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Children's Subjective Well-being in Rich Countries

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CHILDREN'S SUBJECTIVE WELL-BEING IN RICH COUNTRIES

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Abstract. This paper is based on background research undertaken for the UNICEF *Innocenti Report Card 11* on child well-being in rich countries. It develops a new domain index of subjective well-being based on several indicators drawn from the Health Behaviour of School Aged Children (HBSC) survey 2009/10, which includes life satisfaction, relationships with family and friends, well-being at school, and subjective health. It explores the associations between the indicators, components and the overall domain. Changes in subjective well-being during the last decade (between HBSC 2001/02 and 2009/10) are analysed. It then explores the relationships between subjective well-being and objective domains: material, health, education, behaviour and housing and environment. The relationship between subjective well-being and structural indicators is explored further. The paper concludes that subjective well-being should be included in comparative studies of well-being but not necessarily as just another domain within a general deprivation count. Subjective well-being (or the lack thereof) is related to but not a part of (material) child deprivation.

Keywords: Well-being, subjective well-being, comparison of rich countries

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1. INTRODUCTION

Child well-being can be assessed using straightforward monetary poverty counts or measuring deprivations in domains of children's lives such as health, education, behaviour and housing (as is done in UNICEF's *Innocenti Report Card 11*) (UNICEF Office of Research, 2013). It can also be assessed by asking children what they think and feel about their lives. In many previous international comparative studies of child well-being, including UNICEF's *Innocenti Report Card 7*, subjective well-being has been introduced alongside other indicators, giving it equal weight (in the domains) and considering it as a constituent element of children's multidimensional well-being (Bradshaw et al., 2007). In *Report Card 11*, however, subjective well-being is treated differently. It is argued in this paper and elsewhere (de Neubourg et al., 2012) that there are important conceptual differences between child well-being assessed as the absence of deprivations in general and child well-being based on self-assessment by the children. In the former case the judgment on the degree of well-being is based on indicators observable for other people; in the latter case the judgment is based on the assessment by the children themselves. While it is plausible that there is a relationship between the two concepts, it is not necessarily a direct and unidirectional one; it may well be that children who are in a situation of 'objective' well-being, feel unhappy. Equally the opposite can be true: children in poor relative circumstances can still feel happy. Therefore it is important to treat the two concepts empirically as separate; not only do they deserve separate and full attention, but also we would be unable to study their interrelations if they were to be lumped together into a single child well-being index.

In this paper the theoretical background of our analysis is elaborated in section 2. Section 3 discusses the results of the empirical analysis comparing subjective well-being and its constituent elements between rich countries at the end of the first decade of the 21st century. The factors explaining international differences in levels of children's subjective well-being are explored in section 4. Finally, Section 5 concludes.

2. BACKGROUND

Happiness and feelings of well-being have received attention recently. The observation of the paradox that getting richer does not lead automatically to greater happiness (after a certain level) resulted in the initiative by President Sarkozy of France to set up the Stiglitz Commission (see Stiglitz et al., 2009). In its report in 2009 the Commission urged countries (and the OECD) to collect data on subjective well-being. The OECD began to publish the *How's Life* index[1] and a number of countries have begun to collect data on subjective well-being – for example, the United Kingdom government has asked the Office of National Statistics to incorporate questions on happiness for both adults and children in national surveys.

The United Nations Convention on the Rights of the Child (CRC) advises, indeed requires, governments to listen to children and take their views into account. It does not say how governments should do this, but asking children what they think and feel is an obvious first step towards taking their views into account (Redmond, 2011; 2012).

[1] http://www.oecd.org/statistics/howslifemeasuringwell-being.htm

We do not have a lot of experience with registering and analyzing self-assessed well-being among children in an international comparative context. While some research groups made significant progress recently (Casas, 2011), there are still a lot of puzzling questions both around (measuring) subjective child well-being as such and around making international comparisons in subjective well-being among children.

Indicators as used in the UNICEF *Report Cards* (UNICEF Innocenti Research Centre, 2007; Martorano et al, 2013a, 2013b) registering whether children have access to schools and services, whether they do not suffer from important deprivations or whether they do not develop risky behaviour, are generally accepted to be valid indicators of the quality of children's lives; they indicate whether children grow up in circumstances that allow them to develop to their full potential. As such, they can be regarded as indicators of well-becoming rather than of well-being. Self-assessed or subjective well-being is a measure of well-being at the time of the observation. The two sets of indicators can therefore be seen as complementary, each reflecting a different aspect of children's lives.

However, critical arguments have been formulated doubting the viability of considering indicators of subjective child well-being in this context. These doubts relate to the possibility of measuring subjective well-being among children, to comparing outcomes of these measurements internationally and to the dubious relationship between feelings of well-being and conditions of life and thus the policy relevance of the former.

Arguments are put forward doubting whether surveys among children are a reliable way to measure their well-being. Diener et al. (2003) have argued that subjective indicators based on individuals' self-reports of aspects of life should be interpreted and compared across countries with caution as they are influenced by personality traits as well as cultural factors. Others may think that subjective well-being is a transient mood, especially among children, and therefore cannot be measured reliably.

There is also some evidence that expressions of subjective well-being may be a function of false expectations or adaptive preferences. Very deprived children may say that they are very satisfied with life because they know no better, or because they have become reconciled to their lot. There is certainly some evidence in poverty studies of poor children not complaining to their parents in order to protect them from guilt (Ridge, 2002). An example of false expectations in the other direction would be a child being dissatisfied with his/her body or his/her clothing because she/he does not look like models she/he sees in the media.

Finally there is the argument of Cummins (2010) that happiness is the result of genetically determined homeostatic adaptation. Over millennia, the humans who have survived most successfully have been those who have had greater capacity to adapt to their environment and the shocks of life. Humans, including children, have a natural resilience to bounce back to a predetermined state of happiness. This may explain why it is difficult to interpret variations in subjective well-being in terms of social structural characteristics or life events – because people have bounced back.

In terms of measurement, it may be argued that asking children structured questions in sample surveys about what they think and feel is somehow less valid or reliable than asking questions in the same survey about whether they smoke, or drink alcohol.

This paper takes the position that indeed measuring and interpreting differences in subjective well-being among children should be done with care, even though recent experiences indicate that, in general, it is no less problematic than designing and interpreting survey questions for children in general (Casas, 2011).

Interpreting differences between children across countries is to be done with even greater care since cultural factors may play a role both in interpreting the survey questions and in the level of social desirability that creeps into answers. It cannot be excluded that the meaning of some formulations may get lost or changed when translated into other languages. It is equally possible that being negative about parents, teachers, peers or life in general is more acceptable in some cultures than it is in others, or that religious or social norms tend to suppress complaints in some societies more than in others, or even that some societies are simply 'sunnier' in their general mood while others are more 'grumpy'. There is little evidence about these potential biases and fortunately recent international comparative research programmes have been undertaken to cast some light on these issues in order to avoid such biases (Casas, 2011).

Finally, the policy relevance of measuring subjective child well-being may be questioned. It may be argued that it is not the task of a government to make children happy or that the government does not have instruments to influence feelings of well-being among children. Most parents are doubtless concerned about whether their children are happy or not. If they are, then surely policy makers and the media should be too. In the analysis below we find an association between subjective well-being and all of the 'objective' domains of well-being. That is, the countries where material well-being, health, education, behaviour, housing are better, tend also to have happier children. This finding indicates that policy has a part to play in making children happier. [2]

At a micro individual level there is also evidence that children are happier if they live in decent houses, in safe neighbourhoods, are not bullied, enjoy and achieve in schools and are not materially deprived (Children's Society, 2012). Relationships with their family and friends may matter more than these things and improving relationships may not be directly amenable to policy. But relationships can be improved indirectly – for example by: reducing the burdens of poverty and inequality on parents, treating parental depression, and providing family-friendly services and counselling.

