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An Index of Child Well-being in the European Union¹

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Despite the recent developments in well-being research, and the focus on the needs and rights of the child in the EU, there has been no systematic effort to create a comparable EU wide index of child well-being. This paper will introduce the first attempt to identify a range of factors contributing to child well-being and the process of data collection across a range of cross-national surveys and series. The methods applied in constructing causal models for eight dimensions of child well-being will be addressed, alongside the limitations, and the potential this work has to impact upon future research and data collection. Results will be reported for the EU25 in the well-being dimensions of material situation, children's health, education, housing and environment, children's relationships, subjective well-being, risk and safety, and civic participation.

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.

Recently there have been calls for mainstreaming the collection of European wide exclusion indicators from the perspective of children, however progress is slow and far below expectations. 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 is to demonstrate that much more is possible using already available data. Drawing mainly on EU data and comparative studies of children and young people a picture is developed 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

¹ This paper is an abridged version of Bradshaw, J., Hoelscher, P. and Richardson, D. (2006) *An index of child well-being in the European Union*, Journal of Social Indicators (forthcoming). The authors have also produced an OECD child well-being index and working paper for the forthcoming Unicef Innocenti Report Card No.7, *Child Well-being in Rich Countries* (expected September 2006).

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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).

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 (for one perspective of the process see Antonovsky, 1987). 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 (Lippman 2004).

Clusters of child well-being

Children's well-being has been analysed in eight clusters, covering 23 domains and 51 indicators. The clusters include topics that matter to children from their own point of view and also those that point to adults' responsibility for the well-being of children. Wherever possible indicators represent children's own experiences as expressed in surveys³ with young people. The eight clusters are:

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

Together these clusters relate to the conditions children find at home, in their neighbourhood, and at school that have a strong impact on their development and well-being. Furthermore they acknowledge the children's active role in creating their own well-being, and identify some of their personal resources, relationships and behaviours.

Methods

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, and there are some elements of child well-being which are not represented by any of the available comparable indicators. There are also 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.

To summarise the comparative data we have chosen to calculate z scores for each indicator and average the z scores to obtain an average score for each domain. The domain scores were again averaged to create a cluster score from which the overall index score was obtained. 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 index⁴, 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

³ Particularly central to this process were the cross-national surveys of the Health Behaviour in School-aged Children, 2001 (WHO – Currie et al, 2004); and the Programme for International Student Assessment, 2000 and 2003 (OECD). These surveys question children directly on a number of relative topics including family and peer relationships, lifestyle and behaviour, as well as providing data on the respective outcomes of health behaviour and educational attainment.

⁴ The cluster scores have been standardised to a scale with a mean of 100, and a standard deviation of 10.

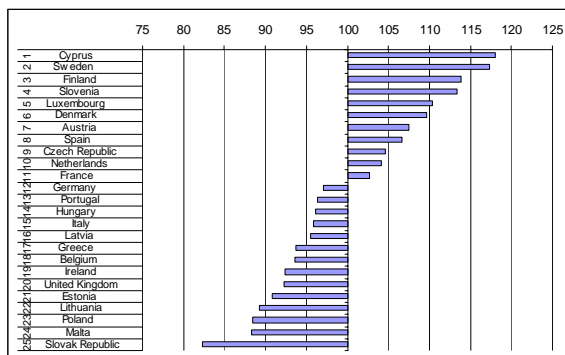
just a better or more reliable indicator of child health. However even if we had evidence to sustain such arguments there is still a question of how we decide what extra weight to give to infant mortality. In the absence of any theoretical or empirical justification for weighting we decided to treat each variable as having equal weight.

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. Thus they can be considered independent contributors to our domain.

Results

Each cluster in the index and the overall index are presented below, identifying the European countries that perform the best and worst in context of the EU25 group.

