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Well-being of children and labour markets in Europe
Different kinds of risks resulting from various structures and changes in the labour markets

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Child poverty and Child well-being

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BACKGROUND

Children in poverty have been named by the European Union as target groups in the Common Outlines and Common Objectives of the National Action Plans for Social Inclusion and also in the March 2005 EU Presidency Conclusions. However 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 other child related indicator should be added to the Laeken Indicators - on educational attainment!

Thus there is a huge gap between rhetoric and evidence in the EU. Many acceding and candidate countries are currently report on the living conditions and/or well-being of children in the context of their Poverty Reduction Strategy Papers. There is a danger that in adjusting to EU social monitoring standards they might no longer see the need to maintain their focus on children. The EU needs to raise its standards and improve its monitoring of child well-being.

As a response to the cautious approach to indicator development of the Indicators Sub Committee of the EU Social Protection Committee we have made a first attempt at an index of child well-being for the EU 25 (Bradshaw, Hoelscher and Richardson 2006) drawing on existing survey and administrative data. The purpose of this paper is to assess the extent to

which either an indicator of relative income poverty or a measure of educational attainment can be useful as vehicles for monitoring the well-being of children in the EU25.

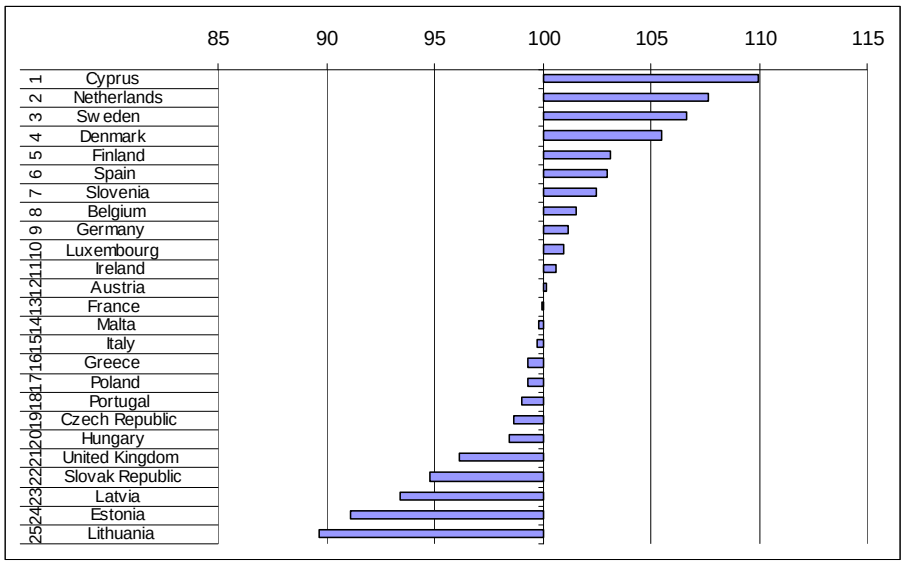
INDEX OF CHILD WELL-BEING

Our index of child well-being is based on on a multidimensional understanding of well-being, where possible tohe unit of analysis is the child and the data is about children if not provided by children. There are eight clusters:

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

These clusters contain 23 domains and the domains are made up from 53 indicators. We have produced an overall index of child well-being in the EU by averaging the z scores for the 23 domains. The results are shown in Figure 1. 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. For four of these countries Cyprus, Malta, Luxembourg and the Slovak Republic more than 25 per cent of the indicators making up the index are missing so it is probably safer to ignore them.

Figure 1: Index of child well-being in the EU25. Distribution of scors around a mean of 100



Source: Bradshaw et al 2006

The child's material situation was one of the clusters that make up this index and the domains that contribute to that cluster are