On the one hand, the association between children's feelings of well-being and the availability and accessibility of good basic material conditions is undeniable and illustrated in the rest of this paper. The study of subjective child well-being is, therefore, both academically interesting and policy relevant. On the other hand, however, the expressions of immediate levels of satisfaction and the presence and quality of (material) conditions necessary for children's development as observed using a set of indicators (Martorano et al, 2013a, 2013b), are not the same and should not be

[2] This contrasts with the findings on the association between subjective well-being as a child and educational- and employment attainment 10 years later in life: Keung (2007) used the British Household Panel to relate employment and educational outcomes at 20-24 to variation in subjective well-being when the cohort members were 11-15. Her results proved largely negative.

confused. Analysing (international) differences in subjective indicators based on child well-being and on indicators of 'objective' conditions are valuable in their own right. They should be pursued independently and their theoretical, as well as empirical, relationships deserve to be elaborated further.

As a conclusion to this short discussion, this paper makes a plea that subjective child well-being should be seen as a serious domain of study distinguished from that of material well-being. The interpretation of the results may be more demanding and the policy links may be less straightforward, but it is surely an important matter, not only because enshrined in the Convention on the Rights of the Child, but also because the empirical evidence strongly indicates that the resilience of children and ability to bounce back after misfortune or difficult circumstances is definitely influenced by the way they feel in addition to the presence of caring parents and attentive governments.

3. THE CONCEPT AND THE ANALYSIS OF SUBJECTIVE WELL-BEING

There is a vast and complex literature on the concept of subjective well-being. Drawing on this literature the Stiglitz Commission suggested that a distinction should be made between

- An evaluative element - life satisfaction or happiness
- An experiential element –
  - Positive affect (joy/pride) and
  - Negative affect (pain/worry)
- Eudemonic well-being – feeling worthwhile, or achieving rewards in life that are independent of pleasure.

Ideally we would want to take account of all these elements, however the only source of internationally comparable subjective well-being measures for a large number of countries, is the Health Behaviour of School Children Survey (HBSC). [3]

For this paper and UNICEF's *Innocenti Report Card 11* (UNICEF Office of Research, 2013), we use data extracted by Currie et al (2012) from HBSC. Starting from these data, we create an index of subjective well-being which encompasses four components – namely life satisfaction, relationships, subjective education and subjective health. These are derived from eight indicators summarised in Table 1.

The subjective index is built in three main stages. For each indicator the z-score is computed (showing the distance of each observation from the mean value in standard deviations). Secondly, the z-score for each indicator contributes equally to the component score, while at the end the subjective well-being score is an average of the z scores of the four components.

All the data refer to young people aged 11, 13 and 15 and are from the HBSC 2009/2010 report. All countries included in the overall analysis of *Innocenti Report Card 11* (UNICEF Office of Research, 2013) are covered with the exception of Australia, Bulgaria, Cyprus, Japan, Malta and New Zealand, since there are no data for these countries in the HBSC survey.

[3] For more information see Currie et al. (2012).

Table 1 Subjective well-being

Component	Indicator	Definition
Life Satisfaction	Life Satisfaction	Young people aged 11, 13 and 15 with scores above the middle of the life satisfaction scale,
Relationships	Easy to talk to mothers	Percentage of 11,13 and15 year-olds who find it easy to talk to mothers
	Easy to talk to fathers	Percentage of 11,13 and 15 year-olds who find it easy to talk to fathers
	Classmates are kind and helpful	Percentage of 11,13 and 15 year-olds finding their classmate are kind and helpful
Subjective education	Pressured by school work	Percentage of 11, 13 and 15 year-olds who feel pressured by school work
	Young people liking school a lot	Young people aged 11, 13 and 15 liking school a lot
Subjective health	Health fair or poor	Percentage of young people aged 11, 13 and 15 who rate their health as fair or poor.
	Health complaints	Prevalence of self-reported health complaints

3.1 The results

In the following sections, we present the main results for the different components. While for the 'life satisfaction' component the results are summarized in a figure, for the remaining components data are presented in tables. As in Martorano et al 2013a, different colours are used to code the countries according to their ranking for each single indicator: "light blue indicates the best performing group, mid-blue the intermediate performers, while dark blue marks the worst performing group. Countries performing around the average form the intermediate group while the best and the worst groups are formed by countries performing respectively half a standard deviation above or below the average. Finally, each table is ordered according to their ranking in the whole component" (Martorano et al, 2013a).

i) Life satisfaction. An important component of subjective well-being is life satisfaction. Life satisfaction correlates with a number of positive outcomes both in the short and in the long-term. In particular, it is related to the ability to cope and social competence, which help achieve more positive outcomes in adulthood (Currie et al., 2012); life satisfaction plays a role in preventing psychopathologies during childhood and adolescence (Huebner et al, 2004).

HBSC uses the 'Cantril Ladder' to measure life satisfaction. Children are asked to place themselves on a ladder where 0 is at the bottom indicating the 'worst possible life' and 10 is the top of the ladder indicating the 'best possible life'. Table 2 gives the proportion of children scoring above the mid-point (6 or more) for all countries included in the 2010 HBSC. It can be seen that the majority are happy, but happiness declines with age for girls and at age 15 they are less happy than boys.

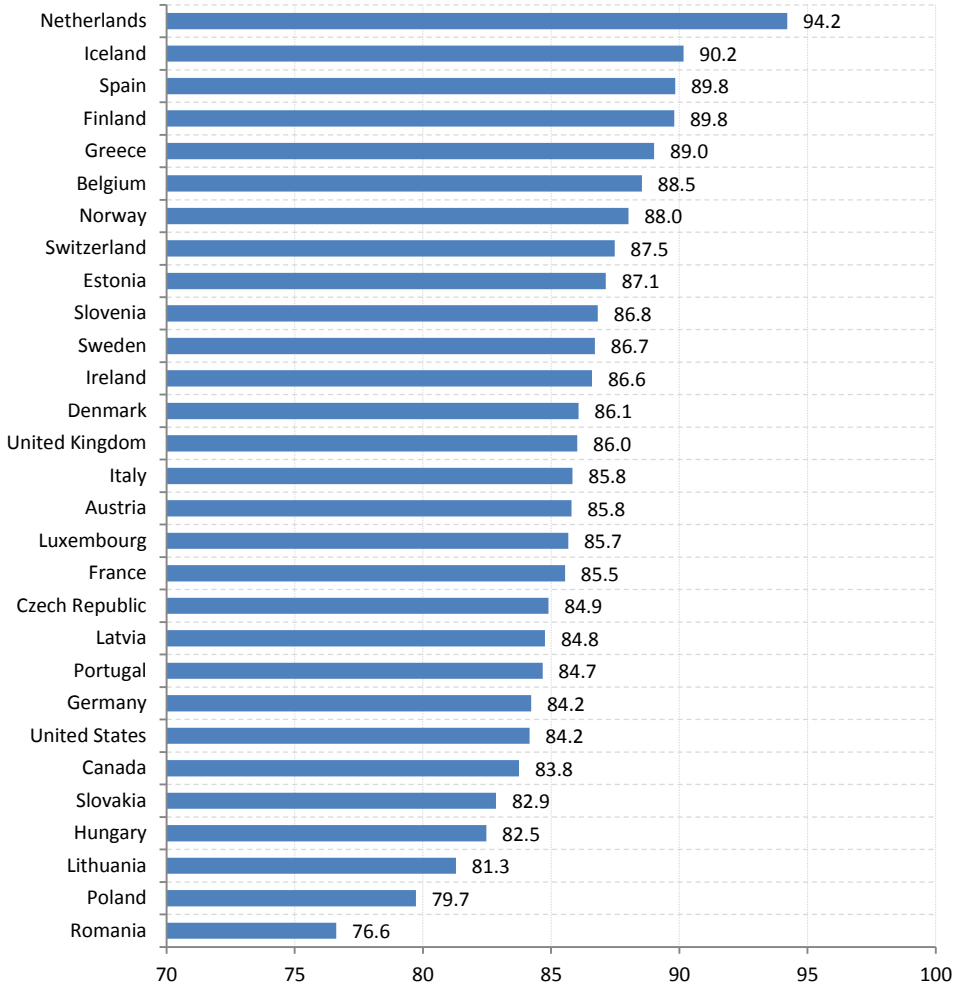
Table 2 *Percentage of children with high life satisfaction by age and gender HBSC 2010*

