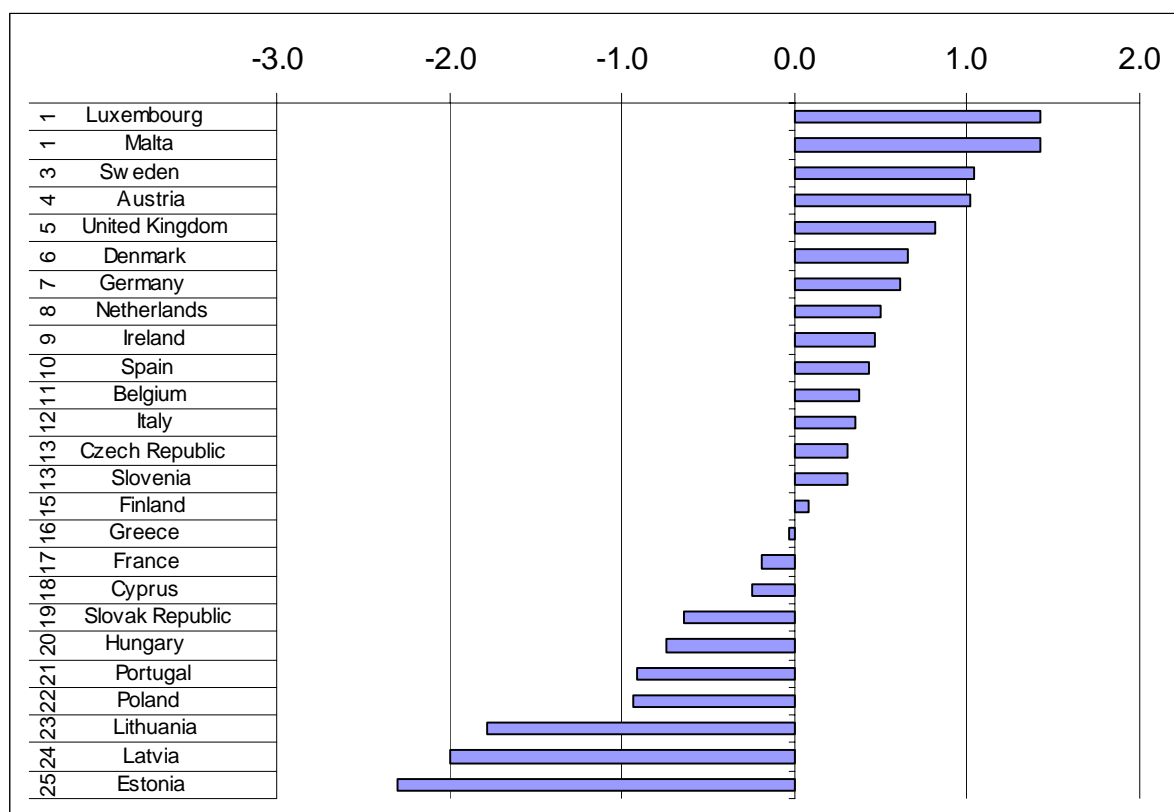
All the three housing and environment domains are positively correlated. However the coefficient between overcrowding and quality of the environment is not statistically significant.

Figure 16 presents a final Housing and Environment league table distributed around the mean of 100 (standard deviation of 10) for all countries. The UK, Denmark and Sweden do best on this cluster and Estonia, Latvia and Lithuania do worst.

Figure 16
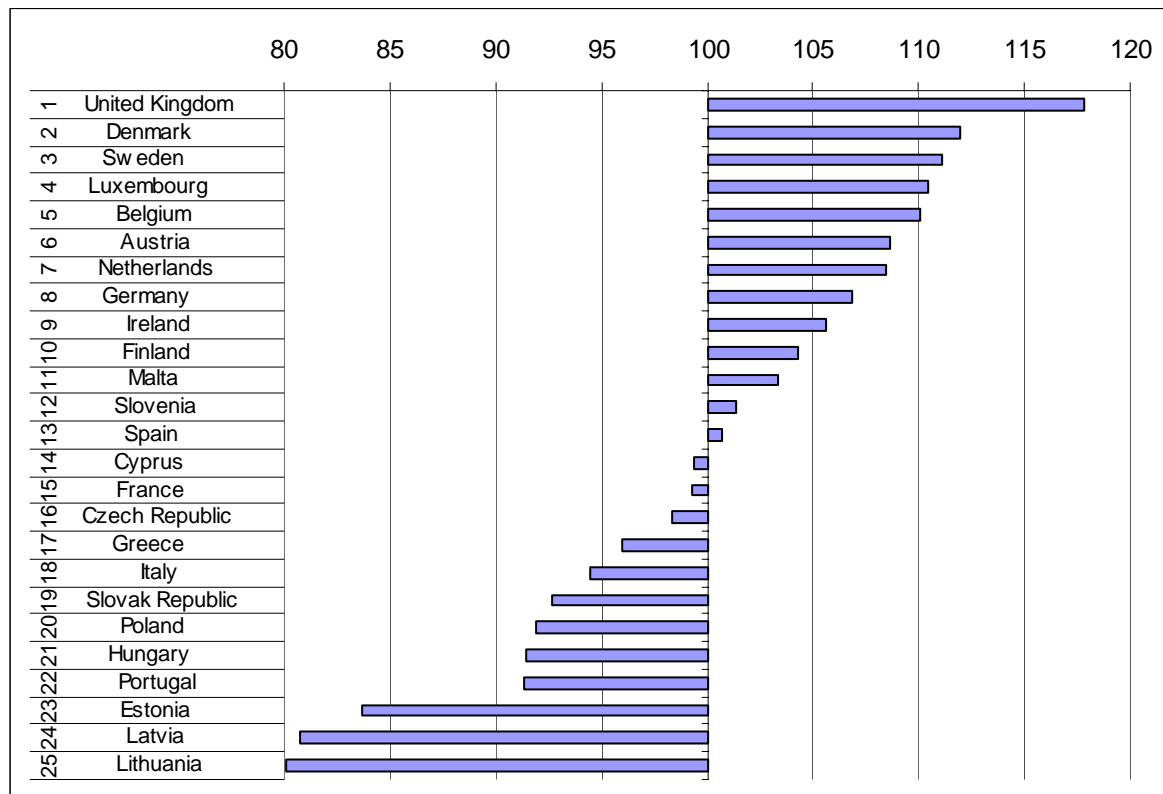
Children's relationships

This cluster is made up of three domains

- Family structure.

- Relationships with parents.

- Relationships with peers.

Family structure

Changes in family structure indicate major events in the life of children and their

parents that require adjustments in the organisation of family life and relationships

and are as such a risk factor for children's well-being (Dumont and Provost 1999).

However, there is substantial evidence that children in single parent as well as in step families tend to have worse outcomes than peers living with both biological parents (Kamerman 'et al' 2003; Rodgers and Pryor 1998).

1. Single parent families 2001/02 (HBSC): Between five per cent and 18 per cent of young people live in single parent families. This family form is rarest in Malta and Greece and most prevalent in Latvia and Estonia.

2. Step families 2001/02 (HBSC): Step family rates range from 1.5 per cent to 14.5 per cent with Greece and Malta again at the lower end of the league and the UK and Denmark with the highest rates.

There is a strong positive correlation between the two variables ($r=0.80$, $p<0.00$). Figure 17 presents the combined ranking for this domain.

