

Inequalities in wellbeing

Background briefings and engagement from the
Making Wellbeing Count for Policy project

This document contains background materials related to the Making Wellbeing Count project funded by the ESRC, conducted by Cambridge University, City University London, and the New Economics Foundation.

As part of that project, three roundtables were held, each with a mix of policy makers, practitioners and academics to share emerging findings, discuss their implications for policy and practice and identify areas for further research. The three roundtables covered:

- Inequalities in wellbeing
- Wellbeing, governance and the perceived quality of society
- The five ways to wellbeing

This paper brings together the background materials on inequalities in wellbeing. Below can be found the following:

- Briefing paper: 'Inequalities in wellbeing' (New Economics Foundation)
- Briefing paper: Inequalities in well-being: Insights from a comprehensive well-being measure (University of Cambridge)
- Summary of roundtable discussion

Both briefing papers were shared with participants ahead of the roundtable.

Roundtables followed Chatham House rules, and comments are therefore not attributed to participants.

The project culminated in the final report *Looking through the wellbeing kaleidoscope*. The report, and background documents on the other two roundtables are available at the project website www.wellbeingcounts.org.

Roundtable briefing: Inequalities in wellbeing

Written by: Saamah Abdallah and Annie Quick

Making Wellbeing Count for Policy

An ESRC-funded collaboration between City University, Cambridge University and the New Economics Foundation, using the European Social Survey

@WBForPolicy

www.wellbeingcounts.org

New Economics Foundation Registered charity number 1055254

Contents

Introduction	2
Inequalities between population groups.....	2
Inequality in overall wellbeing in the population	2
What do we know from the research so far?	3
Inequalities between population groups.....	3
Inequality in overall wellbeing in the population	3
Inequalities in life satisfaction	4
Methods	4
Measures of wellbeing inequality	4
Testing for the drivers of wellbeing inequality	4
Results	4
Wellbeing inequality across Europe.....	4
What is associated with wellbeing inequality?	8
Conclusion: the way ahead	9
Appendix 1	10
Appendix 2	11
Endnotes.....	13

Introduction

What matters more: the greatest overall happiness, or the happiness of the greatest number? This question has concerned philosophers for centuries. Most famously utilitarianism, which traditionally dictates that public policy should be decided based on which action creates the highest aggregate happiness, has been criticised precisely because of its inattention to the distribution of happiness.¹

While people may differ in opinion about the extent to which equality should be prioritised, most people would agree that it is somewhat important.

However, the majority of wellbeing research has so far concentrated on policies to increase *average* population wellbeing, giving little or no attention to who is likely to win and who is likely to lose from a given intervention.

There are at least two ways in which to examine inequalities in wellbeing.

Inequalities between population groups

The first is the difference in average wellbeing scores between population groups. For example, lower income groups almost always have lower wellbeing than higher income groups, and ethnic minorities tend to have lower wellbeing than others. These differences between groups can be quantified allowing us to compare how different countries are doing on inequalities between groups, observe how these inequalities change over time and examine how they are affected by policy changes.

Inequality in overall wellbeing in the population

The second approach involves looking at the distribution in overall population wellbeing, without consideration of any other variables such as income or ethnicity. This is a measure of the overall distribution throughout the whole population. In this way, it is akin to measures such as income ratios or the Gini coefficient which is often used to measure inequalities in income.

What do we know from the research so far?

Although research on wellbeing inequalities is still lagging behind research on average wellbeing, some findings are beginning to emerge from the research.

Inequalities between population groups

There is extensive research describing differences in wellbeing between population groups. Key findings which have emerged are: ^{2 - 4}

- Lower income groups, and lower education groups, have lower average wellbeing than higher income and education groups.
- Studies from the UK and the US have found that many ethnic minorities have lower wellbeing than the rest of the population.⁵ This holds even after controlling for other factors, such as income or education.
- Wellbeing differs according to age. This generally takes a U shape: the lowest life satisfaction occurs between about 35 and 50, with higher levels at younger and older ages.
- The picture for gender is mixed; men have higher wellbeing in some countries, and women in others, with some countries showing no difference at all.

Unfortunately, most studies in this area are descriptive. Only a small number has examined drivers of inequalities between groups.^{6 - 8}

Inequality in overall wellbeing in the population

Initial findings on the drivers of inequalities in the overall wellbeing in the population suggest a number of associations: ^{9 - 15}

- Higher GDP seems to be associated with lower wellbeing inequality, at least in rich countries.^{16 17}
- Better governance seems to be associated with lower wellbeing inequality, at least in rich countries.^{18 - 20}
- In rich countries, higher levels of government consumption, transfers and subsidies may be associated with lower wellbeing inequality.²¹
- Higher health inequality may be associated with higher wellbeing inequality.²²
- There are mixed results on the role of economic freedom in relation to wellbeing inequalities, varying according to the indices of economic freedom used, and the inclusion of rich or poor countries.^{23 24}
- Studies on the association between income inequality and wellbeing inequality have been mixed.^{25 - 30} This may be due to complexities in the relationships between GDP, inequality and wellbeing, and also a 'bounded scale' effect from the use of 0-10 life satisfaction scales.^{31 - 33}

Inequalities in life satisfaction

Methods

Measures of wellbeing inequality

We used the Mean Pair Distance (MDP) of life satisfaction scores as our measure of overall wellbeing inequality.³⁴

We also compared life satisfaction scores according to the following demographic groups:³⁵

- Ethnicity: those who identified as an ethnic minority versus other participants
- Gender: men versus women
- Income: top versus bottom income quintile
- Education: those with education up to and including lower secondary versus those with university education.