	Aged 11	Aged 13	Aged 15
Girls	88	83	79
Boys	88	87	86
Average	88	85	83

Source: Currie et al 2012

Figure 1 shows the differences across countries. Only in Iceland and the Netherlands is the percentage of young people with scores above the mid-point higher than 90 per cent. On the other hand, the lowest positions are occupied by Central and Eastern European countries – Hungary, Lithuania, Poland and Romania, and Slovakia.

Figure 1 *Percentage of young people aged 11, 13 and 15 with scores above the middle of the life satisfaction scale*



Source: Authors' calculations based on Currie et al 2012.

ii) Peer and family relationships. An important aspect of subjective well-being is to do with a child's relationships inside and outside the family. Family relationships were found to be the single most important contributor to children's subjective well-being in the Children Society Surveys (Children's Society, 2012). Beyond the family, the most important environment for children is the school, and relationships with classmates are a very important determinant of happiness. Friendships can provide a supportive environment in which to develop self-esteem and the ability to interact socially, as well as helping young people to form their own identity (Currie et al, 2012).

The relationship component is therefore based on three indicators: the percentage of young people who find it easy to talk to their mother, the percentage of young people who find it easy to talk to their father and the percentage of young people who find their classmates kind and helpful.

Table 3 summarizes the main results regarding children's relationships. In terms of family relationships, as might be expected, the country composition of the groups is quite stable across the two indicators: countries where children find it easy to talk to their mother are also those where children find it easy to talk to their father; however there are some exceptions in the intermediate and worst performing groups. Thus, it is interesting to observe that among the best performers are not only the Nordic countries but also Estonia, Hungary, Romania and Spain. In contrast, children report more problematic communication inside families in Belgium, France, Italy, Slovakia and the United States.

There is no association between finding friends kind and helpful and ease in talking to mothers and fathers, despite the fact that four countries are again in the best performing group. This suggests that in Denmark, Iceland, the Netherlands and Sweden children find it easier to establish relationships inside and outside the family than in other countries. On the other hand, in France and the United States children find it more difficult to talk with their parents and to interact with their classmates.

It is also interesting to observe that there is no extreme re-ranking with the exception of three countries. In Hungary and Poland a high percentage of young people find it easy to talk to their parents but only a small percentage of them find their classmates kind and helpful. In contrast, in Belgium, a high percentage of young people consider their classmates kind and helpful but find it more difficult to communicate with their parents.

Table 3 *Children's relationships*

	easy to talk to mothers	easy to talk to fathers	classmates are kind and helpful
Netherlands	91.7	81.5	80.4
Iceland	89.3	79.8	80.3
Sweden	85.5	72.4	82
Slovenia			76.8
Romania	90.4	74.8	64.8
Hungary	89.9	76.4	58.1
Denmark	84.2	69.5	77.2
Finland	86.6	72.5	66.1
Spain	86.5	70.8	67.1
Estonia	86.1	69.1	65.1
Ireland	82.9	68.1	73.4
Germany	81.5	64.5	77.9
Poland	86.6	72.6	51
Portugal	81.3	61.2	79.4
Norway	78.7	65.1	78.2
United Kingdom	83	68.6	63.3
Switzerland	79.7	62	78.9
Austria	82.2	64.9	69
Luxembourg	79.5	62.7	73.5
Italy	79.7	59.9	68.5
Latvia	82	65.8	54.5
Belgium	77.5	57.3	75
Czech Republic	81.4	62.8	56.1
Lithuania	80.4	62.1	58
Slovakia	78.7	61.3	61.7
Canada	79.4	62.6	58.2
Greece	83.1	64.2	44.3
United States	73.9	59.7	56.2
France	71.2	50.3	56.6

Source: Authors' calculations based on Currie et al 2012

iii) Subjective education. The subjective education component is made up of two indicators: the percentage of young people pressured by school work and the percentage of young people liking school a lot. Table 4 summarizes the main results for subjective education. In Austria, France, Hungary and the Netherlands children are least pressured by school work and are also in the best performing group in liking school a lot. Contrast this with Finland which has one of the highest proportions of young people feeling pressured by school work and one of the lowest proportions of liking school a lot. Overall there is no association between these indicators. For example, Slovakia is in the best performing group with a low proportion of children feeling pressured by

school work, but in the worst group for liking school a lot. The opposite situation can be seen in Iceland and Lithuania.

Table 4 *Subjective educational well-being*

	pressured by school work	young people liking school a lot
Netherlands	16.8	38.4
Austria	20	33.7
Hungary	18.4	31.5
France	20.8	32.4
Romania	32	41.6
Latvia	22.3	32.6
Germany	23.9	33.3
Norway	32.6	38.8
Iceland	43.5	42.5
Slovakia	19.1	21.3
Sweden	23.4	23.2
Belgium	26.7	25.4
Lithuania	44.4	39
Poland	21.8	20.2
Denmark	30.4	27.2
Switzerland	24.7	20.6
Luxembourg	26.8	20.2
United States	40.6	30.7
Ireland	36.9	23.9
United Kingdom	42.1	27.6
Canada	41.2	26.7
Czech Republic	32.6	17.3
Slovenia	48.9	27.4
Greece	40.3	19.3
Spain	49.4	26
Portugal	47.2	23.1
Italy	41.1	14.8
Estonia	34.6	9.2
Finland	44.6	15.3

Source: Authors' calculations based on Currie et al 2012

iv) Subjective health. Table 5 summarizes the results regarding the perceived health status component which is also based on two indicators: the percentage of young people who report their health as fair or poor and those with self-reported health complaints. The former indicator is a conventional self-reported health indicator but the latter indicator may be treated as an indicator of mental health in that it is based on the answers to seven questions about psychosomatic

symptoms similar to the Strengths and Differences Questionnaire.[4] There is no association between these two indicators. Only Portugal and Slovenia are in the best performing group on both and only Poland and the United States are in the worst performing group on both. Italy is fourth best on rating health as fair or poor but the worst country of all in self-reported health complaints.