Figure 17

		-2	-1.5	-1	-0.5	0	0.5	1	1.5	2
1	Malta									
2	Greece									
3	Spain									
4	Italy									
5	Slovenia									
6	Poland									
7	Ireland									
8	Portugal									
9	Netherlands									
10	Belgium									
11	Austria									
12	Lithuania									
13	France									
14	Hungary									
15	Germany									
16	Czech Republic									
17	Finland									
18	Estonia									
19	Latvia									
20	Sweden									
21	Denmark									
22	United Kingdom									
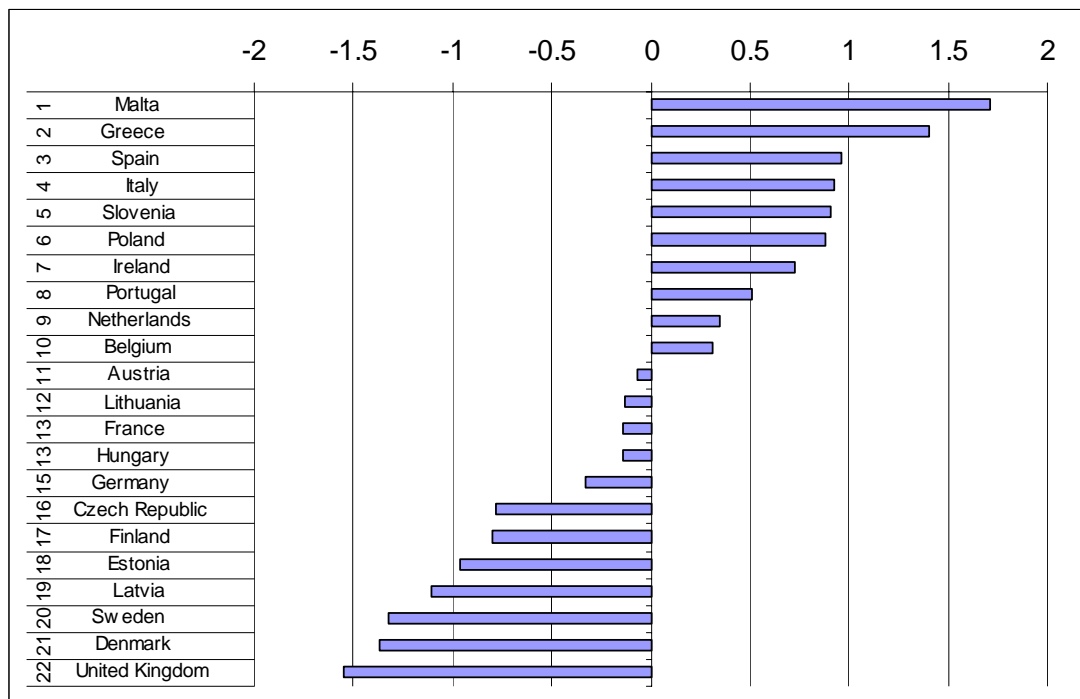
Relationship with parents

The family constitutes the most important mediating factor for children's well-being. An analysis of BHPS youth data found a significant association between the quality of parent-child relationships and young people's subjective well-being (Quilgars 'et al' 2005). Orthner and Jones-Saupei (2003) point to the importance of good family communication for getting children into activities and educational opportunities 'that will help them succeed'. Qualitative research shows that poor adolescents who have a trusting and supportive relationship to at least one parent are better able to deal with problems (Hoelscher 2003).

There is very little comparative data on the quality of children's relationship with their parents available. Therefore we use proxy indicators focusing on time parents and children spend together eating and talking. While spending time just talking points to

the quality of interaction between children and their parents, eating meals together is a ritual that strengthens family bonds and offers room for communication (Tubbs 'et al' 2005; Compan 'et al' 2002).

1. Family meals around a table several times a week 2000 (PISA): With a rate of 60 per cent young people in Finland are least likely and those in Italy with 94 per cent most likely to eat their main meal with their parents.

2. Just talking with parents several times a week 2000 (PISA): Data range from 43 per cent to 90 per cent with the lowest rates in Germany and Luxembourg and the highest in Hungary and Italy.

There is no association between the variables. Figure 18 presents the combined ranking. Italy appears to have the best relationships with parents by some margin. Austria has the worst.

Figure 18
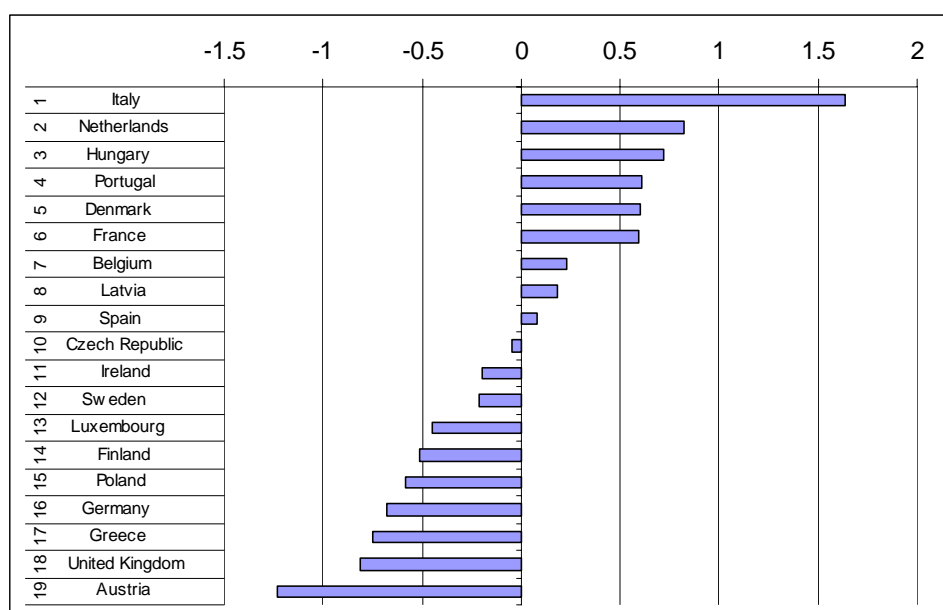
Relationship with peers

According to an Irish project on child well-being children see friends next to the family as the most important factors for their well-being (Hanafin and Brooks 2005). In fact friendship, the possibility to spend time with friends, to have fun and share problems is of high significance in children's lives. A 'best friend' is often the only person with whom children talk about difficulties they have with their family or friends while being part of a wider group of peers strengthens feelings of belonging. Children are at risk of exclusion from their peer group if they stand out in one way or the other. This can be due to personal characteristics of the child (e.g. appearance, having a disability of belonging to a minority), poverty or a high level of psychosocial stress. Against this background are children's relationships with their peers, as well as their wider social networks, crucial for their psychosocial development (Hay 'et al' 2004).

Reliable comparative data on the quality of children's peer relationships is however scarce. We include an indicator on children's perception of peers as kind and helpful. Though this indicator does not give information on children's social networks or their friends and activities it is an indicator for feeling accepted by peers and being engaged in meaningful interaction.

1. Young people finding their peers kind and helpful 2001/02 (HBSC): 80 per cent of children in Portugal think their peers are kind and supportive while the same is true for only 43 per cent in the UK and the Czech Republic. The z scores are presented in Figure 19.

Figure 19
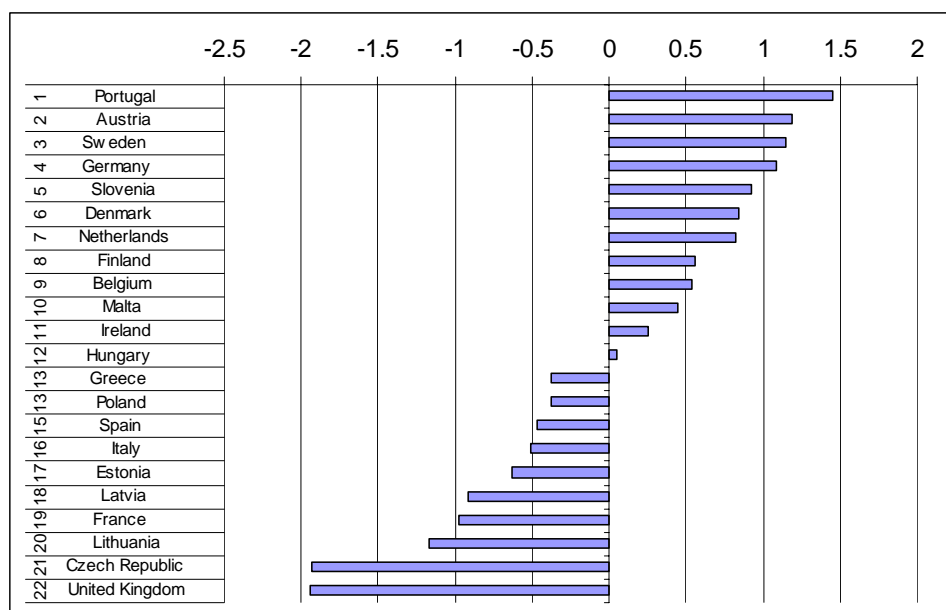
There are no associations between the three domains in this cluster. Figure 20
presents the league table for children's relationships. Children do best in Malta,
Portugal, Slovenia and Italy and by some margin worst in the UK, followed by the
Czech Republic and Estonia.