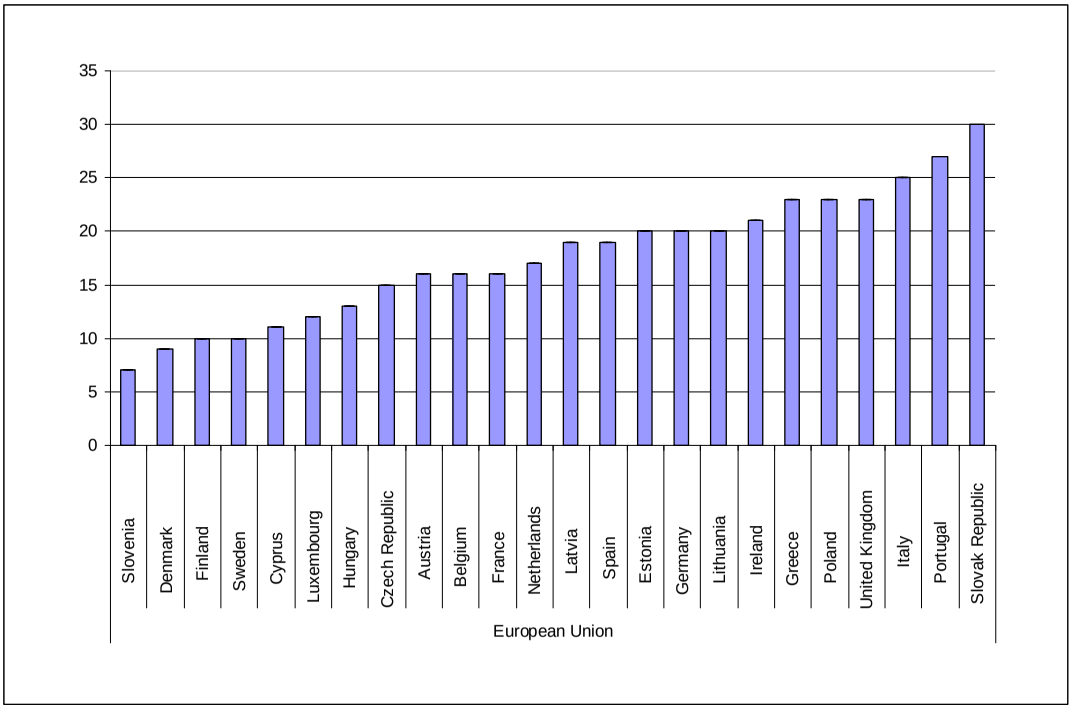
- relative child income poverty
- child deprivation and
- children living in workless households.

The only Laeken indicator relating to children is the proportion of children living in households with equivalent (modified OECD) income less than 60 per cent of the median. Figure 2 presents the most up to date league table based on that measure. There are all sorts of problems with this measure particularly in comparative research (Bradshaw 2006). Among these is the fact that the threshold used for these relative measures is very different in different countries. The 60 per cent of median threshold in Latvia was 2111 and in Estonia 2137 euros per month in 2002. In Luxembourg it was 14,376 and the Netherlands 10,000 euros per month in 2002 (the full distribution is given in Figure Appendix 1). Children in Slovenia have the lowest child poverty rate in the EU25 not because they are more affluent than other children but because Slovenia has an equal income distribution and fewer children are in households with income below 60 per cent of the median. What is really needed to compare like with like is a more absolute measure perhaps based on the % children living below the 60 per cent of the EU median. Unfortunately the EU does not publish such a measure.

However although it is not a Laeken indicator it does publish data on child poverty gaps - that is the average distance between net income and the poverty threshold. These are presented in Figure 3 and although there is a correlation of r=0.7 between the child poverty rates and the child poverty gaps for the EU25, it produces a rather different league table. It is arguable that any satisfactory income based poverty measure should take account of poverty gaps as well as rates – is it worse to have a few children a long way below a poverty threshold