As part of our research, we identified some irregularities in the income data and these findings should therefore be treated with caution (see Appendix 1 for details).

Testing for the drivers of wellbeing inequality

As well as describing the levels of wellbeing inequality, we wanted to examine the drivers of inequality.³⁶

We conducted multilevel modelling which enabled us to explore associations with a number of other variables over time as well as between countries. Previous studies had indicated that a) a number of our independent variables are associated with mean life satisfaction, and b) mean life satisfaction is associated with inequalities in life satisfaction. This suggests that our analyses of wellbeing inequality could have been confounded by changes in mean life satisfaction. Therefore, all analyses controlled for mean life satisfaction. We also included GDP and unemployment as two variables which could act as confounders.

Our multilevel model also controlled for country fixed effects. This should include variables such as cultural biases, reducing the chance of a misleading finding.³⁷

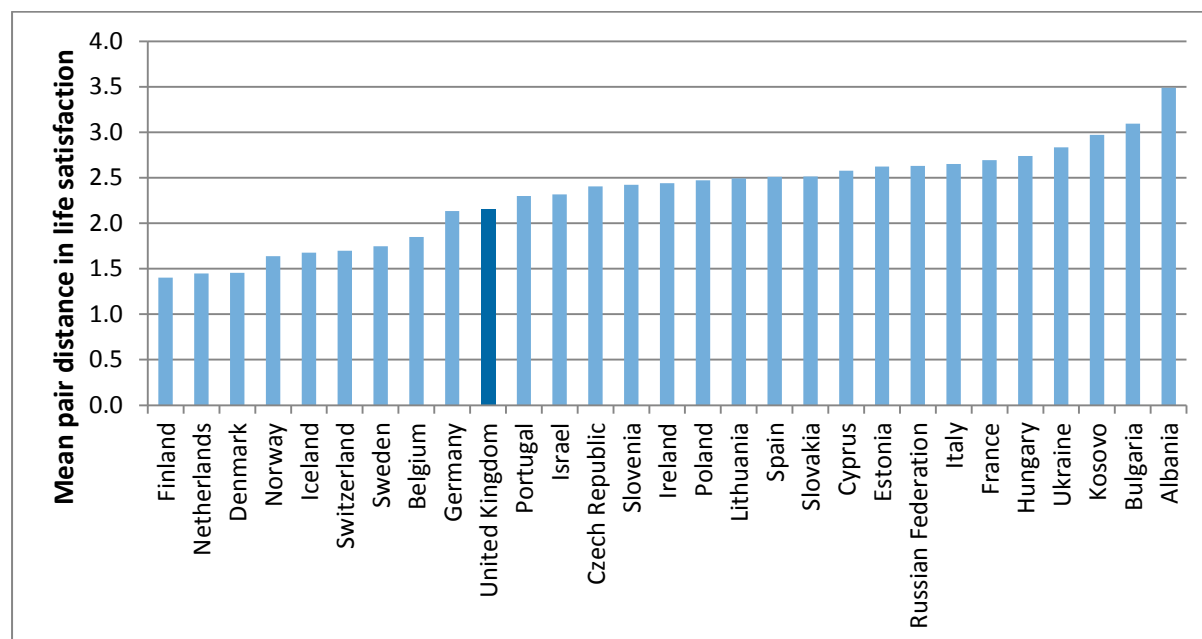
Results

Wellbeing inequality across Europe

When looking at the inequality in overall wellbeing, the UK is more equal than many other European countries. On this measure, the UK ranks 10 out of 29. This is similar to its position for average life satisfaction, where it ranks 11 out of 29.

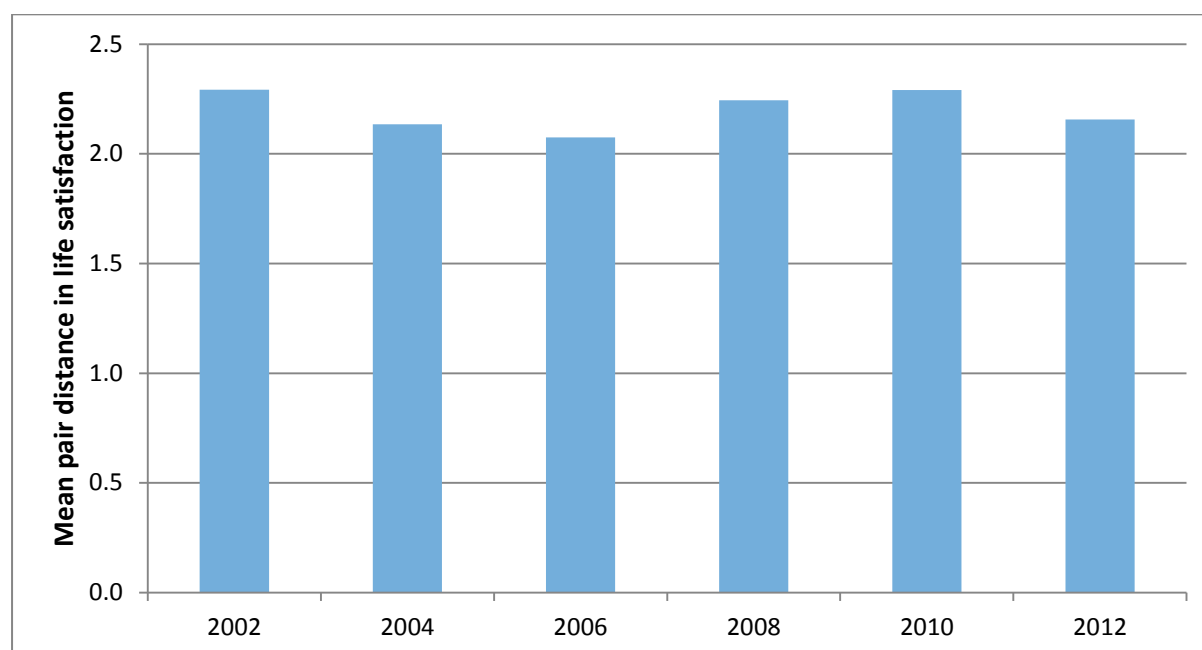
5 Roundtable briefing: Inequalities in wellbeing