Figure 20
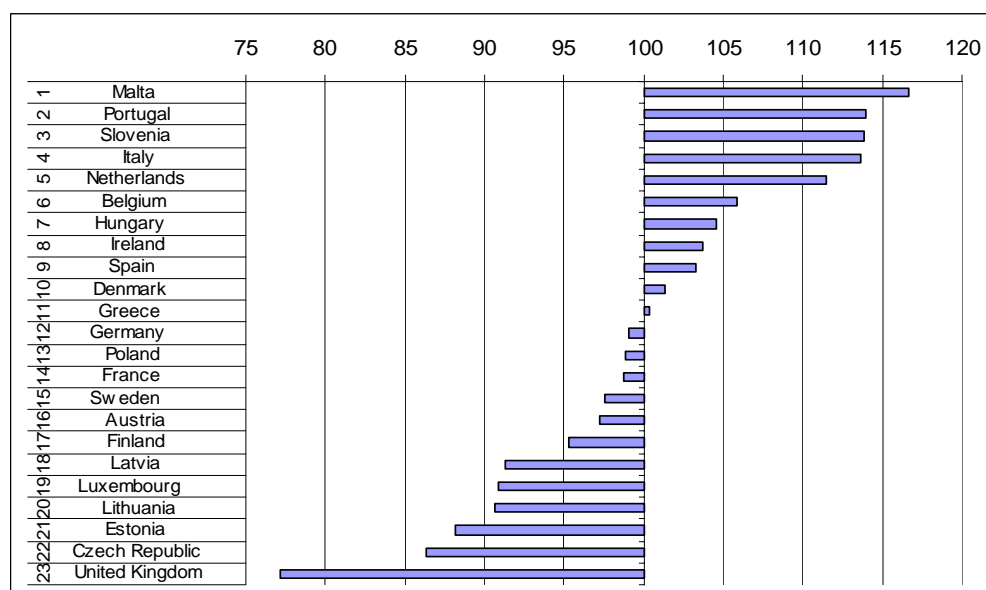
Children's subjective well-being

Children's subjective well-being is represented by three domains:

- Self-defined health.
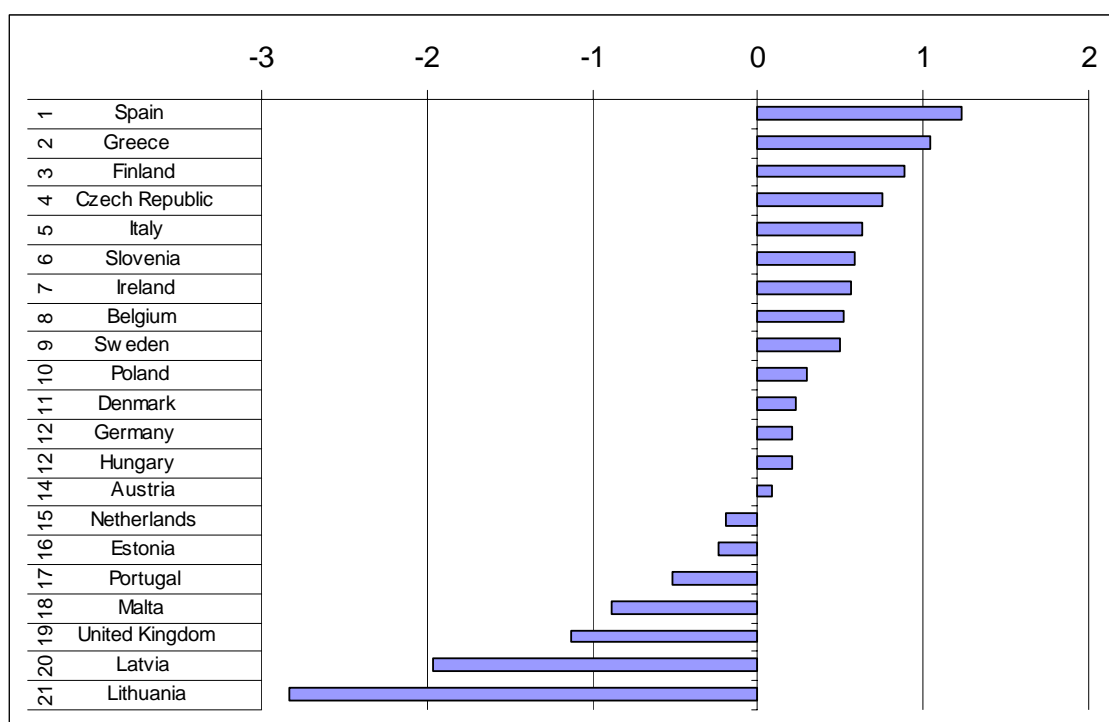
- Personal well-being.

- Well-being at school.

Self-defined health

Young people's perceptions of their own health are associated with a number of factors. The HBSC survey found that young people who reported low family affluence and those who lived in lone parent and step-families perceived themselves as less healthy. Subjective health was also linked to the quality of family relations (ease of communication with mothers and fathers) and a positive school environment (Currie 'et al' 2004).

1. Young people (11-15) rating their health as fair or poor 2001/02 (HBSC): The percentage of children with low subjective health ranges from ten per cent or less in Spain and Greece to 27 per cent in Latvia and even 32 per cent in Lithuania.

Figure 21 presents the z-scores for children's self-defined health in the EU

Figure 21

		-3	-2	-1	0	1	2
1	Spain						
2	Greece						
3	Finland						
4	Czech Republic						
5	Italy						
6	Slovenia						
7	Ireland						
8	Belgium						
9	Sweden						
10	Poland						
11	Denmark						
12	Germany						
12	Hungary						
14	Austria						
15	Netherlands						
16	Estonia						
17	Portugal						
18	Malta						
19	United Kingdom						
20	Latvia						
21	Lithuania						

Personal well-being

Children's perceptions of themselves and their peers determine the social

experiences they have with their peers and through that their future perceptions.

Negative self-perceptions are associated with feelings of depression and

hopelessness and less assertive styles of interaction so that children may become an

easy target for bullying (Salmivalli and Isaacs 2005). In a similar way feelings of

loneliness are mediated by the duration and quality of best friendships, acceptance

by peers, friendships and experiences of victimisation (Asher and Paquett 2003). We

have combined four variables:

1. Young people above the middle of the life satisfaction scale 2001/02: This

indicator captures how children feel overall about their lives, based on a rating from 1

to 10. Children in the Baltics report the lowest life satisfaction with values around 75

per cent. Children in Finland, Greece and the Netherlands are most satisfied with their life, with values between 92 per cent and 94 per cent.

2. Young people feeling like an outsider or left out of things 2003: Data ranges from three per cent in Spain to ten per cent in the Czech Republic.

3. Young people feeling awkward and out of place 2003: While only five per cent of children in Sweden feel this way, more than 15 per cent in Belgium do.

4. Young people feeling lonely 2003: Data ranges from three per cent in the Netherlands to nine per cent in Latvia.

There is a negative correlation between young people feeling lonely and young people with high life satisfaction (r=-0.58, p<0.05) and a positive correlation between loneliness and feeling like an outsider (r=0.53, p<0.05). Figure 22 presents the combined ranking for personal well-being.

Figure 22
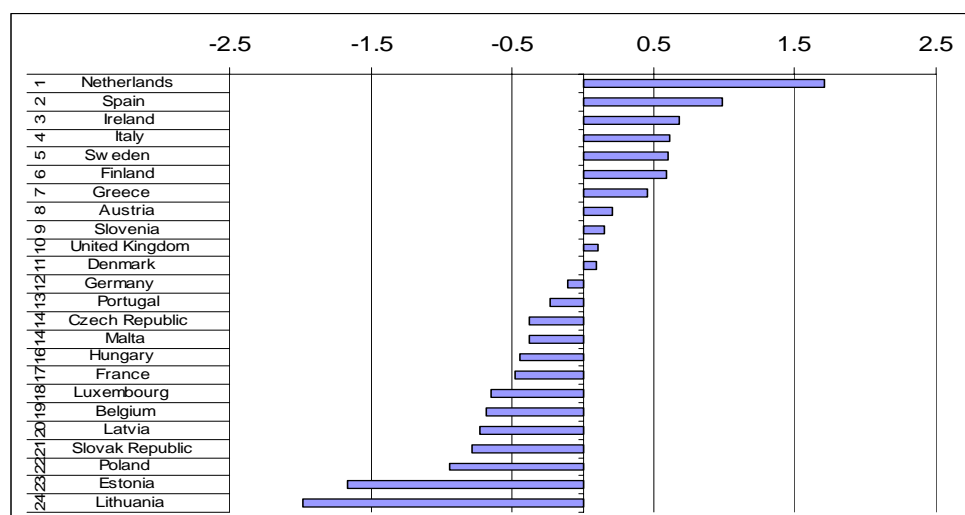
Well-being at school

Children spend a great part of their day at school. How they feel about school is therefore an important aspect of their well-being. A positive school environment that is characterised by a socially inclusive school climate, supportive peers and good academic achievements with a low level of stress, can increase young people's sense of success and competence. This self-confidence in turn increases children's health and well-being which again strengthens the likelihood that they will continue to manage well at school (Currie 'et al' 2004).