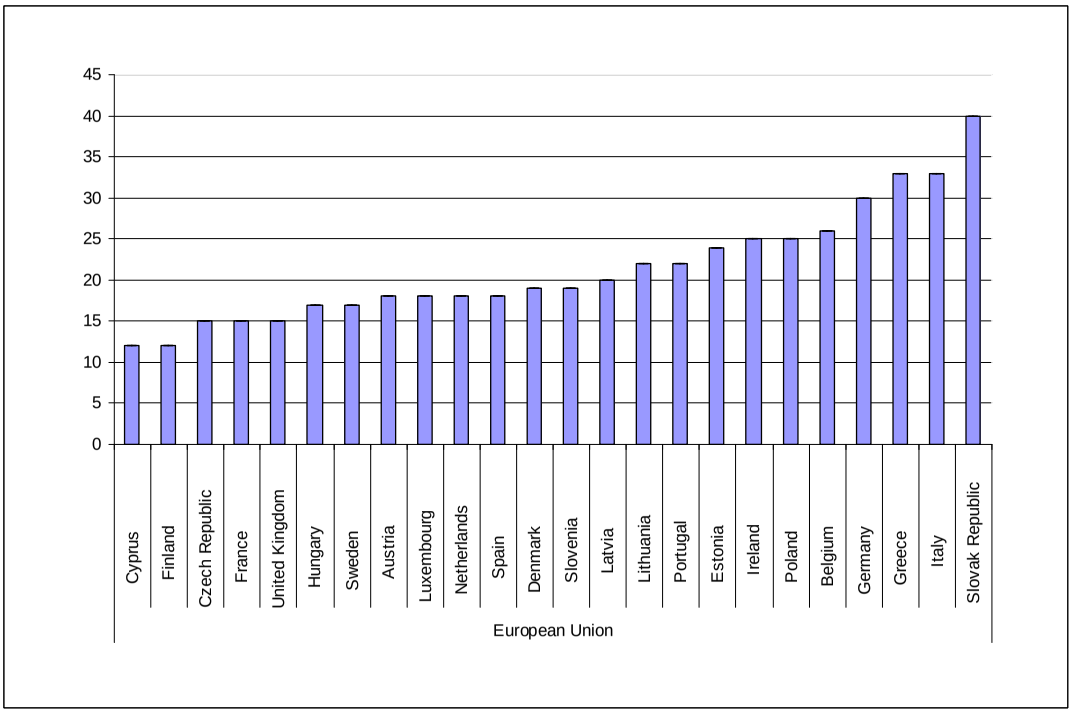
than a lot of children a little way below the poverty threshold? So Figure 4 presents a league table based on the average z scores of child poverty rates and child poverty gaps.

Figure 2: Proportion of children living in households with equivalent (modified OECD) income less than 60 per cent of the median



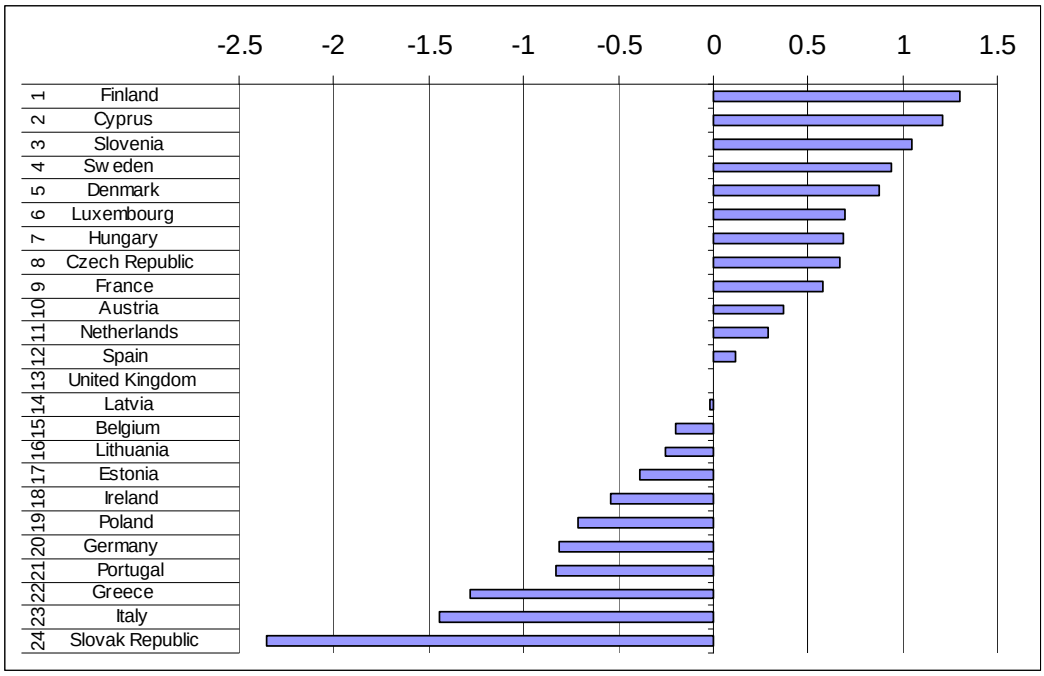
Source: Eurostat Living Conditions and Welfare