Figure 1 Wellbeing inequality in Europe, 2012. European Social Survey, round 6, 2012



Looking back over time since 2002, there has been some variation in this score for the UK: dipping in 2004 and 2006, and then rising again in 2009 and 2010.

Figure 2 Wellbeing inequality in the UK. European Social Survey, rounds 1-6, 2002-2012



Figures 3, 4, 5 and 6 show a high level of variation in how much age, education, income and gender affect life satisfaction across different European countries.

The largest differences are found in income and education. In the case of education, those with a university degree score up to 2.3 points lower on the life satisfaction scale compared to those educated up to lower secondary. However, there is a high level of variation, with Sweden, Ukraine, Cyprus and Finland showing very small differences from 0, with Norway

6 Roundtable briefing: Inequalities in wellbeing

dipping in the opposite direction (i.e. lower educated participants in Norway reported very slightly higher mean life satisfaction than those with higher education).³⁸

In the case of gender the differences are smaller, and the direction varies across countries, with almost no difference in the UK.

Those of an ethnic minority tend to have lower wellbeing than the rest of the population, although Poland, Norway and Germany show little difference.

Figure 3 Difference in life satisfaction according to education

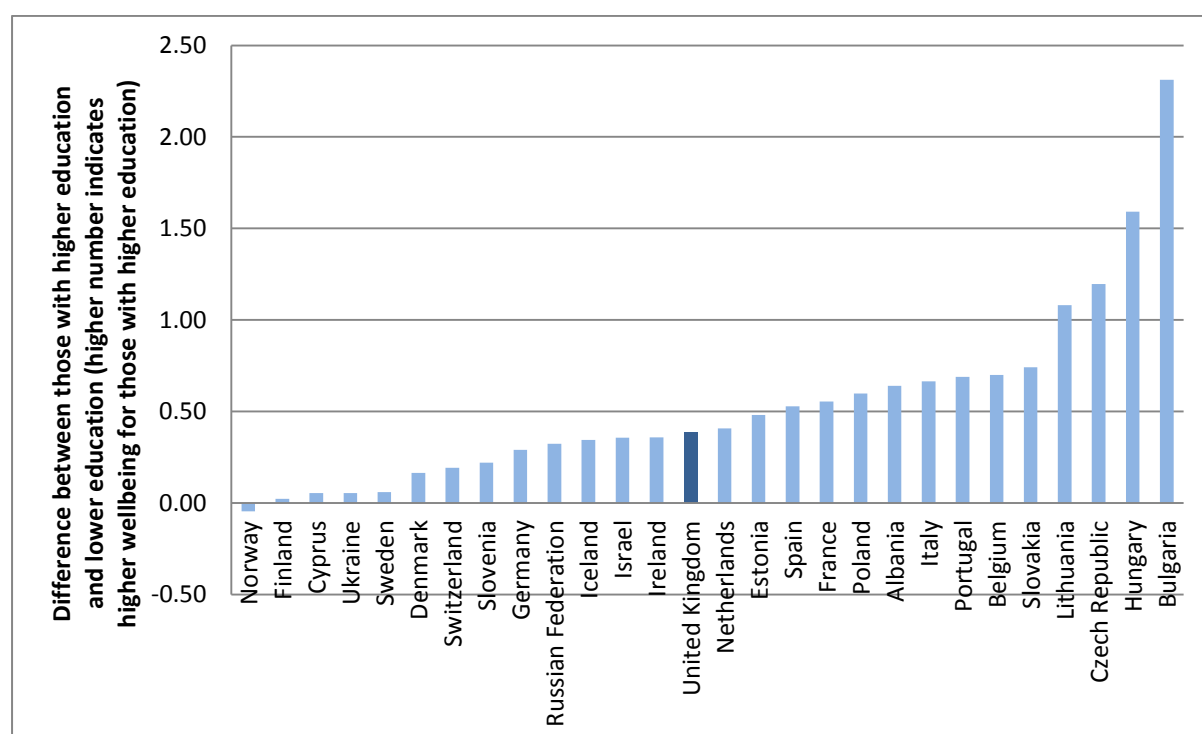
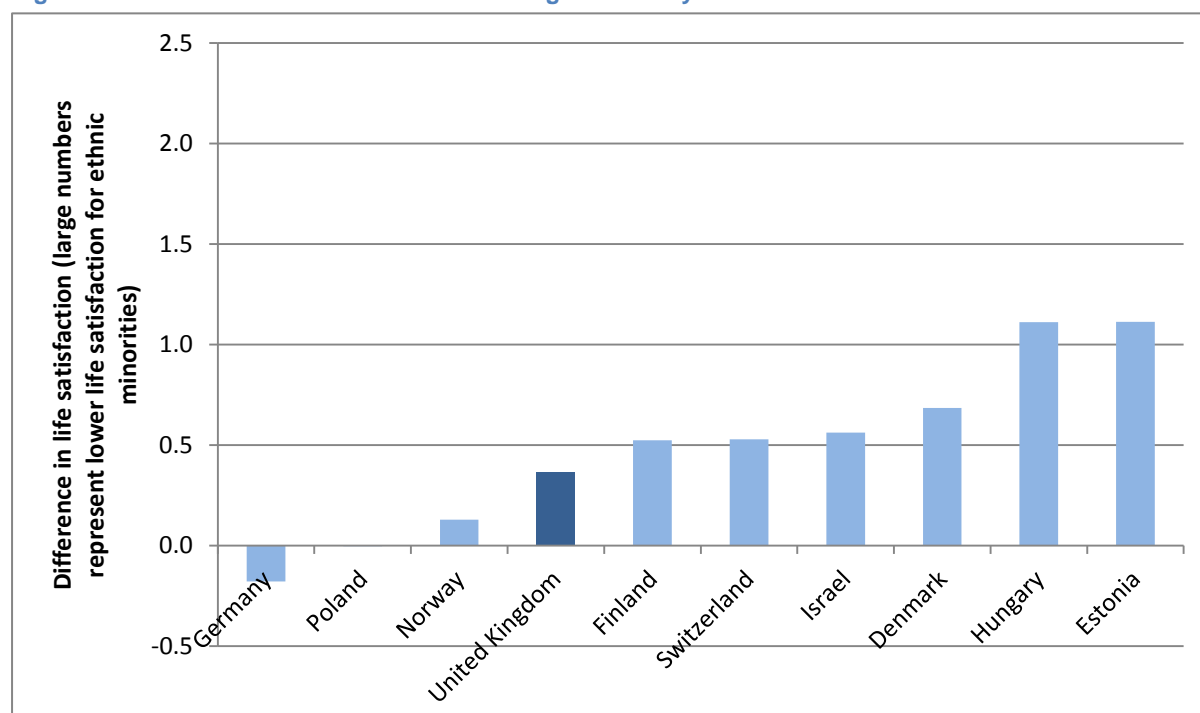