We use two HBSC variables to represent this domain:

1. Young people feeling pressured by schoolwork 2001/02: While relatively few children in the Netherlands (13 per cent) and Austria (20 per cent) feel pressured by schoolwork, 59 per cent in Lithuania and 61 per cent in Malta report this kind of stress.

2. Young people liking school a lot 2001/02: Data ranges from eight per cent to 36 per cent. Children in Austria, the Netherlands and Malta like school best, whereas few children in Finland, Estonia and the Czech Republic state that they like school.

There is no correlation between these variables. Figure 23 presents the combined ranking for this domain.

Figure 23
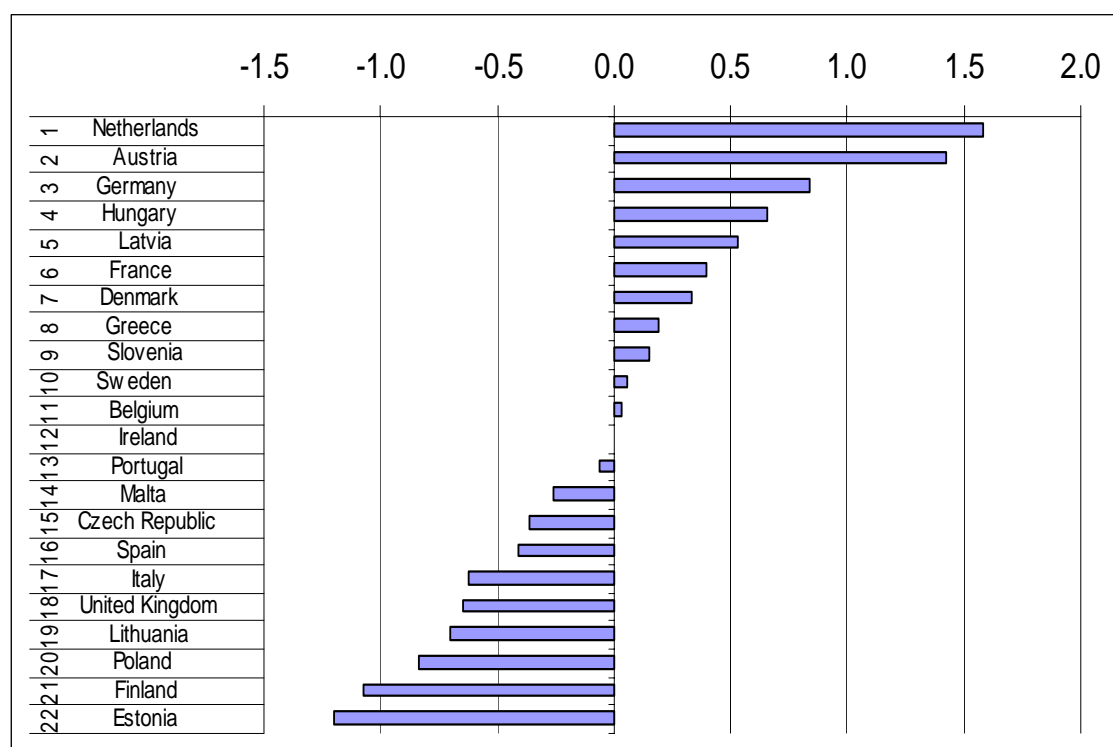
There is a positive correlation between children's self-defined health and children's personal well-being (r=0.57, p<0.00). Correlations between the other domains are not significant. Figure 24 presents the overall ranking of z-scores for this cluster. Children in the Netherlands do best by some margin, followed by Austria, Spain and Greece. At the bottom of the table are Lithuania and Estonia.

Figure 24
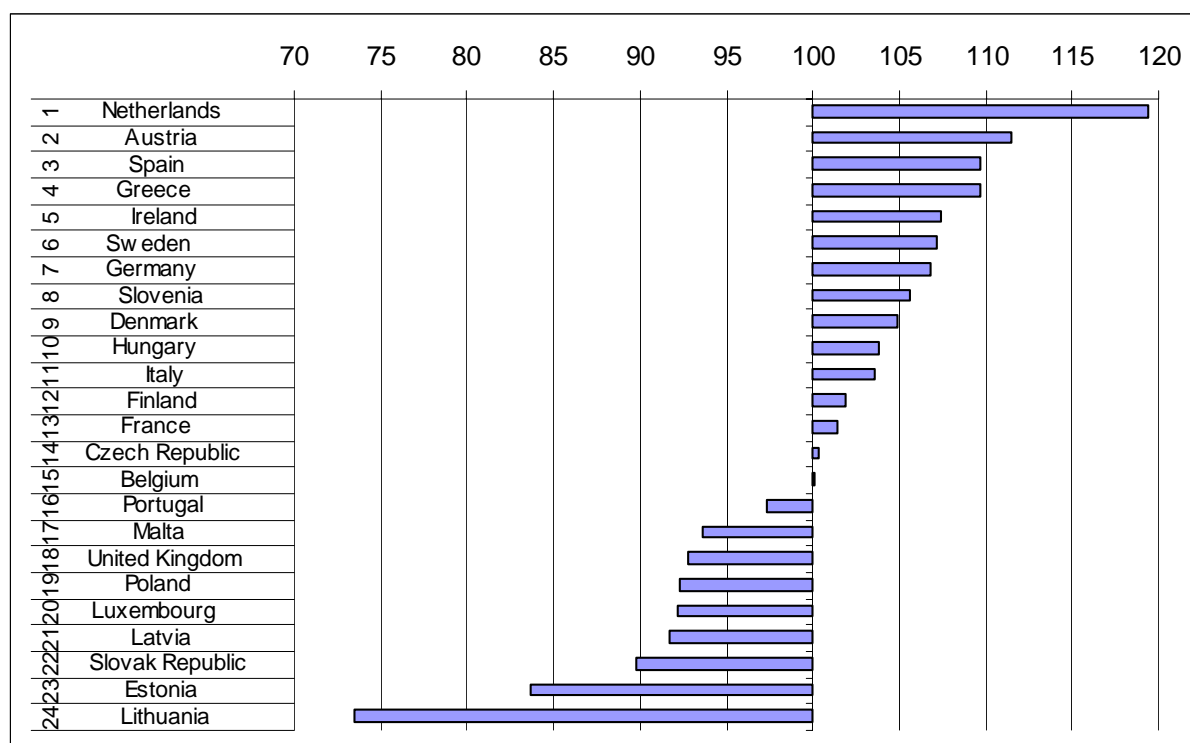
Risk and safety

This cluster includes three domains covering:

- Child mortality.

- Risky behaviour.

- Experiences of violence.

Child mortality

Child deaths are the most basic indicator for children's safety. Children's accidental

deaths, murder and suicide are rare events but for every child that dies many other

children survive accidents and violence. Children's death rates are thus both an

indicator for the most severe violation of children's rights and a proxy for the safety of children. We combined data from the WHO Mortality Database for all kinds of accidental deaths, murder, suicide and deaths with undetermined cause into one variable. As case numbers are still very low the reliability of the data might be a problem. To make data more reliable we used averages of the three most recent available years.

1. Accidental and non-accidental deaths under 19 per 100,000 most recent data: Child mortality rates range from seven per cent to 43 per cent. Malta, Sweden, the United Kingdom and the Netherlands have child mortality rates below ten per cent, and children are most vulnerable in the Baltic states with mortality rates between 32 per cent and 43 per cent. Figure 25 presents the z-scores for this variable.