Figure 3: Child poverty gaps: percentage difference between the net income and the poverty threshold



Source: Eurostat Living Conditions and Welfare

Figure 4: Composite child poverty domain based on child poverty gaps and child poverty rates



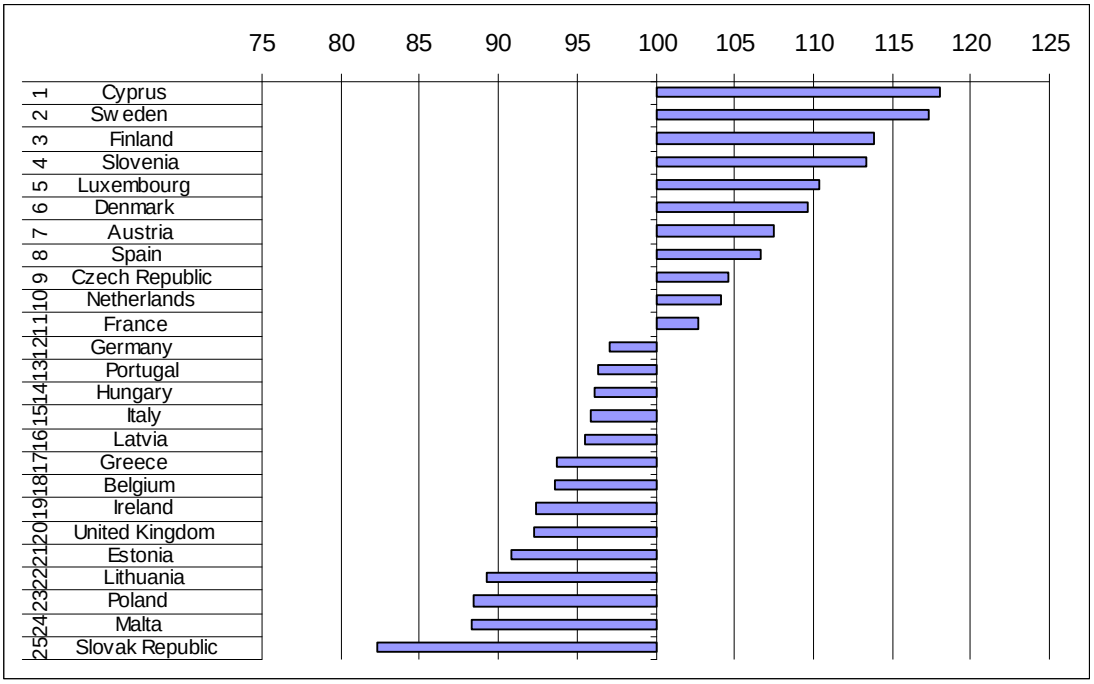
Source: Bradshaw et al (2006)

Because we were so dissatisfied with the relative poverty measures for the cluster on material well-being in our index of child well-being we also added two other domains

- A child deprivation domain which was based on three indicators
    - Low family affluence derived from the WHO Health Behaviour of School Children Survey
    - Lacking educational resources derived from OECD PISA survey and
    - Lacking books at home derived from PISA.
- A children living in workless families domain

When these were added to the child poverty domain they produced the overall material resources league table presented in Figure 4.

Figure 4: Material resources cluster



Source: Bradshaw et al (2006)

We now have a set of different measures of the material well-being of children. One is the official relative child poverty indicator used in the Laeken set. The others are attempts by us to represent a less relative measure of the concept of child material resources.

We shall go on to explore how these are related to overall child well-being. But first let us consider educational attainment.