Table 5 *Subjective health*

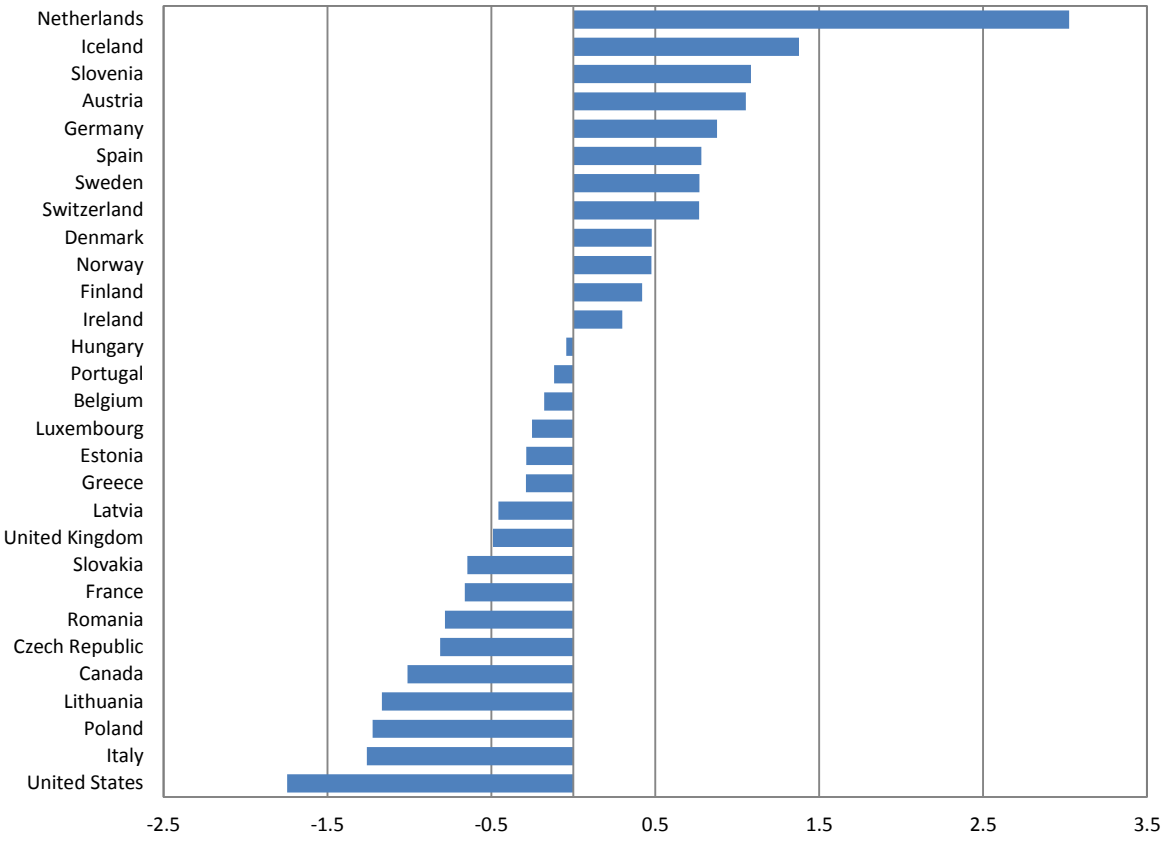
	rating health as fair or poor	self-reported health complaints
Slovenia	10.2	16.8
Switzerland	7.7	28
Germany	12.6	20.7
Portugal	11.6	22.6
Spain	6.8	30.7
Austria	12.5	21.3
Finland	12.4	24.8
Ireland	11.5	28.5
Netherlands	13.6	25.4
Greece	6.5	38.2
Denmark	16.6	24.1
Estonia	13.6	30
Sweden	13.5	30.3
Czech Republic	10.1	37.8
Luxembourg	14.3	30.8
Slovakia	11.3	36.7
France	11.6	36.8
Canada	15.1	31.5
Iceland	15.7	31.3
Norway	17.1	29.1
United Kingdom	17	31.2
Belgium	19.3	28.5
Lithuania	14.7	36.2
Italy	9.1	46.4
Hungary	20.1	31.5
Latvia	19.1	33.3
Poland	17.8	36
Romania	15.5	40.7
United States	21.4	34.6

Source: Authors' calculations based on Currie et al 2012

[4] Young people were asked how often they had experienced the following symptoms in the last six months: headache; stomach ache; feeling low, irritable or bad tempered; feeling nervous; difficulties in getting to sleep; feeling dizzy. Response options for each symptom ranged from "about every day" to "rarely or never". The findings presented show the proportions reporting multiple (two or more) health complaints more than once a week in the past six months.

Figure 2 shows results for the overall subjective well-being dimension – that is after combining the indicators into components and the components into the domain. The Netherlands is a clear outlier on subjective well-being, performing much better than the other countries. Only Iceland among the Nordic countries is in a top position. Spain performs well as a result of its good results on life satisfaction, relationships and perceived health status. The worst performing country overall is the USA.

Figure 2 *Subjective well-being in rich nations*



Source: Authors' calculations

The association between the subjective well-being indicators is explored in Table 3. Three of the four components are associated with overall subjective well-being. The exception is subjective education where neither 'liking school a lot' nor 'pressured by school work' are associated with overall subjective well-being. The strongest association with overall subjective well-being is self-reported health complaints and class mates who are kind and helpful. Among the components, life satisfaction is only associated with subjective health while it is not correlated with indicators for the quality of children's relationships with parents and peers ('relationships') nor with subjective satisfaction in the education component ('subjective education'). Moreover, 'relationships' and 'subjective education' are not associated with any other component (Table 6).

Table 6 *Correlation matrix of subjective well-being indicators, components and domains (z scores Spearman rank)*

	Life satisfaction	Easy to talk to mothers	Easy to talk to fathers	Classmates kind and helpful	Pressured by school	Like school a lot	Health fair or poor	Self-reported health	Relation-ships	Subjective education	Subjective health	Subjective domain
Life satisfaction	1.000	.229	.240	.509**	-.234	-.133	.295	.416*	.350	-.228	.487**	.646**
Easy to talk to mothers		1.000	.931**	.118	-.002	.085	-.039	.135	.798**	.051	.117	.393*
Easy to talk to fathers			1.000	.189	.066	.224	-.219	.189	.842**	.185	.031	.452*
Classmates kind and helpful				1.000	-.035	.160	.102	.699**	.607**	.109	.511**	.755**
Pressured by school					1.000	.144	-.239	-.047	-.034	.756**	-.164	.066
Like school a lot						1.000	-.466*	.092	.193	.737**	-.232	.266
Health fair or poor							1.000	.028	-.075	-.437*	.691**	.184
Self-reported health								1.000	.491**	-.007	.705**	.778**
Relationships									1.000	.111	.283	.669**
Subjective education										1.000	-.275	.228
Subjective health											1.000	.692**
Subjective domain												1.000

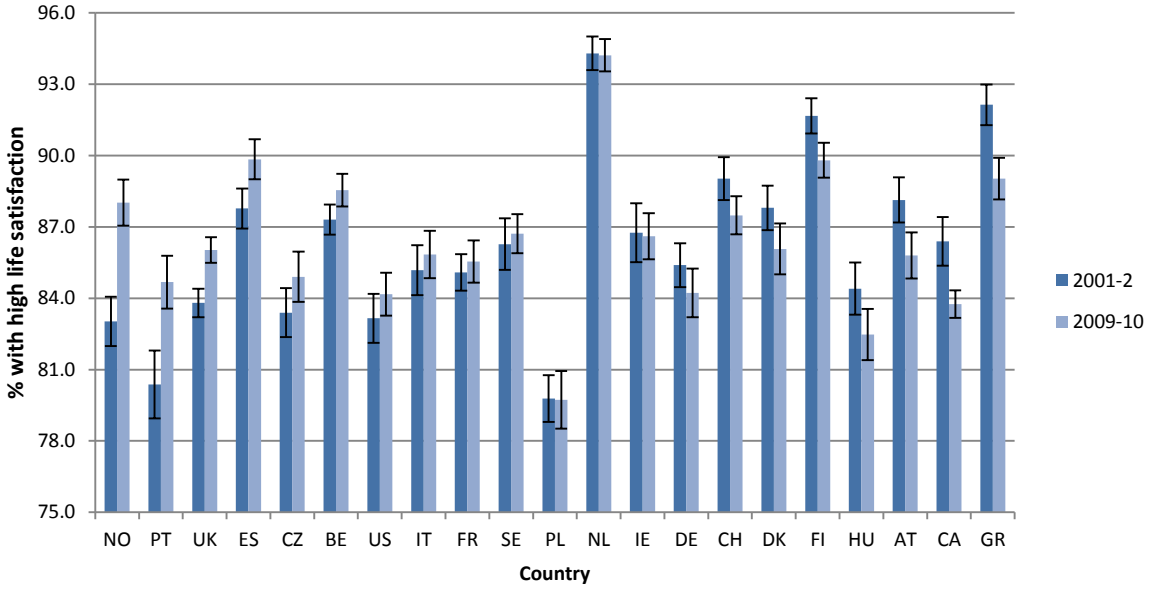
3.2. Changes in the subjective well-being dimension during the last decade