Figure 4 Difference in life satisfaction according to ethnicity



7 Roundtable briefing: Inequalities in wellbeing

Figure 5 Difference in life satisfaction according to gender

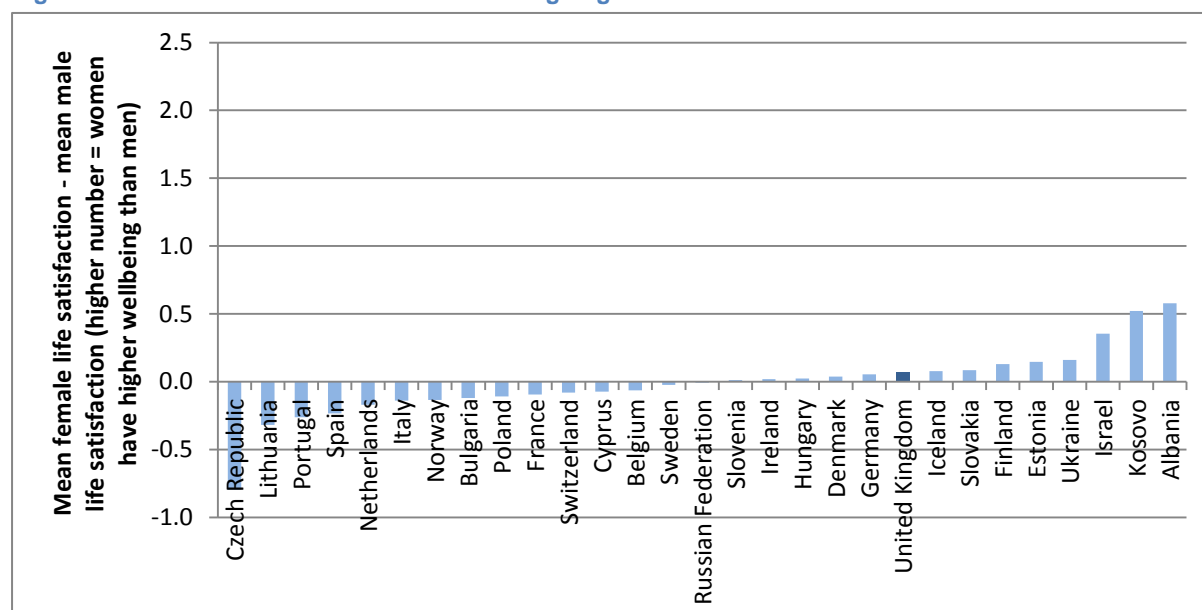
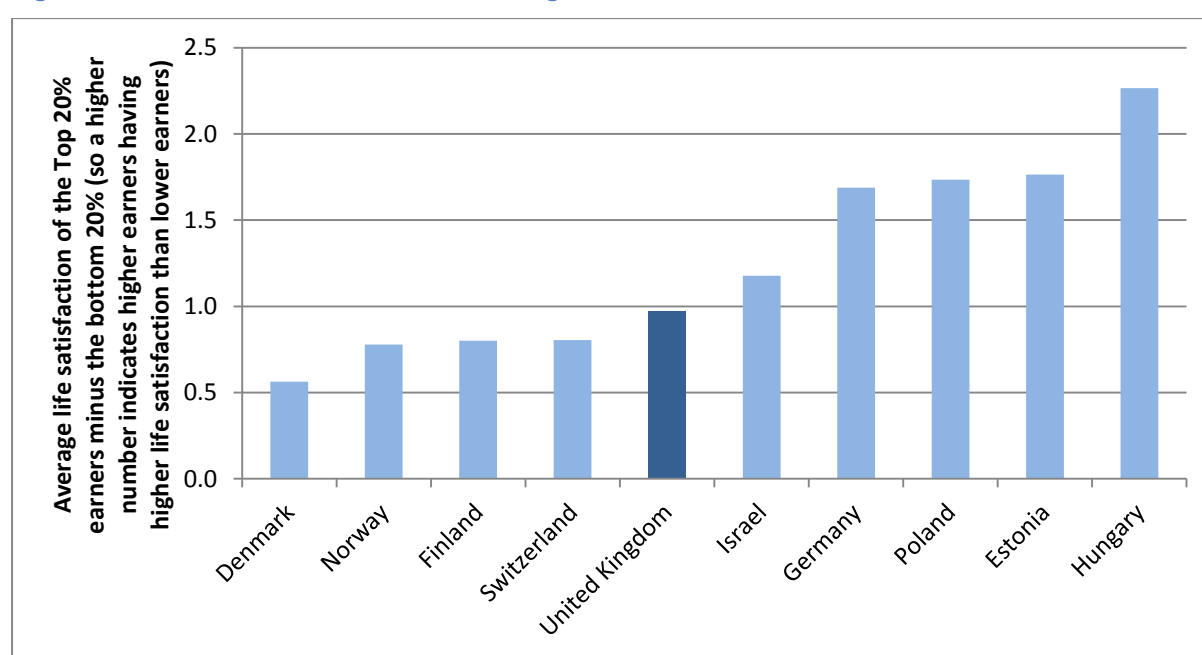