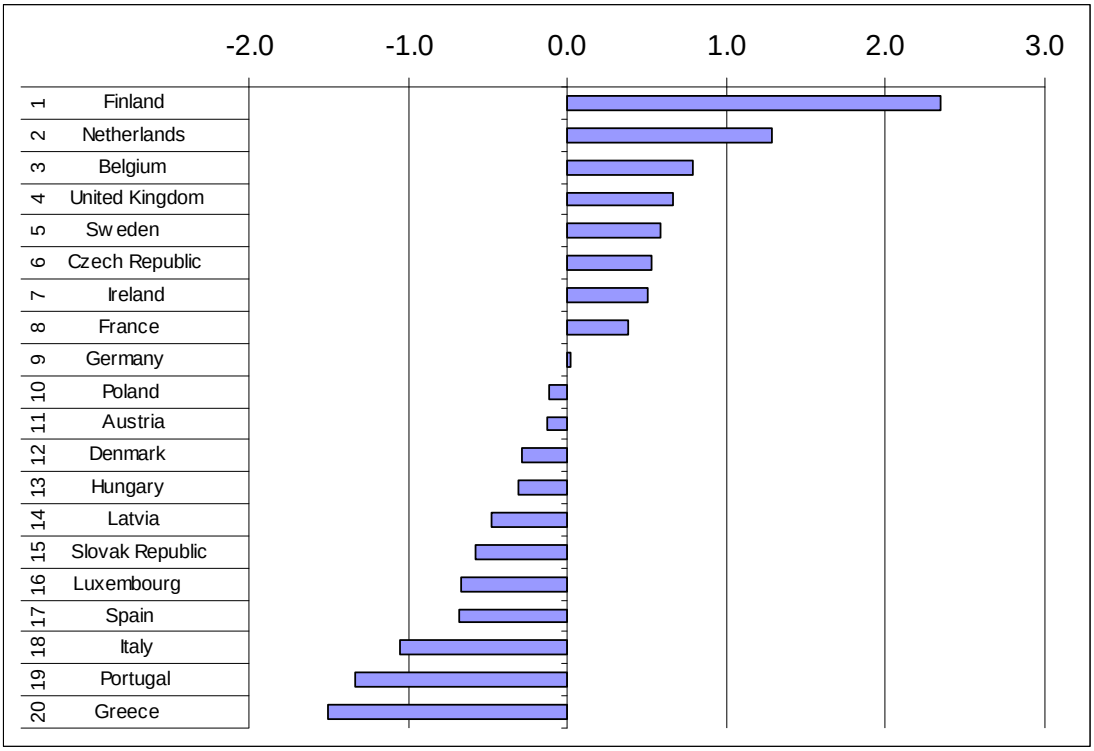
EDUCATIONAL ATTAINMENT

It is threatened (very informally in a remark at the Luxembourg Presidency Conference by the Head of Eurostat) that the only concession that the Indicators Sub-Committee of the Social Protection Committee of the EU might make to children is to add a Primary or Secondary Laeken indicator on educational attainment. How is educational attainment related to other indicators of child well-being and our overall index? In the educational well-being cluster of our index we included domains covering educational attainment, educational participation and educational outcomes. However the issue here is educational attainment. For this we used the OECD PISA data which the EU would probably have to rely on. This domain includes data on reading literacy, mathematical literacy and science 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. We produced a composite based on

There are strong positive associations (r=0.8, ***for all) between scores on these three attainment indicators. Figure 5 presents the average of z scores for the three educational

attainment indicators. Finland has the highest overall educational attainment levels by some margin and the Southern EU countries have the lowest levels of educational attainment.

Figure 5: Educational attainment domain average of z scores



Source: Bradshaw et al (2006)

DOES CHILD POVERTY REPRESENT CHILD WELL-BEING

I am going to explore this question using scatterplots and correlation coefficients. This is not particularly sophisticated but we have only a maximum of 25 cases and there is little else that is possible.

We will be exploring the relationship between a number of variables and the overall index of child well-being which includes those variables. Strictly speaking they are not therefore independent. However the relative child poverty rate is only one of 53 variables contributing to child well-being and the child poverty domain is only one of 23 domains contributing to child well-being.

First we examine the relationship between the child poverty rate and the index of child well-being in Figure 6. There is a statistically significant correlation between these two variables (r=-0.55**). But that means that the child poverty rate explains only about 30 per cent of the variation in overall well-being. It can be seen that Latvia, Estonia and Lithuania have much lower child well-being levels than their child poverty rate would indicate.