It is interesting to analyse how subjective well-being changed over the last decade using HBSC data for 2001/2002 and 2009/10. As in Martorano et al. (2013b), there are some problems due to some changes introduced in building the components of Report Card 7 and Report Card 11. Although the number of components is the same, the number of the indicators is different. First of all, we add two indicators referring to relationships with parents to the peer relations component. Consequently, 'peer relations' in Report Card 7 corresponds to the 'relationships' component in Report Card 11. Secondly, the percentage of young people who feel pressured by school is added to the education component, while that of young people self-reporting health complaints is added to the health component. These two components are renamed respectively 'subjective educational well-being' and 'subjective health well-being' in Report Card 11. Lastly, the 'personal well-being' component in Report Card 7 is renamed 'life satisfaction'.

Thus, we build a modified subjective child well-being index thanks to the availability of at least one indicator for each component. As in Martorano et al. (2013b), the index is computed as the average rank of the four components, and countries are ranked according to them. The component value is given by a simple average of the z-scores for the different indicators. Finally, the countries under analysis are only the 21 originally included in Report Card 7.

i) Life satisfaction. Figure 3 shows two different trends. In half of the countries the percentage of children satisfied with their lives increased. Norway is the country which recorded the biggest improvement. The proportion with high life satisfaction also improved significantly in Portugal, the United Kingdom and Spain. In the remaining countries, there was either no significant change or a significant reduction in the percentage of young people with high life satisfaction (i.e. in Austria and Canada), with Greek children experiencing the biggest decline. The Netherlands was clearly an outlier with the percentage of young people with scores above the mid-point of life satisfaction close to 95 per cent in both the early and the late 2000s.

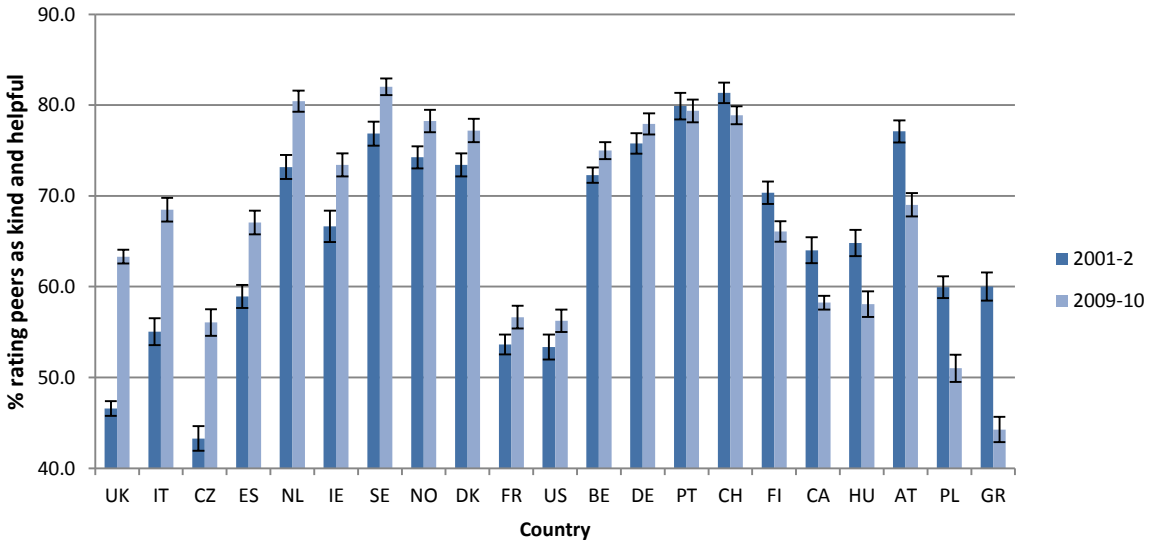
Figure 3 *Percentage of young people aged 11, 13 and 15 who rated their life satisfaction with a score of 6 or more on the 11-step 'Cantril Ladder' scale between 2001/2002 and 2009/2010.*



Source: Authors' calculations based on Currie et al (2004, 2012).
Note: See Annex Table A for country abbreviations.

ii) Classmates kind and helpful. To represent children's relationships we have used only one indicator: the percentage of young people that find their classmates kind and helpful. In the majority of countries the percentage of children who consider their classmates kind and helpful increased over the last decade. The biggest improvements were in the UK, Italy and the Czech Republic even though all these countries started from a low percentage in 2001/2002. In contrast, Austria, Canada, Greece and Poland recorded significant and large negative changes (Figure 4).

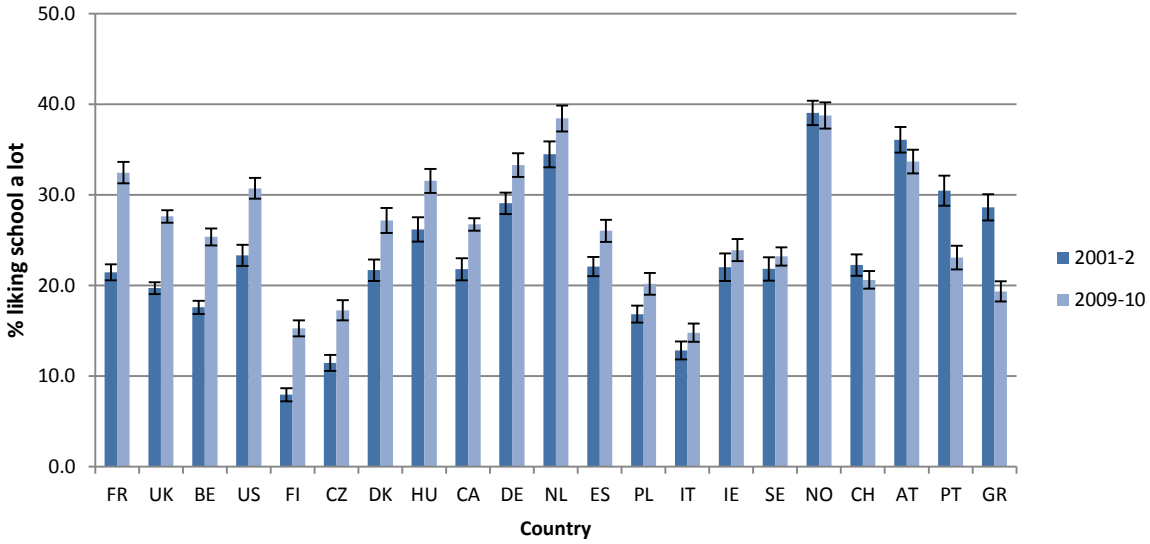
Figure 4 *Percentage of young people who find their classmates kind and helpful - 2001/2002 and 2009/2010*



Source: Authors' calculations based on Currie et al (2004, 2012).
Note: See Annex Table A for country abbreviations.

iii) Liking school a lot. Figure 5 shows changes in the percentage of young people liking school a lot over the last decade. In particular, improvements were seen in the vast majority of the countries but were most outstanding in Belgium, Finland, France, the United Kingdom and the United States. In contrast it decreased significantly in Greece and Portugal.