Figure 25
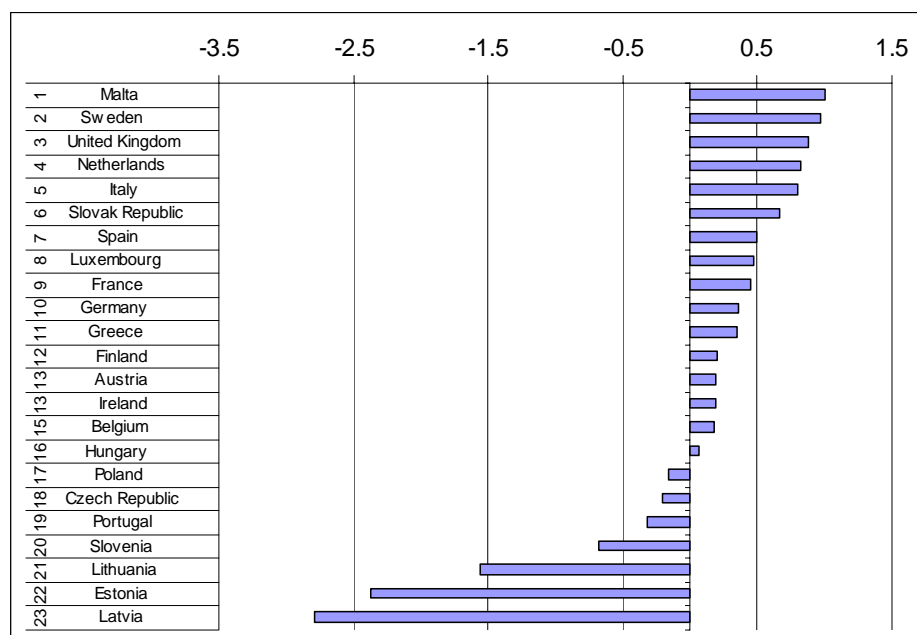
Risky behaviour

Adolescence is a time in development in which risk behaviour is very common and young people often engage in it hoping for some positive gains like acceptance in their peer group. In this they tend to underestimate the risks they take. While the impact of tobacco, alcohol and drugs on young people's health are evident, experimenting with these substances or taking up regular use during adolescence has to be seen in the context of young people's development, their peer relations and coping strategies. Young people who want to belong to a group of peers try to conform to the behaviour they perceive as normative. Alcohol and tobacco in this context are also used to create a sense of togetherness within the peer group, for example by sharing cigarettes (Stewart-Knox 'et al' 2005; Conwell 'et al' 2003). Young people who do engage in risk behaviour often do so in more than one way, e.g. they consume alcohol and have unprotected sex. Research also shows that risk behaviour is influenced by stress experiences that young people can't manage successfully with positive coping strategies (Klein-Hessling 'et al' 2005; Essau 2004).

Sexual intercourse at a young age is likely to be unplanned and therefore unprotected (Currie 'et al' 2004). Qualitative research with Swedish teenage girls shows that many were underestimating the risks of unprotected sex, unsure about the use of contraceptives and sometimes embarrassment and carelessness prevented discussions about the use of condoms with their partner. This was particularly true for casual sex and under the influence of alcohol (Ekstrand 'et al' 2005). We therefore include an indicator on the percentage of 15-year-olds who already had sexual intercourse as well as an indicator on the use of condoms during

the last intercourse. The number of teenage pregnancies is our third indicator on sexual behaviour.

We have combined the following variables:

1. Cigarette smoking: Lifetime use 40 times or more (ESPAD) for 2003.

2. Drunkenness: Lifetime 20 times or more (ESPAD).

3. Cannabis: Experience of use in lifetime (ESPAD).

4. Inhalants: Experience of use in lifetime (ESPAD).

5. Teenage pregnancy rate (WDI) for 2003.

6. 15 year-olds who have had sexual intercourse 2001/02 (HBSC).

7. Young people who used condoms during their last sexual intercourse 2001/02(HBSC).

Figure 26 is a composite of all variables of the risky behaviour domain. There are hardly any significant associations between the variables. However, there is a negative correlation between the proportion of young people who had sexual intercourse and condom use.

Figure 26
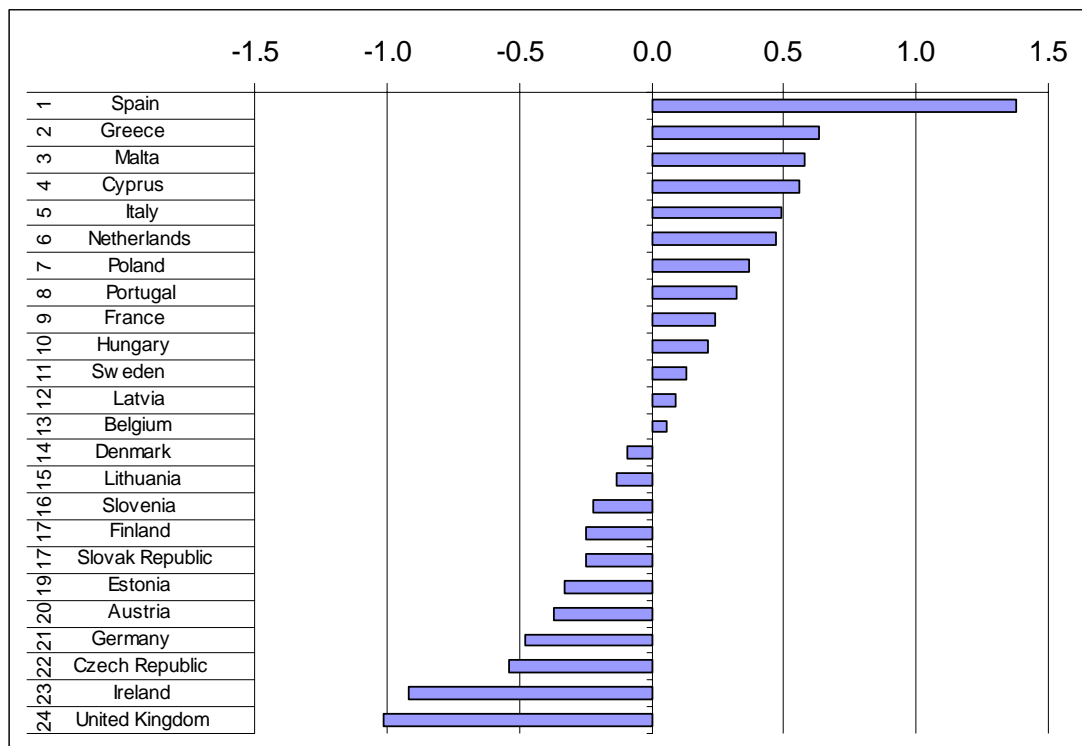
Experience of violence

Bullying and fighting are different facets of violence among children and young people. The boundaries are not always clear though. Verbal and physical violence can mix and children can be either victims or aggressors or both. Experiences of peer violence are associated with a range of negative outcomes. In the short term victimised children tend to experience higher levels of social anxiety and depressive symptoms, they tend to feel lonely and have lower self-esteem. These symptoms and particularly anxiety at the same time make children more vulnerable to bullying and can reinforce the bullies' behaviour so that children may get caught up in a cycle of victimisation (Craig 1998). Victimised children are at risk of being victimised in later life as well. In the same way is bullying in childhood associated with antisocial behaviour in adulthood and difficulties in maintaining stable social relationships and long-term employment (Currie 'et al' 2004).

1. Young people involved in physical fighting in previous 12 months (HBSC) 2001/02: Between 25 per cent and 49 per cent of young people have been involved in physical fighting. Only Finland and Germany have rates below 30 per cent, whereas more than 47 per cent of young people in Estonia, the Czech Republic, Hungary and Lithuania had fights.

2. Young people who were bullied at least once in previous 12 months (HBSC)2001/02: 15 per cent of children in Sweden and 16 per cent in Czech Republic experience bullying. The by far highest rates of bullying are with 64 per cent in Lithuania, followed by Portugal and Latvia with around 48 per cent.

The variables are not significantly correlated. Figure 27 presents the composite ranking.