Figure 6 Difference in life satisfaction according to income



8 Roundtable briefing: Inequalities in wellbeing

What is associated with wellbeing inequality?

Table 1 Estimated coefficients for the association between inequality in life satisfaction, and average life satisfaction and independent variables, controlling for GDP and unemployment.

Variable	Inequality in life satisfaction		Average life satisfaction	
	Between countries	Over time	Between countries	Over time
MACROECONOMIC INDICATORS				
Inflation	0.00	0.01	-0.05	-0.04**
Income inequality (gini coefficient)	0.00	0.00	-0.04	0.04**
Urban Density	0.00	0.00	0.01	0.00
Economic freedom (Fraser institute)	-0.13	0.05	0.10	-0.14
Economic freedom (Heritage foundation)	-0.01	0.01	0.01	0.02
GOVERNMENT SPENDING				
Govt spend as a percentage of GDP	0.00	0.00	0.02	0.00
Govt spend on economic affairs	0.01	0.00	-0.02	0.02
Govt spend on education	-0.05	-0.03	0.23**	-0.02
Govt spend on health	-0.02	0.00	0.03	-0.06
Govt spend on order and safety	-0.07	0.01	-0.39	-0.01
Govt spend on recreation and culture	-0.02	0.03	0.23	-0.02
Govt spend on sickness and disability	-0.06	-0.02	0.14	0.06
Govt spend social protection	0.01	0.00	0.02	-0.01
Govt spend unemployment	-0.06	.01	0.35*	0.08
GOVERNANCE				
Control of corruption	-0.17*	0.03	0.56**	-0.05
Government effectiveness	-0.22*	0.06	0.68**	0.22
Political stability	-0.14*	0.15**	-0.02	0.31**
Regulatory quality	-0.19	-0.09	0.48	0.02
Voice and accountability	-0.23*	-0.16	0.43	-0.07
Rule of law	-0.19*	-0.07	0.49*	-0.04
ENVIRONMENT				
Urban Population	-0.01	0.02*	0.01	-0.01
Air pollution	0.00	-0.01	0.02	0.03
ATTITUDES				
Self-enhancement	-0.15	-0.05	0.49	-0.05
Important to reduce inequality	-0.08	-0.13	0.92**	-0.40*
OTHER INEQUALITY MEASURES				
Gender inequalities	1.51	0.66	-5.72**	0.43
Health inequality (according to education)	0.01	-0.01	-0.06	0.05

* indicates significance at 5%

** indicates significance at 1%

9 Roundtable briefing: Inequalities in wellbeing

Each indicator was inputted into a separate model. Models on inequality in life satisfaction also controlled for mean life satisfaction. The model exploring government spending on unemployment also controlled for actual unemployment.

Table 1 shows the associations between inequalities in life satisfaction and a number of possible drivers. Those findings which are in bold and indicated with a * are statistically significant meaning that the association is unlikely to be due to random variation alone. We also show their association to average wellbeing for comparison.

Our results show no association on a number of variables (such as economic freedom and government spending) which previous studies had identified as being associated to wellbeing inequality. It is worth noting, however, that these analyses were controlling for GDP and unemployment. So, if we hypothesise, for example, that economic freedom might affect wellbeing *through* its effect on unemployment, this would not show up. Indeed, when we did the same analysis excluding unemployment, one of the associations was significant (see Appendix 2).