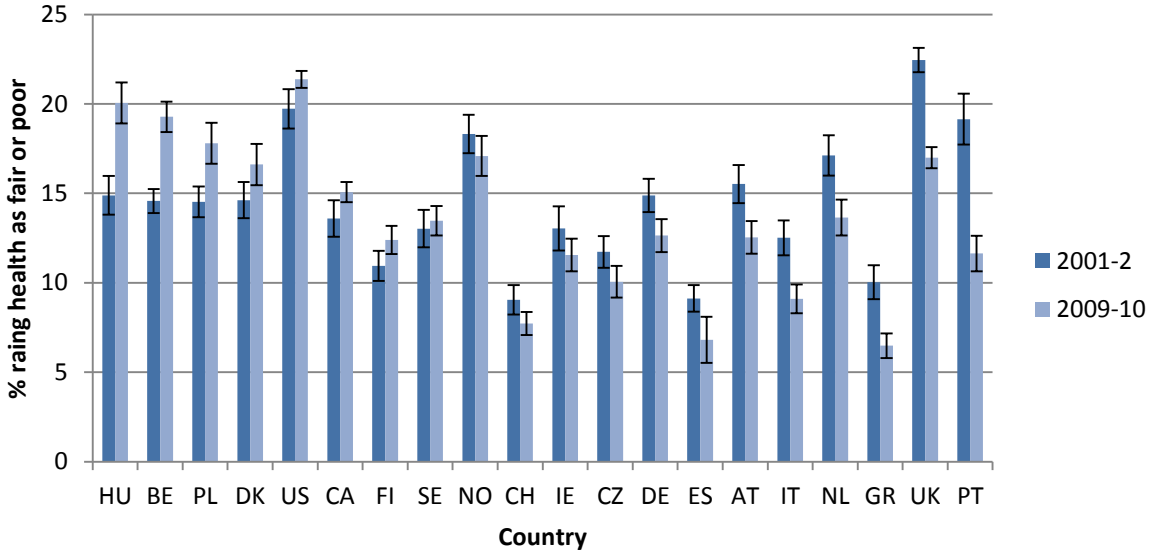
Figure 5 *Changes in percentage of young people who report liking school a lot between 2001/2002 and 2009/2010*



Source: Authors' calculations based on Currie et al (2004, 2012). **Note**: See Annex Table A for country abbreviations.

iv) Health – fair or poor. Figure 6 shows changes in the percentage of children reporting their health as only fair or poor between 2001/2002 and 2009/2010. The biggest improvement is observed in Portugal and the United Kingdom. In contrast, the percentage of young people rating their health as only fair or poor increased significantly in Belgium, Hungary and Poland.

Figure 6 *Changes in percentage of young people rating their health as 'fair' or 'poor' between 2001/2002 and 2009/2010*



Source: Authors' calculations based on Currie et al (2004, 2012). **Note**: See Annex Table A for country abbreviations.

v) Overall subjective well-being. Table 7 shows the results for the overall subjective well-being dimension between 2001/2002 and 2009/2010. The most evident changes are related to Norway (+7 positions), followed by France and Portugal (+6 positions). In contrast, Greece experienced the greatest fall (-11) moving from the top group to an intermediate position. On the whole, the group compositions are relatively stable over the last decade.

Table 7 *Changes in subjective well-being in rich nations between 2001/2002 and 2009/2010*

	Subjective well-being RC7	Subjective well-being RC11	Difference
Norway	10	3	7
France	17	11	6
Portugal	15	9	6
Spain	7	2	5
United Kingdom	21	16	5
Ireland	11	8	3
Czech Republic	20	18	2
Italy	16	15	1
Belgium	12	12	0
Germany	5	5	0
Netherlands	1	1	0
Denmark	9	10	-1
Sweden	6	7	-1
USA	19	20	-1
Austria	4	6	-2
Switzerland	2	4	-2
Poland	18	21	-3
Canada	13	17	-4
Finland	8	13	-5
Hungary	14	19	-5
Greece	3	14	-11

Source: Authors' calculations

4. WHAT EXPLAINS VARIATIONS IN SUBJECTIVE WELL-BEING?

In this section we try to analyse not only the relationship between subjective and objective domains, but also how subjective well-being is affected by other factors.

4.1. Relationship between subjective and objective domains

How are the subjective components and the overall subjective well-being domain related to the other more objective domains of well-being? Table 8 summarises the associations. In general, subjective well-being is associated with all the objective domains. Overall well-being (excluding subjective) is associated with all the components of subjective well-being except educational well-being. In fact, subjective education is not associated with any of the objective domains, including that of education. Material well-being is associated with all the other subjective components. The health and safety and the housing and environment domains are associated with life satisfaction and subjective health but not family relations and education. Behaviour is associated with life satisfaction. The strongest associations between overall subjective well-being and the other domains are with material well-being and housing and the environment.

Table 8 *Correlation between the other domains of well-being, overall subjective well-being and the subjective well-being components.*

	Overall subjective well-being	Life satisfaction	Family relations	Subjective education	Subjective health
Material well-being domain	.677**	.600**	.379*	.167	.458*
Health and safety domain	.542**	.620**	.393*	-.106	.427*
Education domain	.474**	.290	.437*	.201	.239
Behaviour domain	.534**	.447*	.367	.119	.360
Housing and environment domain	.610**	.598**	.277	.012	.504**
Overall (excluding subjective well-being)	.666**	.576**	.448*	.139	.429*

Source: Authors' calculations

Table 9 compares the rank orders of the child well-being index (without subjective well-being) and the subjective well-being dimension. The Netherlands is the best performing country on both. Also Iceland, Norway and Sweden are in the top group of countries on both objective and subjective well-being. Italy, Lithuania, Poland, Romania, Slovakia and the United States are in the bottom group of countries for both the objective and subjective measures. In other countries the pattern is more mixed. Austria, Slovenia and Spain are the countries with a positive difference in their ranking between subjective well-being and 'objective' well-being. In contrast, for the Czech Republic, France and Italy there is a negative difference (indicating that their ranking based on 'objective' indicators is higher than their ranking based on subjective well-being).