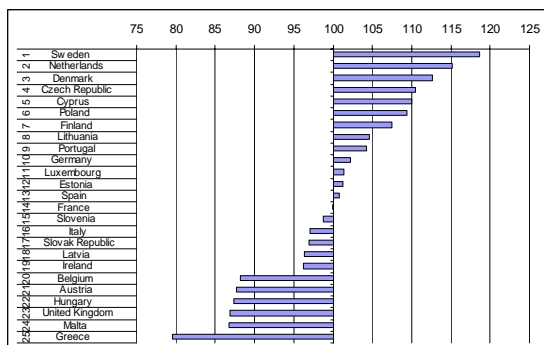
Material situation



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. The domains representing children's material situation include: relative child income poverty, child deprivation and

parental worklessness. Relative child income poverty is operationalised using the child poverty rate (60% of median income) and the child poverty gap. Child deprivation, a more direct measure of children's economic situation than income, includes self reported low affluence, and ownership of educational and cultural possessions (books). Finally the 'proportions of children in jobless households' identifies children at very high risk of being in poverty. Cyprus, Sweden and Finland are the best performers in this cluster, the Slovak Republic, Malta and Poland perform worst.

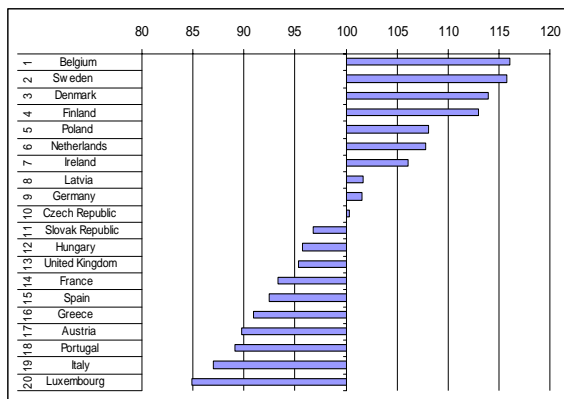
Children's Health



Children's health is represented by the domains of: Health at birth, Immunisation, and health behaviour. Health at birth is of fundamental importance for children's physical, cognitive and psychosocial development. We have combined two variables to represent this domain: Infant mortality rate, and Low birth weight. Immunization rates for measles, dpt3 and

Polio represent preventative measures and health promotion in early childhood. Finally 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). This measure includes consumption of fruit and breakfast daily, physical activity, obesity and dental hygiene. Sweden, the Netherlands, and Denmark take the top three places in the health cluster. The worse performing group is quite distinct from Belgium in 20th place to Malta, with Greece some way behind the rest of the group.

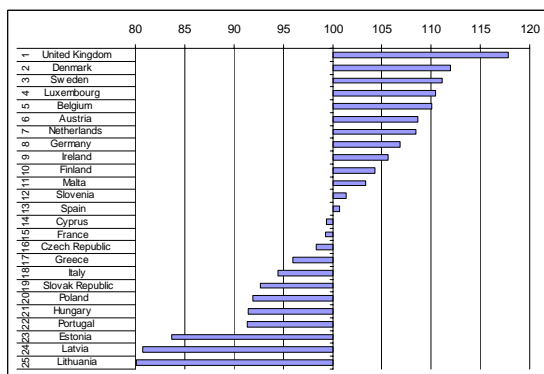
Education



The education cluster is made up of: educational attainment, educational participation, and youth labour market outcomes from education. 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 (Ermisch, Francesconi & Pevalin, 2001; Lauer, 2003), and their attainment to their life

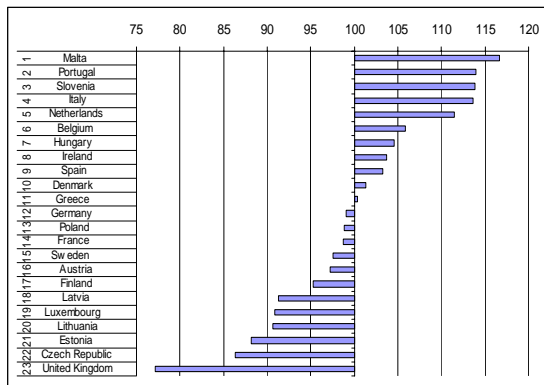
chances. Data on reading, science and mathematics literacy make up this domain. Children and young people’s participation in education indicates their well-becoming rather than their well-being, though it is acknowledged that participation itself raises a number of separate well-being issues. We use two indicators of educational participation: children aged 0-2 in registered childcare and the percentage of 15-19 year olds in education. Youth labour market outcomes from education, crucial for inclusion in society and economic and social well-being, is operationalised using the percentage of youth population not in education and not employed aged 15-19 and the percentage of pupils aged 15 years aspiring to low skilled work. Results for this cluster show that four countries take a clear lead: Belgium, Sweden, Denmark and Finland. Educational well-being is worst for children in Italy and Luxembourg.