Figure 27
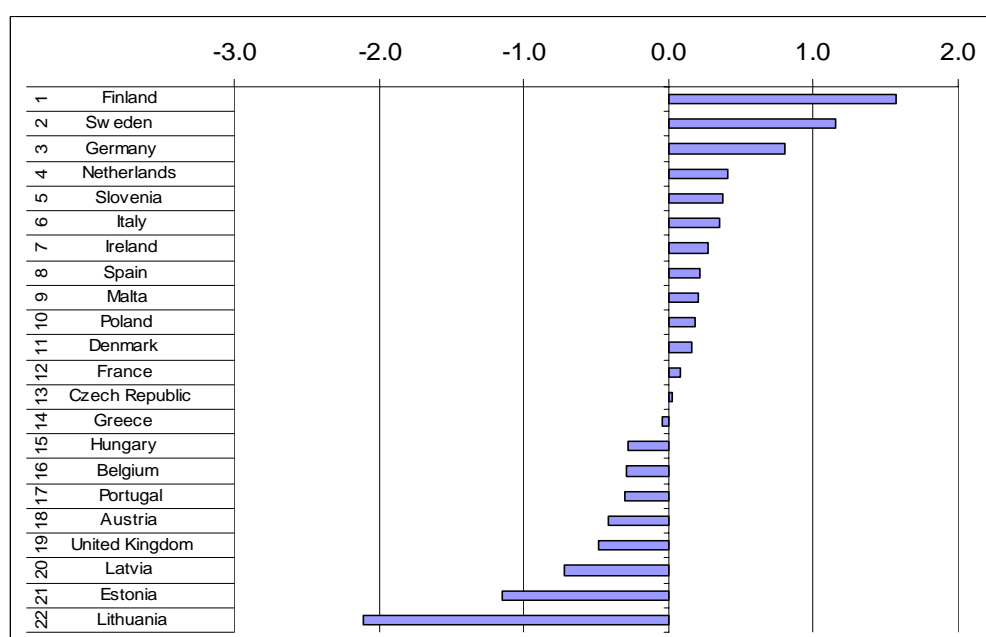
The domains 'child mortality' and 'experience of violence' are positively correlated (r=0.62, p<0.00), while there is no association between risk behaviour and the other domains. Figure 28 presents the overall league table for this cluster. Spain, Cyprus and Sweden are at the top of the league, while the Baltic states are at the bottom, doing much worse than the other countries.

Figure 28
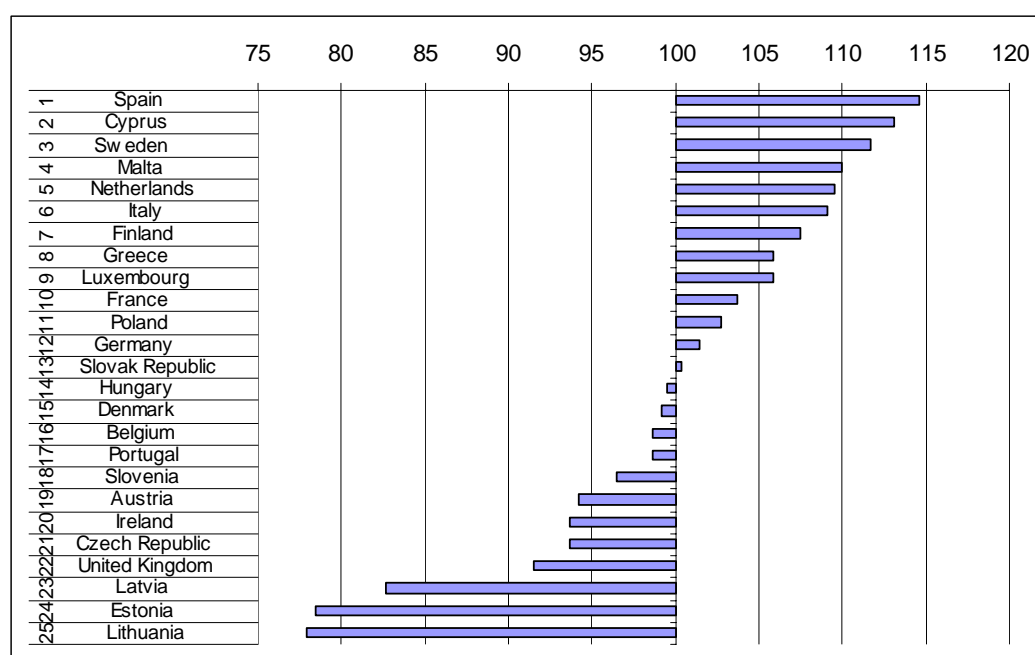
Civic participation

Children's civic participation is represented by two domains covering:

- Participation in civic activities.

- Political interest.

The extent to which children gain interest in politics and have the opportunity for civic participation at school or in their community depends much on how much this is encouraged and supported by their environment. Information on young people's political interest and civic participation give insight into the way young people are prepared to take over their role as citizens in democratic societies. It is noteworthy that approaches to improve living conditions and child well-being in deprived communities increasingly are organised in a community-based, participatory way, actively involving children and their families. For children and young people civic participation is beneficial as they acquire new skills and knowledge, they learn how to access information and develop critical thinking capabilities. The experience of participation also teaches them to cooperate and to communicate with peers as well as with adults and to build up new networks and relationships. Being able to express themselves, to be listened to and be taken seriously furthermore strengthens children's confidence and self-esteem (Williams 2004; Lansdown 2001). Data for civic participation indicators are derived from the Civic Education Study (IEA/CIVED, 2005, for further information on CIVED content and survey methods see Schulz and Sibberns, 2004).

1. Young people's participation in two or more civic activities 1999 (CIVED): This indicator represents the percentage of students that have been involved in two or more of the following civic activities: student council, youth organization, environmental organisation, human rights organisation, charity/collecting money. Data ranges from two per cent to 53 per cent. Young people in the Slovak Republic and Italy are least likely to participate in at least two civic activities, while around 50 per cent of young people in Greece and Cyprus are involved in this kind of activities.

1. Young people reporting political interest above the median score 1999 (CIVED):
This indicator captures the percentage of students that score above the median (4) on a summary scale of items on political interest (0 to 7). Students can score a single point for responses on the following items: agree or strongly agree with 'I am interested in politics', sometimes or often reads newspaper articles about own country, sometimes or often watches news items about own country, sometimes or often listens to radio news about own country, expect or will probably vote in national elections, expect or will probably take part in non violent marches, expect or will probably collect signatures for a petition. Across the EU young people's political interest differs widely between 21 per cent and 70 per cent. The lowest political interest can be found in Finland, Sweden and the Czech Republic, while young people in Cyprus, Poland and Hungary are most interested in politics.

The association between civic participation and political interest is r=0.46 but below significance level. Figure 29 shows the overall composite for this cluster. Civic participation is strongest by some margin in Cyprus and Greece while Finland and the Czech Republic are at the bottom of the table.