The most notable finding from our analysis was the role of governance as a key indicator effecting inequality in wellbeing. This confirms previous studies identified above, which suggested that, in rich countries at least, countries with better quality governance also have lower levels of inequality in wellbeing. The exception is political stability, where, when measured over time, better quality governance seems to be associated with *higher* inequalities in wellbeing.

In terms of effects on average wellbeing, it is interesting to note that income inequality is associated with lower average wellbeing.

Conclusion: the way ahead

Our analysis points to some tentative conclusions.

Firstly, there is strong variation in the extent to which wellbeing is predicted according to different demographic groups. This suggests that, in many cases, it is not the case that it is the demographic characteristic *per se* which effects wellbeing. An obvious example might be ethnic minorities, where racial discrimination may in fact be the root cause of observed differences in wellbeing.³⁹ It is also reasonable to assume that the varied results for gender across different countries are socially rather than biologically determined. This should encourage policy makers that there may well be policy which can affect these differences.

Secondly, we have added to the literature on those aspects of a society which might contribute to inequalities in wellbeing, finding that governance is one of the most important.

Appendix 1

Table 2 Data sources of indicators

Variable	Source
GDP per capita	World Bank
Unemployment (% of total labor force)	World Bank (ILO estimate) 'the share of the labour force that is without work but available for and seeking employment.'
Inflation	World Bank
Income inequality (gini coefficient of equivalised disposable income)	Eurostat (SILC) http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di12 Please note the source is not clear from their documentation, which implies that it is from the OECD. This is out of data – the source is in fact Eurostat. The coefficient is described out of 100, rather than 1. Higher is more unequal, lower less unequal.
Union Density	OECD Trade union density corresponds to the ratio of wage and salary earners that are trade union members, divided by the total number of wage and salary earners (OECD Labour Force Statistics). Methodology at: http://www.oecd.org/employment/emp/UnionDensity_Sourcesandmethods.pdf
Economic freedom (Fraser institute)	Fraser Institute. Methodology at; Methodology here: http://www.freetheworld.com/
Economic freedom (Heritage foundation)	Heritage Foundation. Methodology at http://www.heritage.org/index/about
Government spending as % of GDP (various categories)	Eurostat. Details at: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_a_exp&lang=en
Governance (control of corruption, government effectiveness, political stability, regulatory quality, voice and accountability, rule of law)	World bank. Larger numbers relate to higher quality governance.
Urban Population	World bank. people living in urban areas as defined by national statistical offices. It is calculated using World Bank population estimates and urban ratios from the United Nations World Urbanization Prospects. http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS
Air pollution. PM2.5, mean annual exposure (micrograms per cubic meter)	World Bank
Self-enhancement	<p>We combined attitudinal measures as follows, using the Schwartz approach: Each question asked the interviewee to listen to a description of a person and say how much that person 'is or is not like you.'</p> <p>'Self-enhancement' was calculated as the mean of the following questions:</p> <ul style="list-style-type: none"> • It is important to her to be rich. She wants to have a lot of money and expensive things • It's important to her to show her abilities. She wants people to admire what she does • Being very successful is important to her. She hopes people will recognise her achievements. • It is important to her to get respect from others. She wants people to do what she says. <p>'Self-transcendence' was calculated as the mean of the following questions:</p>

11 Roundtable briefing: Inequalities in wellbeing

	<ul style="list-style-type: none"> • It's very important to her to help the people around her. She wants to care for their well-being. • She thinks it is important that every person in the world should be treated equally. She believes everyone should have equal opportunities in life. • It is important to her to be loyal to her friends. She wants to devote herself to people close to her. • She strongly believes that people should care for nature. Looking after the environment is important to her • It is important to her to listen to people who are different from her. Even when she disagrees with them, she still wants to understand them. <p>We wanted to then adjust these figures to account for peoples' response bias. We did this by subtracting, ie. using the syntax: selfenhancement-Selftranscendence. The new variable was self-enhancement adjusted for response bias. So the higher the number, the more someone's values are about self enhancement rather than self transcendence.</p>
Important to reduce inequality	People's answers to the question of whether "Government should reduce differences in income levels".
Gender inequalities	<p>Human Development Index.</p> <p>A composite measure reflecting inequality in achievements between women and men in three dimensions: reproductive health, empowerment and the labour market.</p> <p>See Technical note 3 at http://hdr.undp.org</p>
Life expectancy difference in education	<p>Eurostat.</p> <p>An existing appropriate indicator for health inequalities could not be found and so we calculated one using Eurostat data. We used the difference in life expectancy between those with higher and lower education: Life expectancy whose highest completed level of education is ISCED class 3 or 4 - Life expectancy, for those whose highest completed level of education is ISCED class 0</p>

Appendix 2

Table 3 Estimated coefficients for the association between inequality and life satisfaction, and average life satisfaction and independent variables, controlling for GDP.