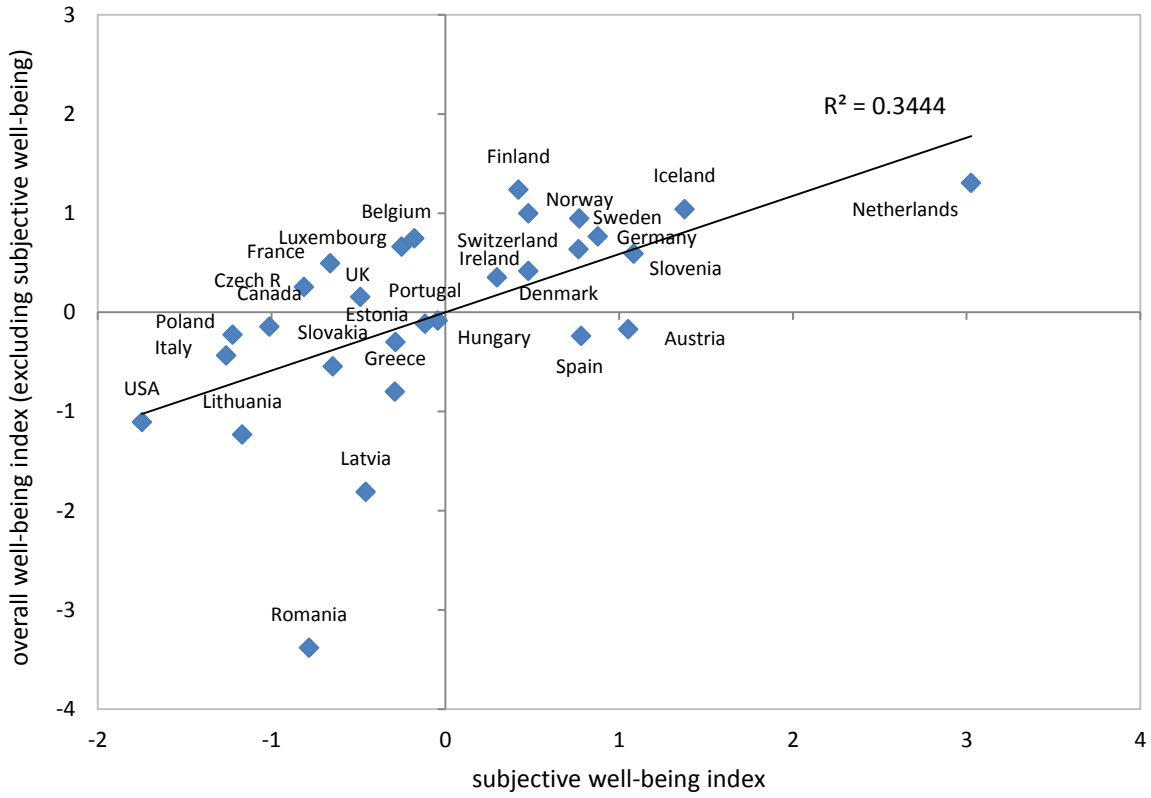
Table 9 *Child well-being rank versus subjective well-being*

	Child well-being index	Subjective well-being index
Netherlands	2.4	1
Norway	4.6	10
Iceland	5.0	2
Finland	5.4	11
Sweden	6.2	7
Germany	9.0	5
Luxembourg	9.2	16
Switzerland	9.6	8
Belgium	11.2	15
Ireland	11.6	12
Denmark	11.8	9
Slovenia	12.0	3
France	12.8	22
Czech Republic	15.2	24
Portugal	15.6	14
United Kingdom	15.8	20
Canada	16.6	25
Austria	17.0	4
Spain	17.6	6
Hungary	18.4	13
Poland	18.8	27
Italy	19.2	28
Estonia	20.8	17
Slovakia	20.8	21
Greece	23.4	18
USA	24.8	29
Lithuania	25.2	26
Latvia	26.4	19
Romania	28.6	23

Source: Authors' calculations

Figure 7 shows the association between objective and subjective well-being graphically. Latvia, the Netherlands and Romania have higher subjective well-being than might be expected given their overall 'objective' well-being. In contrast, Canada, France, Italy, Luxembourg, Poland and the United States all have lower subjective well-being than might be expected given their score on 'objective' well-being.

Figure 7 *Association between overall well-being excluding subjective well-being and overall subjective well being*



Source: Authors' calculations

4.2 The relationship between subjective well-being and structural factors

Several studies have investigated the different factors contributing to levels of and changes in subjective well-being. According to Stevenson and Wolfers (2008), there are no differences between the micro and macro levels as *within* country analysis and *between* country analyses lead to the same results. In particular, "estimates of the within- and between-country well-being-income gradient tend to lie in the range of 0.2-0.4" (Stevenson and Wolfers, 2008: 32). Based on a sample of 129 countries, Deaton (2008) confirms the same results finding a correlation close to 0.8 between life satisfaction and log average income. The natural conclusion emerging from these analyses is that increasing income could make people happier, generating a more satisfied society.

However, there is no general consensus in the macro literature about this point. As reported by Frey and Stutzer (2003), the results are mixed and it is not possible to draw firm conclusions. Some analyses show that there is low correlation between income and life satisfaction while other researchers find it is not significant in rich countries (see Böhnke and Kohler, 2008; Frey and Stutzer 2002). Indeed, the famous 'Easterlin paradox' highlights that satisfaction in the society is not strictly related to variation in the material conditions beyond a certain threshold (Easterlin 1974). One of the explanations is related to the existence of decreasing marginal utility: "concretely, this means that the effect of earning an additional ten thousand dollars on subjective well-being becomes progressively smaller as one's initial level of income increases" (Clark and Senik, 2011: 14).

Consequently, a growing part of the literature stresses that in rich societies subjective well-being is affected by other factors. For example, the level of subjective well-being is negatively related to unemployment (Pittau et al., 2010) and also to inflation (Frey and Stutzer, 2003; di Tella et al., 2003). Moreover, a number of studies suggest that it is the relative position occupied in the society rather than the level of income per se that counts (Layard, 2005). Empirical evidence confirms that on average high income inequality is associated to low subjective well-being (Verme, 2011). However, according to Alesina et al. (2004), this result holds for European countries but not for the United States where the expectation that one will move up the distribution in the future reduces the negative effect of inequality on life satisfaction.

Beyond economic factors, subjective well-being could be affected by institutional and social factors. Inglehart et al. (2008) found a positive correlation between subjective well-being and freedom, while Veenhoven (2000) argues that it is economic freedom in particular that generates a positive impact on happiness. Hudson (2006) shows a positive association between satisfaction and the quality of institutions; Dorn et al. (2007) point out that democratization improves subjective well-being as people tend to participate more in the society.

Finally, a number of publications also introduced variables such as religion and language in an attempt to catch cultural differences (Dorn et al., 2007). Notwithstanding the difficulty of finding valid proxies to measure cultural differences, these variables seem to be important factors in explaining the level of subjective well-being, at least of adults.

4.2.1. Empirical analysis

It is interesting to investigate the relationship between subjective well-being and other structural factors. In contrast to the previous studies, our analysis considers children's subjective well-being and tries to regress it on a set of variables considered relevant for children according to the empirical literature.

The description of the variables is reported in Table 10. First, we include the level of income proxied by the GDP per capita. Since our analysis is based on high income countries, we do not expect subjective well-being to be affected by the material conditions. As reported in the previous section, the level of subjective well-being in high income countries seems to be more affected by factors such as inequality and the quality of institutions. To measure the level of inequality we introduce the Gini coefficient. The assumption is that more inequality produces less satisfaction inside the society. To proxy for the quality of institutions we include the government effectiveness index provided by Kaufmann et al. (2010). This index measures the quality of governments in producing public goods and providing services, and more generally operating independently and efficiently. We expect good institutions to impact positively on family satisfaction and therefore on children's subjective well-being. Moreover, subjective child well-being could be affected by government policies toward family conditions. In countries where government is more sensitive to the problems of families, satisfaction will be higher than in other countries. For all these reasons we include the percentage of GDP spent by government on families. We expect that more expenditure will impact positively on subjective well-being since children can enjoy more services and so on.

Table 10 *Description of variables*

Variable name	Description	Source	Year
Subjective well-being	Index of children's subjective well-being	Authors' elaboration	2009 -2010
GDP per capita	GDP per capita, PPP (constant 2005 international $)	World Development Indicators	2008
Gini	Gini on income	Eurostat, OECD and national sources	2008-2009
Public expenditure on families	Public expenditure on families (% of GDP)	OECD	2009
Government effectiveness	Quality of institutions	Kaufmann et al. (2010)	2008

Finally, although cultural differences are important in understanding the level of subjective well-being, these are difficult to capture. The authors are well aware that the exclusion of such important factors limits the analysis.