Figure 29
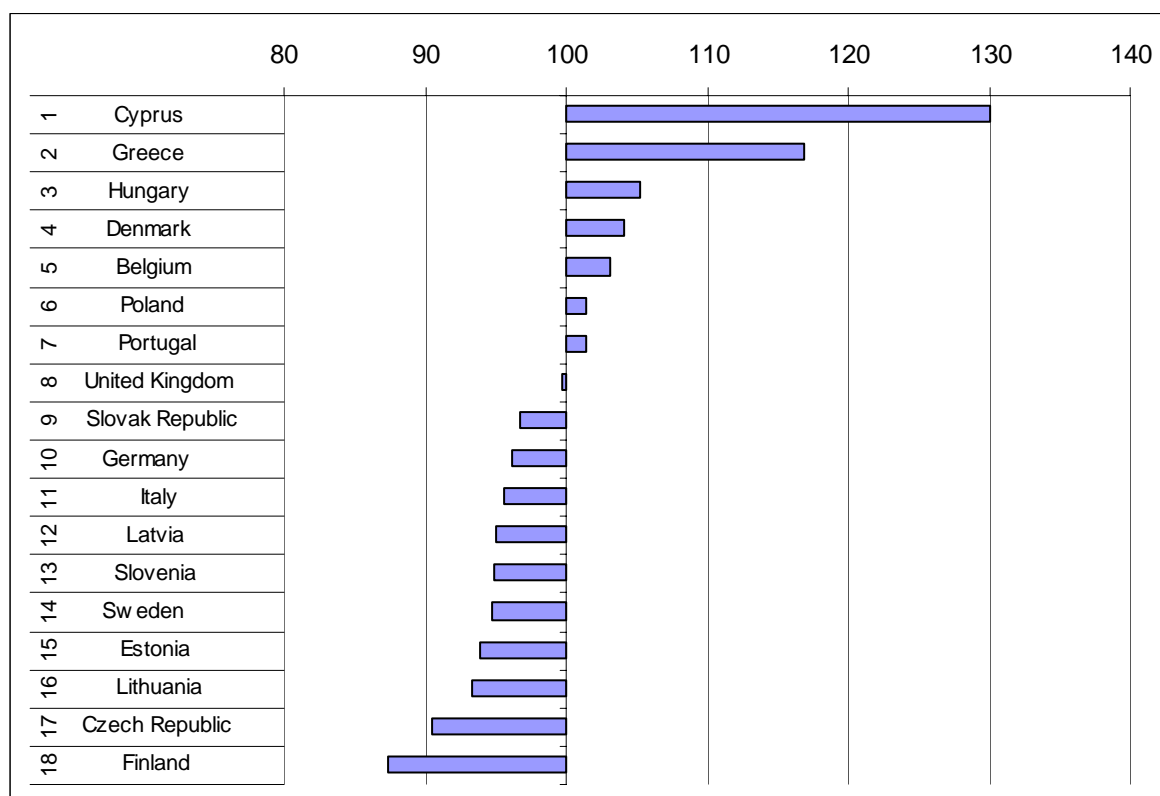
Concluding discussion

We have employed 51 variables in this index of child well-being and we have
structured them into 23 domains and the domains have formed eight clusters.
Domains are the essence of our conception of child well-being and we believe that
the average of domains is the best for representing overall child well-being. So in
Figure 30 we take the average z scores of the 23 domains. Cyprus, the Netherlands,
Sweden and Denmark are at the top of the league table of child well-being. The
Slovak Republic, Latvia, Estonia and Lithuania are at the bottom of the league table
of child well-being.

Figure 30
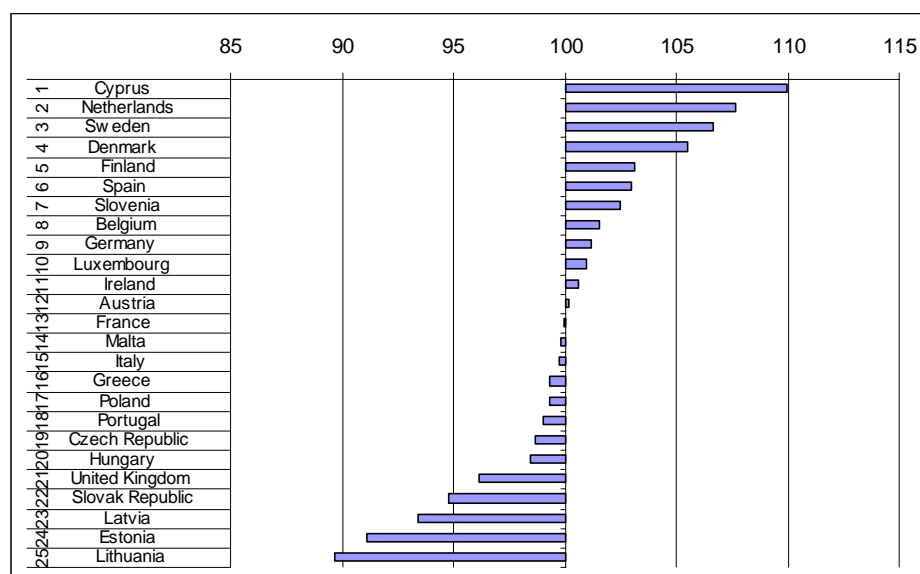
Figure 31 presents the same summary of domains but leaving out the four countries with over 30 per cent of missing data. This we think is the most authoritative summary league table. There is some relationship between the ranking of child well-being and the general level of wealth of a country however this does not explain the presence of Spain and Slovenia in the top third of the figure, or the presence of the United Kingdom towards the bottom of the league table. This and other possible explanations for these rankings need further research but on the face of it there does not appear to be an association between overall child well-being and the national prevalence of post modern family forms. Further investigation may well find that social policy effort such as expenditure on children as a proportion of public expenditure explains some of the variation.

Figure 31
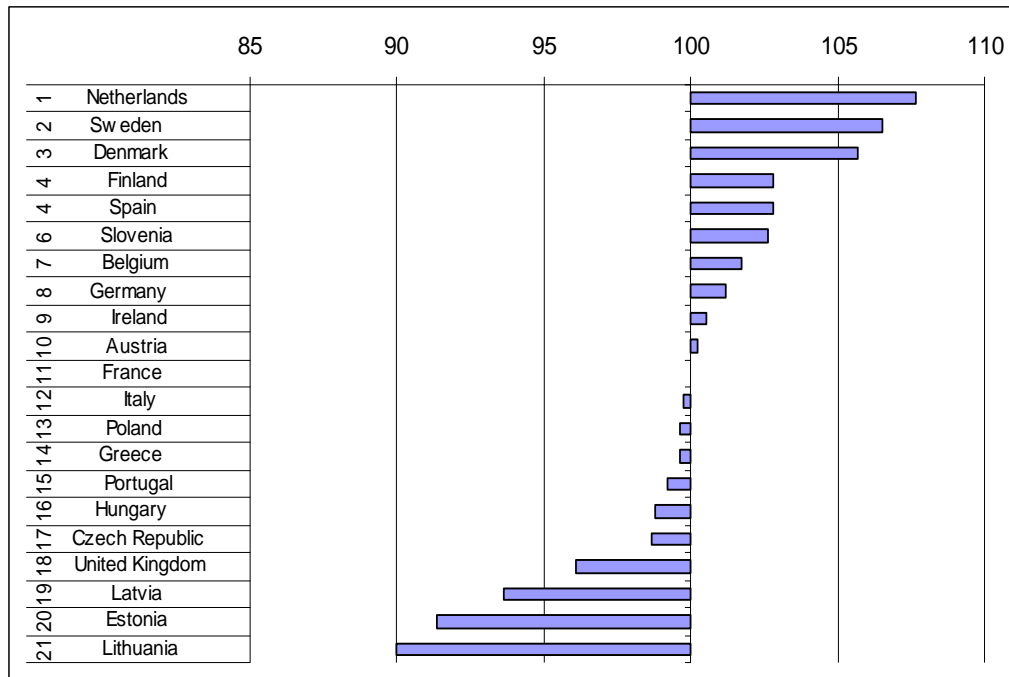
How sensitive are these rankings to the methods we have employed for summarising the data. We explore this first by comparing movements of countries in the league tables across ranks based on clusters and domains. We do this only for the countries passing the 70 per cent test. There is relatively little reranking between the average of z scores for clusters and for domains in Figure 32. Greece moves down four places, Poland up one, Finland up two and Slovenia down two.
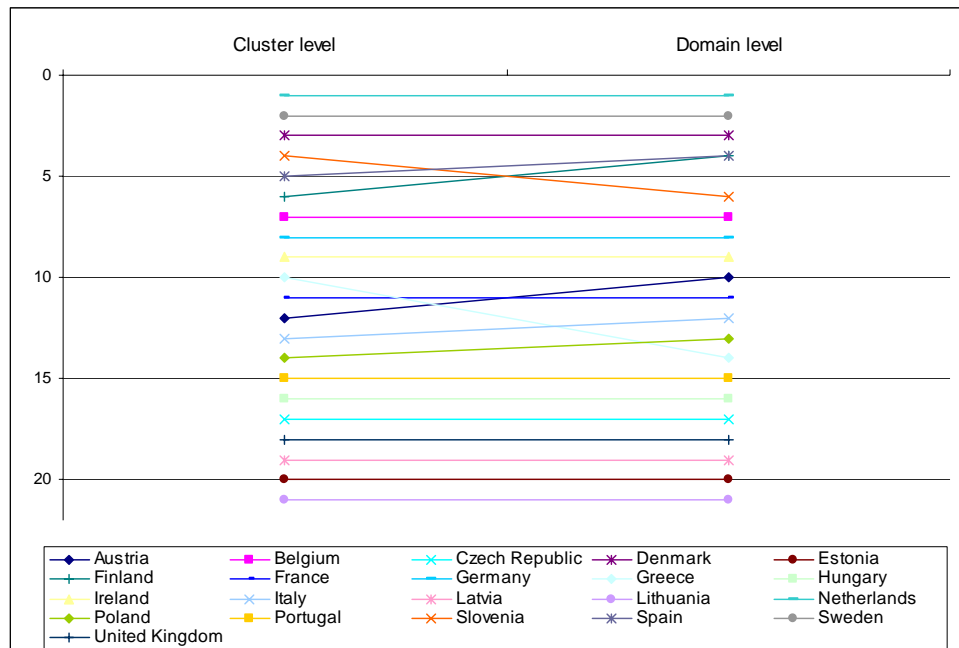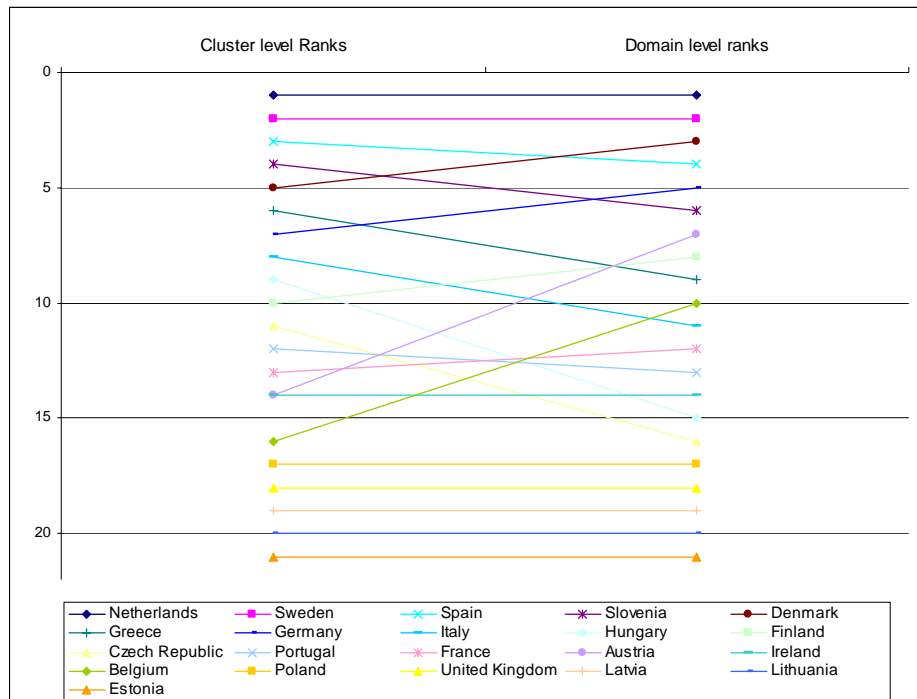
Figure 32