Housing and environment



Children’s housing and environment is represented by three domains indicating: overcrowding, the quality of the local environment, and housing problems. Overcrowding is measured using rooms per person in households with children. Local environment and space is the percentage of households with children that think it is unsafe or very unsafe to walk around in their area at night, and those reporting high levels of environmental problems, Finally housing

problems are identified using the proportion of households with children reporting at least two of the following: shortage of space, rot in windows, floors or doors, damp or leaks, and lack of an indoor flushing toilet. Results show that the United Kingdom has the best children’s housing and environment by some margin. At the other end of the scale Estonia, Latvia and Lithuania are a long way from the rest of the group.

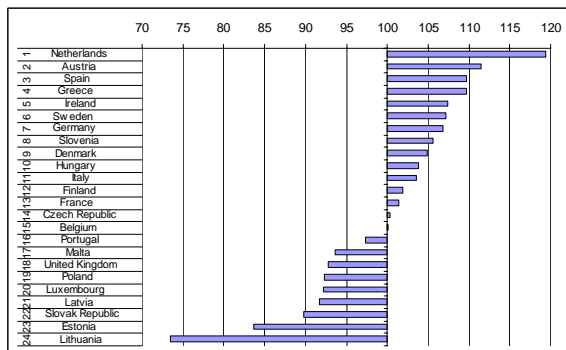


Children's relationships

The relationships cluster is made up of the domains: family structure, relationships with parents, and relationships with peers. Changes in family structure indicate major events in the life of children that require adjustments in the organisation of family life, and as such are a risk factor for children's well-being (Dumont and Provost 1999). There is also 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). The family structure domain therefore includes indicators for proportions of both single and step families in the EU25. The family constitutes the most important mediating factor for children's well-being; there is also evidence from one national study (Hanafin and Brooks 2005), that for children friends are the next most important factor. There is very little comparative data on the quality of children's relationship with their parents or peers available. Therefore for parental relationships we use proxy indicators focusing on time parents and children spend together eating and talking. For data on the quality of children's peer relationships we use an indicator on children's perception of peers as kind and helpful. Results show five clear leaders and one laggard. Relationships are best for children in Malta, Portugal, Slovenia, Italy and the Netherlands, the situation in the UK is worst.

Subjective Well-being

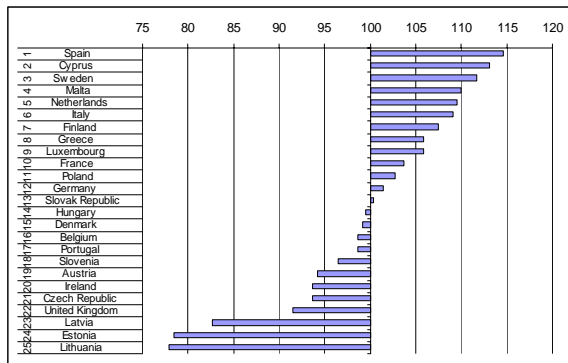


Children's subjective well-being is represented by three domains: self-defined health, personal well-being, and well-being at school. Whether Young people rate their health as fair or poor indicates young people's perceptions of their own health and the likelihood of experiencing a number of associated factors including low family affluence, the quality of family relations, and a positive school environment (Currie et al

2004). Personal well-being identifies children's perceptions of themselves and their peers which determine the social experiences they have, and through that their future perceptions. For this domain we have combined four variables: self reported life satisfaction, Young people feeling like an outsider or left out of things, young people feeling awkward and out of place, and young people feeling lonely. Finally two variables represent the well-being at school variable: Young people feeling pressured by schoolwork, and Young people liking school a lot. Together these capture the experience of children in a place where they spend a significant part of the day. The Netherlands is a notable leader in this cluster. Three of the bottom four countries are again the Baltic States.