Figure 6: Overall child well-being by child poverty rate. R=-0.55**

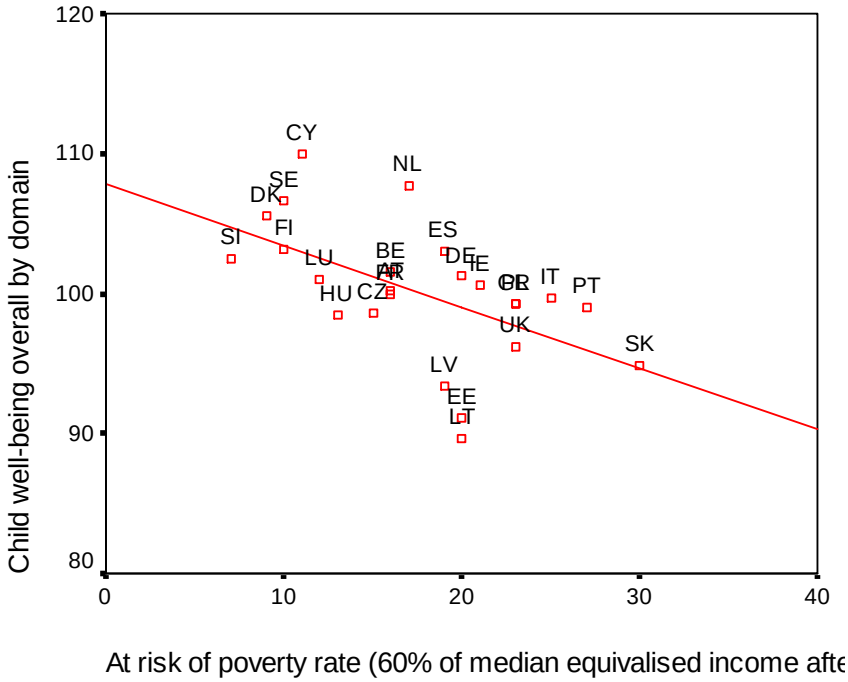
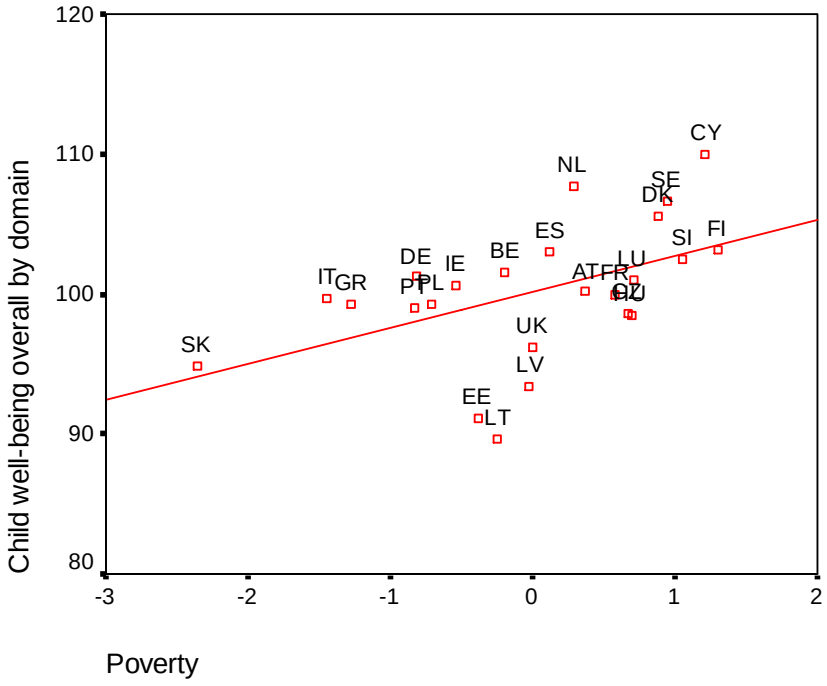