Figure 33 ranks the countries by the average of rank rather than the average of z scores. There is a little more change in rankings in moving from the average of rankings of clusters to the average of domains. Belgium and Austria move up five places and the Czech Republic moves down four places.

Figure 33

Many of the countries that move places are in the middle of the distribution in a group with relatively small differences in their z scores and where a small change can result in big changes in order.

Figure 34 summarises these changes in ranking using z scores by grouping the countries into high, medium and low groups. There are no changes in groupings between clusters and domains using z scores.

Figure 34

	Cluster level	Domain level	Cluster level - 70%	Domain level - 70%
Cyprus	HIGH	HIGH		
Netherlands	HIGH	HIGH	HIGH	HIGH
Sweden	HIGH	HIGH	HIGH	HIGH
Denmark	HIGH	HIGH	HIGH	HIGH
Spain	HIGH	HIGH	HIGH	HIGH
Finland	HIGH	HIGH	HIGH	HIGH
Slovenia	HIGH	HIGH	HIGH	HIGH
Belgium	HIGH	HIGH	HIGH	HIGH
Germany	MEDIUM	MEDIUM	MEDIUM	MEDIUM
Ireland	MEDIUM	MEDIUM	MEDIUM	MEDIUM
France	MEDIUM	MEDIUM	MEDIUM	MEDIUM
Malta	MEDIUM	MEDIUM		
Italy	MEDIUM	MEDIUM	MEDIUM	MEDIUM
Austria	MEDIUM	MEDIUM	MEDIUM	MEDIUM
Luxembourg	MEDIUM	MEDIUM		
Poland	MEDIUM	MEDIUM	MEDIUM	MEDIUM
Greece	MEDIUM	MEDIUM	MEDIUM	MEDIUM
Portugal	LOW	LOW	LOW	LOW
Czech Republic	LOW	LOW	LOW	LOW
Hungary	LOW	LOW	LOW	LOW
United Kingdom	LOW	LOW	LOW	LOW
Slovak Republic	LOW	LOW		
Latvia	LOW	LOW	LOW	LOW
Estonia	LOW	LOW	LOW	LOW
Lithuania	LOW	LOW	LOW	LOW

However there are some changes in Figure 35 between clusters and domains using average ranks but these occur only in the middle of the league table. The bottom and top are very stable.

Figure 35

	Cluster level	Domain level	Cluster - 70%	Domain level - 70%
Cyprus	HIGH	HIGH		
Netherlands	HIGH	HIGH	HIGH	HIGH
Sweden	HIGH	HIGH	HIGH	HIGH
Spain	HIGH	HIGH	HIGH	HIGH
Denmark	HIGH	HIGH	HIGH	HIGH
Slovenia	HIGH	MEDIUM	HIGH	HIGH
Italy	HIGH	MEDIUM	MEDIUM	MEDIUM
Greece	HIGH	MEDIUM	HIGH	MEDIUM
Finland	MEDIUM	HIGH	MEDIUM	MEDIUM
Hungary	MEDIUM	MEDIUM	MEDIUM	LOW
France	MEDIUM	MEDIUM	MEDIUM	MEDIUM
Portugal	MEDIUM	MEDIUM	MEDIUM	MEDIUM
Germany	MEDIUM	HIGH	HIGH	HIGH
Czech Republic	MEDIUM	LOW	MEDIUM	LOW
Austria	MEDIUM	HIGH	MEDIUM	HIGH
Ireland	MEDIUM	MEDIUM	MEDIUM	MEDIUM
Belgium	MEDIUM	MEDIUM	LOW	MEDIUM
Luxembourg	MEDIUM	MEDIUM		
Poland	MEDIUM	LOW	LOW	LOW
Malta	LOW	LOW		
United Kingdom	LOW	LOW	LOW	LOW
Latvia	LOW	LOW	LOW	LOW
Slovak Republic	LOW	LOW	.	.
Lithuania	LOW	LOW	LOW	LOW
Estonia	LOW	LOW	LOW	LOW

We believe that the average of domains is the best way to represent overall child well-being. Although clusters stand for our underlying understanding of child well-being and have been used to organise the data in this study, domains better represent the multi-dimensional nature of well-being. We believe that the average of

z scores is a better method of summarising rankings than the average of rankings because the former takes account of the dispersion or degree of difference.

But the evidence we have presented here suggests that with a few exceptions it does not make a big difference whichever method we use to summarise the data. The countries with the best well-being stay the best. The countries with the worst well-being stay the worst and there are some changes in rankings of few countries in the middle.

This still leaves much room for debate about whether the domains we have used in this index are the right ones and whether the variables we have found to represent them are reliable and valid. Critics of this league table will have different views about which domains are more or less important. As we have seen there are countries which do well on some domains and badly on others. People may want to build an index with different variables, domains and clusters and they are free to do so – the data can be found at http://www-users.york.ac.uk/~jrb1/.

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Legends

Figure 1   Child income poverty

Figure 2   Deprivation

Figure 3   % children in workless households

Figure 4   Material situation in the EU

Figure 5   Health at birth

Figure 6   Immunisation

Figure 7   Health behaviour

Figure 8   Child health in the EU

Figure 9   Educational attainment

Figure 10   Educational participation

Figure 11   Educational outcomes

Figure 12   Education

Figure 13   Overcrowding

Figure 14   Quality of the local environment

Figure 15   Housing problems

Figure 16   Housing and environment

Figure 17   Family structure

Figure 18   Relationships with parents

Figure 19   Relationship with peers

Figure 20   Children's relationships

Figure 21   Self-defined health

Figure 22   Personal well-being composite

Figure 23   Well-being at school