Variable	Inequality in life satisfaction		Mean life satisfaction	
	Estimate for country mean	estimate for difference from mean	Estimate for country mean	estimate for difference from mean
MAIN ECON INDICATORS				
Unemployment	0.01	0.01**	-0.02	-0.03**
Inflation	-0.01	0.00	-0.04	-0.02*
Gini	0.00	0.00	-0.04	0.04**
Union Density	0.00	0.00	0.01	0.00
Economic freedom Fraser	-0.11	0.10*	0.07	-0.27*
Economic freedom Heritage	0.00	0.01	0.01	0.01

12 Roundtable briefing: Inequalities in wellbeing

GOVERNMENT SPENDING				
Govt spend as a percentage of GDP	0.00	0.00	0.01*	0.02
Govt spend on economic affairs	0.01	0.00	-0.01	0.02
Govt spend on education	-0.05	-0.04	0.23**	0.00
Govt spend on health	-0.02	-0.02	0.02	-0.04
Govt spend on order and safety	-0.08	-0.03	-0.35	0.03
Govt spend on recreation and culture	-0.02	0.03	0.24	-0.02
Govt spend on sickness and disability	-0.05	-0.02	0.14	0.06
Govt spend social protection	0.01	-0.02**	0.02	0.02
Govt spend unemployment (**CONTROLLING FOR ACTUAL UNEMPLOYMENT**)	-0.06	0.01	0.30*	0.07
GOVERNANCE				
Control of corruption	-0.17*	-0.03	0.52**	0.10
Government effectiveness	-0.21**	-0.01	0.51**	0.37**
Political stability	-0.16**	0.05	-0.08	0.43**
Regulatory quality	-0.20	-0.20**	0.34	0.32
Voice and accountability	-0.22*	-0.22**	0.27	0.10
Rule of law	-0.19*	-0.11	0.37	0.05
ENVIRONMENT				
Urban Population	-0.01	0.00	0.01	0.02
Air pollution	0.00	0.00	0.02	0.04
ATTITUDES				
Self-enhancement	-0.10	-0.07	0.35	0.01
Important to reduce inequality	-0.06	-0.22**	0.94**	-0.11
OTHER INEQUALITY MEASURES				
Gender inequalities	0.98	1.27*	-5.53**	-1.10
Life expectancy difference in education	0.02	-0.01	-0.08	0.04

* indicates significance at 5%

** indicates significance at 1%

Each indicator was inputted into a separate model. Models on inequality in life satisfaction also controlled for mean life satisfaction. The model exploring government spending on unemployment also controlled for actual unemployment.

Endnotes

- ¹ Sen, A. 'Equality of What?' The Tanner Lecture on Human Values. Delivered at Stanford University May 22, 1979. Retrieved from: http://tannerlectures.utah.edu/_documents/a-to-z/s/sen80.pdf
- ² Stoll, L., Michaelson, J., & Seaford, C. (2012). Well-being evidence for policy: A review. *London: New Economics Foundation*, Retrieved from: www.neweconomics.org/publications/well-beingevidence-for-policy-a-review
- ³ Eurofound (2013). *Quality of Life Survey- Quality of life in Europe: Subjective well-being*. Publications Office of the European Union, Luxembourg
- ⁴ Helliwell, J. F., Layard, R., & Sachs, J. (2015). World Happiness Report 2015. New York: Sustainable Development Solutions Network., p.42-75
- ⁵ Stevenson, J., & Rao, M. (2014). Explaining levels of wellbeing in Black and Minority Ethnic populations in England. Project Report. University of East London, Institute for Health and Human Development. Retrieved from: <http://www.leadershipacademy.nhs.uk/wp-content/uploads/2014/07/Explaining-levels-of-wellbeing-in-BME-populations-in-England-FINAL-18-July-14.pdf>
- ⁶ Becchetti, L., Massari, R., & Naticchioni, P. (2013). The drivers of happiness inequality: suggestions for promoting social cohesion. *Oxford Economic Papers*, gpt016.
- ⁷ Stevenson, J., & Rao, M. (2014). Explaining levels of wellbeing in Black and Minority Ethnic populations in England. Project Report. University of East London, Institute for Health and Human Development. Retrieved from: <http://www.leadershipacademy.nhs.uk/wp-content/uploads/2014/07/Explaining-levels-of-wellbeing-in-BME-populations-in-England-FINAL-18-July-14.pdf>
- ⁸ Stevenson, B., & Wolfers, J. (2008). *Happiness inequality in the United States* (No. w14220). National Bureau of Economic Research.
- ⁹ Kalmijn, W. M., & Arends, L. R. (2010). Measures of Inequality: Application to Happiness in Nations. *Social indicators research*, 99(1), 147-162.
- ¹⁰ Veenhoven, R., (2005). Return of Inequality in Modern Society? Test by Dispersion of Life Satisfaction Across Time and Nations, *Journal of Happiness Studies*, 6, 457–487.
- ¹¹ Dutta, I., & Foster, J. (2013). Inequality of Happiness in the US: 1972–2010. *Review of Income and Wealth*, 59(3), 393-415.
- ¹² Veenhoven, R. (2011). Trend Inequality of Happiness in Nations 1946–2010: How Much Happiness Differs Across Citizens, *World Database of Happiness, Trend Report Inequality in Happiness*, Erasmus University, Rotterdam.
- ¹³ Clark, A., Flèche, S., & Senik, C. (2012). The great happiness moderation. July 1, 2012. SOEPpaper No. 468. Retrieved from SSRN: <http://ssrn.com/abstract=2135447> or <http://dx.doi.org/10.2139/ssrn.2135447>
- ¹⁴ Kalmijn, W., & Veenhoven, R. (2005). Measuring inequality of happiness in nations: In search for proper statistics. *Journal of Happiness Studies*, 6(4), 357-396

¹⁵ Stevenson, B., & Wolfers, J. (2008). *Happiness inequality in the United States* (No. w14220). National Bureau of Economic Research.

¹⁶ Ott, J. (2005). Level and inequality of happiness in nations: Does greater happiness of a greater number imply greater inequality in happiness? *Journal of Happiness Studies*, 6(4), 397-420.