Risk and safety

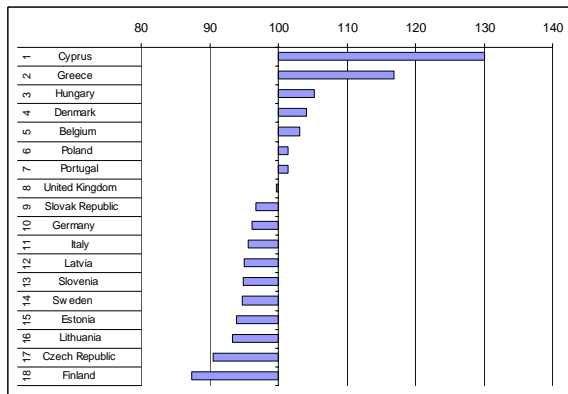
This cluster includes three domains covering: child mortality, risky behaviour, and experiences of violence. Child deaths are the most basic indicator for children's safety. Our mortality measure is a three year average for data on children's accidental and non-accidental deaths. Fortunately murder and suicide are rare events but for every child that



dies many other children survive accidents and violence. Risk behaviour is very common during adolescent development and young people often engage in it hoping for some positive gains like acceptance in their peer group. For risk behaviour we have combined the following variables: cigarette smoking, drunkenness, cannabis use, inhalant use, teenage pregnancy rates, 15 yr olds who have had sexual intercourse

and young people who used condoms during their last sexual intercourse. Finally experience of violence uses levels of bullying and fighting in each country to identify victimised children who tend to experience higher levels of social anxiety and depressive symptoms, to feel lonely and have lower self-esteem. Risk and safety is of least concern in Spain, Cyprus and Sweden. The Baltic States, with high child mortality figures, are by far the worst performing nations.

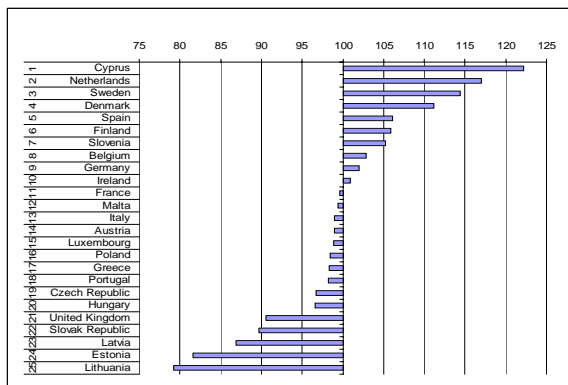
Civic Participation



Children’s civic participation is represented by two domains covering participation in civic activities and political interest. 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 (Lansdown 2001). Young people’s participation in two or more civic activities (student council, youth organization, environmental organisation, human rights organisation, charity/collecting money) makes up the first domain. Young people reporting political interest above the median score across EU25 countries that participated in the Civic Education Survey (CIVED) 1999. Results for the eighteen countries with data show little variation in the main, though notably Cyprus and Greece are strong here.

Overall Child Well-being



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. The final index shows that alongside the usual Nordic suspects at the top of the table, Cyprus on average outperforms all other EU25 countries. The Baltic nations perform worst, with Slovakia and the United Kingdom making up a low performing group.

It is important to note in conclusion that the indicators do not amount to a comprehensive picture of child well-being, but do begin an important journey of debate and development. The final goal of this process is to have a monitoring process in place providing a comparable picture of child well-being progress across the EU 25 to inform policy developments in this area. Most importantly this is not the last word on an EU-wide index, and data and method need to develop a good deal to comprehensively operationalise the complicated nature of children's lives and well-being.

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