In order to analyze the factors affecting children's subjective well-being, a simple OLS regression is used. Table 11 confirms that the level of income is not a relevant variable in explaining international differences in children's subjective well-being in advanced economies. Other factors such as income inequality and the quality of institutions played a more important role. In particular, Table 11 shows that the Gini coefficient is negative and significant. In other words, high inequality reduces children's subjective well-being in the society. Moreover, Table 11 shows that the government effectiveness index is positive and significant. Consequently, the quality of life is positively affected by the quality of institutions. Public expenditure on families, however, has no additional significant influence.

Table 11 *Factors affecting children's subjective well-being – OLS regression results (dependent variable: children's subjective well-being)*[5]

VARIABLES	1	2	3	4
GDP per capita	0.0221 [0.016]	0.0128 [0.015]	-0.0099 [0.009]	-0.0085 [0.010]
Gini		-0.0980** [0.039]	-0.0764* [0.042]	-0.0967* [0.049]
Government effectiveness			0.7102** [0.302]	0.8354** [0.397]
Public expenditure on families				-0.0475 [0.226]
Constant	-0.6852 [0.442]	2.5068* [1.456]	1.6482 [1.510]	2.1204 [1.710]
Observations	29	29	29	26
R-squared	0.073	0.227	0.317	0.294

Source: Author's compilation.
Notes: Robust standard errors in brackets. * significant at 10%; ** at 5%; *** at 1%

[5] See Annex for the correlation matrix.

5. CONCLUSION

As has been highlighted in this paper, subjective well-being represents an important component of overall well-being. The data show that children in the Netherlands present the highest level of subjective well-being. Between the early and the late 2000s, it is possible to observe that the changes in subjective well-being were relatively modest. The countries that recorded the highest variations in a positive direction were Norway, Portugal and the United Kingdom, while Austria, Canada and Greece recorded the most important falls.

The relationship between subjective well-being and its components to the other more 'objective' measures of well-being (included in UNICEF's *Innocenti Report Card 11*) revealed interesting results. We found there is an association between subjective well-being and all of the objective domains of well-being. This study also explored the relationship between subjective well-being and some structural factors. Our macro-analysis finds that the level of income (GDP per capita) is not a relevant variable in explaining international differences in children's subjective well-being in advanced economies. Indeed, the 'Easterlin paradox' highlights that satisfaction is not related to the variation of material conditions beyond a certain income threshold (Easterlin, 1974). However, other factors play a more important role. In particular, in rich societies people value their relative economic position more. Consequently, high inequality negatively impacts on children's subjective well-being. In addition, the quality of life is positively correlated to the quality of institutions.

These results suggest some policy implications: governments could improve children's subjective well-being by promoting redistributive policies, producing public goods and providing services in an independent and efficient way. It is also clear that better material conditions and higher quality in health, education and housing have a positive impact on children's feelings of well-being; governments seem far from powerless when they have the policy objective of making their nation's children feel happier.

Annex Table A Country's abbreviations

Abbr.	Country
AT	Austria
BE	Belgium
CA	Canada
CH	Switzerland
CZ	Czech Republic
DE	Germany
DK	Denmark
ES	Spain
FI	Finland
FR	France
GR	Greece
HU	Hungary
IE	Ireland
IT	Italy
NL	Netherlands
NO	Norway
PL	Poland
PT	Portugal
SE	Sweden
UK	UK
US	United States

Annex Table B Correlation matrix

	Subjective well-being	GDP per capita	Gini	Public expenditure on families	Government effectiveness
Subjective well-being	1.0000				
GDP per capita	0.3053	1.0000			
Gini	-0.4077**	0.0181	1.0000		
Public expenditure on families	0.2807	0.2479	-0.4128**	1.0000	
Government effectiveness	0.4031**	0.7203***	-0.1491	0.2779	1.0000

Source: Author's compilation.
Notes: * significant at 10%; ** at 5%; *** at 1%

Data and sources – late 2000s (2009/2010)				
Dimension name	**Component name**	**Indicator description**	**Date(s)**	**Source(s)**
Subjective well-being	Life satisfaction	***Life satisfaction*** Percentage of young people aged 11, 13 and 15 who rate themselves above the middle of the life satisfaction scale	2009/2010	Currie C, Zanotti C, Morgan A et al. (2012) Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. Copenhagen: World Health Organization.
	Relationships	***Easy to talk to mothers*** Percentage of young people aged 11, 13 and 15 who find it easy to talk to mothers	2009/2010	Currie C, Zanotti C, Morgan A et al. (2012) Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. Copenhagen: World Health Organization.
		Easy to talk to fathers Percentage of young people aged 11, 13 and 15 who find it easy to talk to fathers	2009/2010	Currie C, Zanotti C, Morgan A et al. (2012) Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. Copenhagen: World Health Organization.
		Classmates are kind and helpful Percentage of young people aged 11, 13 and 15 who find their peers 'kind and helpful'	2009/2010	Currie C, Zanotti C, Morgan A et al. (2012) Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. Copenhagen: World Health Organization.
	Subjective educational well-being	***School work*** Percentage of young people aged 11, 13 and 15 who feel pressured by school work	2009/2010	Currie C, Zanotti C, Morgan A et al. (2012) Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. Copenhagen: World Health Organization.
		Young people liking school a lot Percentage of students aged 11, 13 and 15 who report liking school a lot	2009/2010	Currie C, Zanotti C, Morgan A et al. (2012) Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. Copenhagen: World Health Organization.
	Subjective health well-being	***Health rating*** Percentage of young people aged 11, 13 and 15 who rate their health as fair or poor	2009/2010	Currie C, Zanotti C, Morgan A et al. (2012) Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. Copenhagen: World Health Organization.
		Health complaints Prevalence of self-reported health complaints	2009/2010	Currie C, Zanotti C, Morgan A et al. (2012) Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. Copenhagen: World Health Organization.

Data and sources– early 2000s (2001/2002)				
Dimension name	**Component name**	**Indicator description**	**Date(s)**	**Source(s)**
Subjective well-being	Life satisfaction	***Life satisfaction*** Percentage of young people aged 11, 13 and 15 who rate themselves above the middle of the life satisfaction scale	2001/02	Currie, C., et al (eds) (2004) Young People's Health in Context. Health Behaviour in School-Aged Children Study (HBSC): International report from the 2001/2002 study, WHO Regional Office for Europe.
	Relationships	***Classmates are kind and helpful*** Percentage of young people aged 11, 13 and 15 who find their peers 'kind and helpful'	2001/02	Currie, C., et al (eds) (2004) Young People's Health in Context. Health Behaviour in School-Aged Children Study (HBSC): International report from the 2001/2002 study, WHO Regional Office for Europe.
	Subjective educational well-being	***Young people liking school a lot*** Percentage of students aged 11, 13 and 15 who report liking school a lot	2001/02	Currie, C., et al (eds) (2004) Young People's Health in Context. Health Behaviour in School-Aged Children Study (HBSC): International report from the 2001/2002 study, WHO Regional Office for Europe.
	Subjective health well-being	***Health rating*** Percentage of young people aged 11, 13 and 15 who rate their health as fair or poor	2001/02	Currie, C., et al (eds) (2004) Young People's Health in Context. Health Behaviour in School-Aged Children Study (HBSC): International report from the 2001/2002 study, WHO Regional Office for Europe.

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