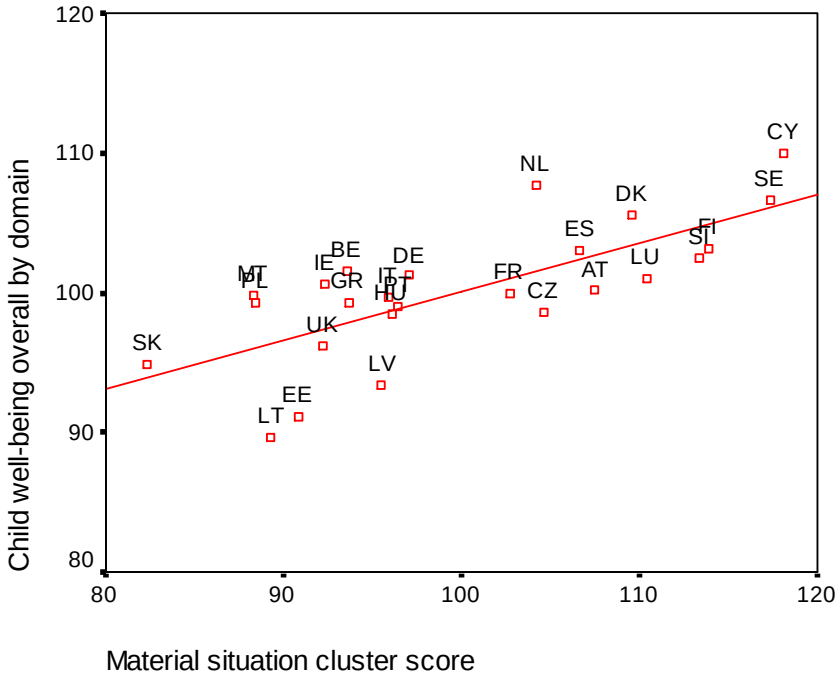
Figure 7 repeats the analysis this time using the child poverty domain z scores which includes the child poverty gap. This does not improve the correlation coefficient (r=0.49*). Latvia, Estonia and Lithuania are still outliers

Figure 7: Child well-being by child poverty rates and gaps combined z scores



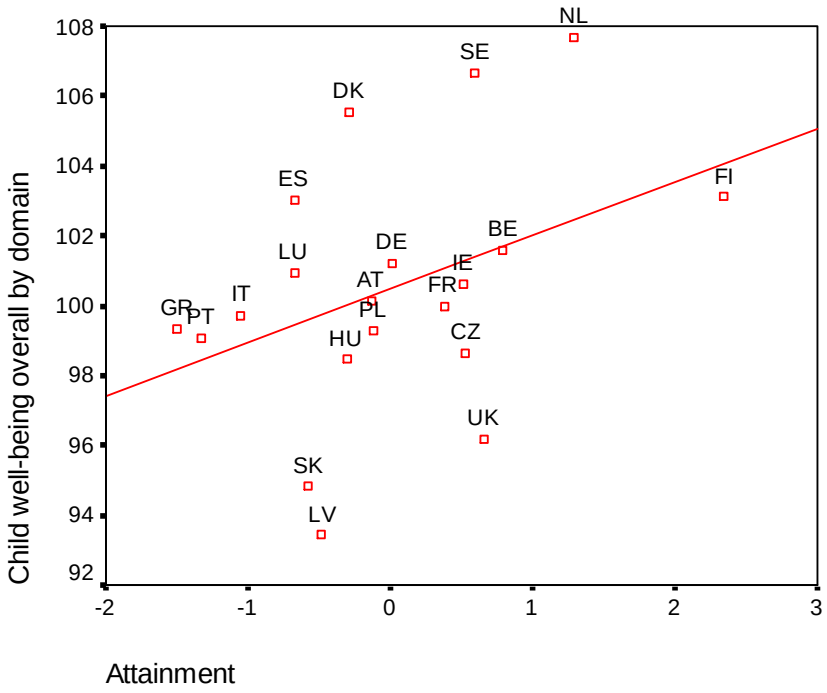
Then in figure 8 we examine the relationship between the overall well-being index and the material well-being cluster. Now there is a much better fit (r=0.73***). It is the addition of the indicator of deprivation that is improving this fit – the correlation between overall well-being and deprivation is r=0.72*** and with worklessness r=0.36 ns.

Figure 8: Overall well-being and material well-being.



If the EU were to add an indicator on educational attainment how well would that represent overall well-being. The answer is not at all well. Figure 9 shows that (despite the regression line) there is no relationship between educational attainment and overall well-being r=0.39 ns. Educational attainment is really a well-becoming indicator not a well-being indicator.

Figure 9: Child well-being and educational attainment



What factors are related to overall wellbeing? In Table 1 we have selected those indicators from our set of 53 which correlate most highly with the index of overall well-being. The selection is restricted to those with coefficients in excess of r=0.6 and which are statistically significant at least the 95 per cent level. They are presented in rank order. All of these variables are better indicators of child well-being than relative child poverty rates and educational attainment. The relationship between the Teenage fertility rate and overall well-being is shown in Appendix Figure 2.

Table 1: Indicators with high correlates with over child well-being

Indicator	Correlation coefficient r
Teenage fertility rate	0.88***
Feeling unsafe in neighbourhood	0.82***
Life satisfaction score	0.81***
Low family affluence (deprivation)	0.78***
Infant mortality rate	0.74***
Under 19 mortality rate	0.67***
Bullied last month	0.67**
Self rated health	0.64**
At least two household problems	0.63**
Low educational possessions	0.60**
Peers kind and helpful	0.61**

CONCLUSION

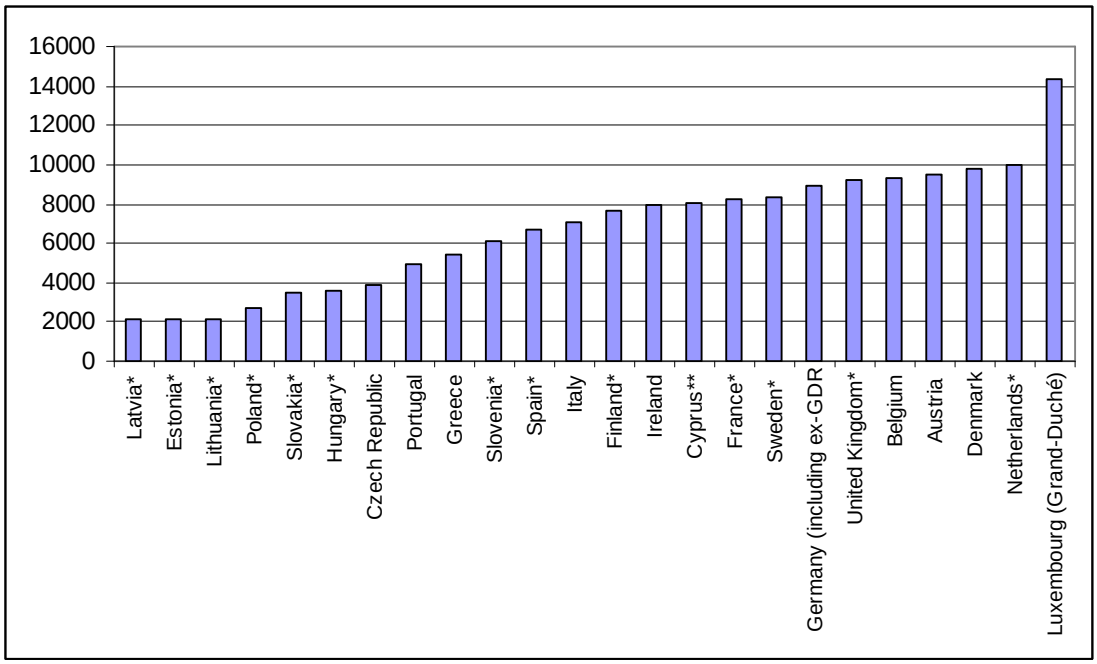
The relative child poverty rate which has been adopted by the EU as the only child related primary or secondary indicator of social inclusion is not adequate to represent variations in child well-being across the EU25. Educational attainment, which might be adopted, is even worse. There are some single indicators that are highly correlated with child well-being and for which there is data across the EU25. However it might be better for the EU to adopt the kind of multi-dimensional index of child well-being of the kind explored in this paper.

REFERENCES

Atkinson, A.B., Cantillon, B., Marlier, E. and Nolan, B.(2005) *Taking Forward the EU Social Inclusion Process. Final Report. (*Government of Luxembourg, Luxembourg), http://www.ceps.lu/eu2005_lu/inclusion/report/final_report.pdf.

Bradshaw, J., Hoelscher, P. and Richardson, D. (2006) An index of child well-being in the European Union, *Journal of Social Indicators* (forthcoming)

Appendix Figure 1: 60% of median poverty threshold 2001, 2002*, 2003** Euros



Source: Eurostat

Appendix figure 2: Child wellbeing and teenage fertility rate r=0.88***