¹⁷ Fahey, T., & Smyth, E. (2004). Do subjective indicators measure welfare? Evidence from 33 European societies. *European Societies*, 6(1), 5-27.

¹⁸ Ovaska, T., & Takashima, R. (2010). Does a rising tide lift all the boats? Explaining the national inequality of happiness. *Journal of Economic Issues*, 44(1), 205-224.

¹⁹ Ott, J. (2005). Level and inequality of happiness in nations: Does greater happiness of a greater number imply greater inequality in happiness? *Journal of Happiness Studies*, 6(4), 397-420.

²⁰ Ott, J. C. (2011). Government and happiness in 130 nations: Good governance fosters higher level and more equality of happiness. *Social indicators research*, 102(1), 3-22.

²¹ Ott, J. (2005). Level and inequality of happiness in nations: Does greater happiness of a greater number imply greater inequality in happiness? *Journal of Happiness Studies*, 6(4), 397-420. However, significance levels were not tested in these studies so robustness of association is hard to attain.

²² Ovaska, T., & Takashima, R. (2010). Does a rising tide lift all the boats? Explaining the national inequality of happiness. *Journal of Economic Issues*, 44(1), 205-224.

²³ Ott, J. (2005). Level and inequality of happiness in nations: Does greater happiness of a greater number imply greater inequality in happiness? *Journal of Happiness Studies*, 6(4), 397-420.

²⁴ Ovaska, T., & Takashima, R. (2010). Does a rising tide lift all the boats? Explaining the national inequality of happiness. *Journal of Economic Issues*, 44(1), 205-224.

²⁵ Ovaska, T., & Takashima, R. (2010). Does a rising tide lift all the boats? Explaining the national inequality of happiness. *Journal of Economic Issues*, 44(1), 205-224.

²⁶ Fahey, T., & Smyth, E. (2004). Do subjective indicators measure welfare? Evidence from 33 European societies. *European Societies*, 6(1), 5-27.

²⁷ Berg, M. & Veenhoven, R. (2010). Income inequality and happiness in 119 nations. In B. Greve (Eds), *Social Policy and Happiness in Europe*. Cheltenham: Edward Elger, pp. 174–194. QUOTED IN Delhey, J., & Kohler, U. (2011). Is happiness inequality immune to income inequality? New evidence through instrument-effect-corrected standard deviations. *Social Science Research*, 40(3), 742-756.

²⁸ Becchetti, L., Massari, R., & Naticchioni, P. (2013). The drivers of happiness inequality: suggestions for promoting social cohesion. *Oxford Economic Papers*, gpt016.

²⁹ Stevenson, B., & Wolfers, J. (2008). *Happiness inequality in the United States* (No. w14220). National Bureau of Economic Research.

³⁰ Ott, J. (2005). Level and inequality of happiness in nations: Does greater happiness of a greater number imply greater inequality in happiness? *Journal of Happiness Studies*, 6(4), 397-420.

³¹ Explored further in NEF's working paper on wellbeing inequalities.

³² Delhey, J., & Kohler, U. (2011). Is happiness inequality immune to income inequality? New evidence through instrument-effect-corrected standard deviations. *Social Science Research*, 40(3), 742-756.

³³ Clark, A., Flèche, S., & Senik, C. (2012). The great happiness moderation. July 1, 2012. SOEPpaper No. 468. Retrieved from SSRN: <http://ssrn.com/abstract=2135447> or <http://dx.doi.org/10.2139/ssrn.2135447>.

³⁴ We chose life satisfaction because it is increasingly used as the best available indicator of wellbeing, where a single number (rather than an index) is desired. The MPD is mathematically similar to the gini coefficient. We chose MPD because (unlike a ratio) it gives information about the whole of the distribution of inequality.

³⁵ Our identification of demographic groups was based on which demographics were known to predict wellbeing, and which were available in the ESS.

³⁶ We used the following criteria to identify our list of possible drivers: 1. Variables which have previously been tested in other studies of predictors of wellbeing inequality (in order to check findings on a new dataset), 2. Variables which had been found to predict mean wellbeing, 3. Other key inequality measures

³⁷ Country fixed effects are only able to limit confounding between countries. Variables which change over time will not be controlled for in this analysis, unless they are included as independent variables in the multilevel model.

³⁸ This association has not been tested for statistical significance, however.

³⁹ Stevenson, J., & Rao, M. (2014). Explaining levels of wellbeing in Black and Minority Ethnic populations in England. Project Report. University of East London, Institute for Health and Human Development. Retrieved from: <http://www.leadershipacademy.nhs.uk/wp-content/uploads/2014/07/Explaining-levels-of-wellbeing-in-BME-populations-in-England-FINAL-18-July-14.pdf>

Inequalities in well-being: Insights from a comprehensive well-being measure

Kai Ruggeri

Áine Maguire

Eduardo Garcia-Garzon

Felicia Huppert

Approach

Subjective well-being is a multidimensional construct (e.g. Dolan & Metcalfe 2011; Huppert & So, 2013). Based on the multidimensional nature of subjective well-being, ten key items were selected from the European Social Survey (ESS) Round 6 to comprehensively represent subjective (or psychological) well-being. This incorporated the following ten components of well-being previously identified by Huppert and So (2013) as the features of flourishing (high well-being): competence, emotional stability, engagement, meaning, optimism, positive emotion, positive relationships, resilience, self-esteem, and vitality. These items have been condensed into a single score, which allows us to report both on *Comprehensive Psychological Well-being* (CPWB) and on the individual dimensions where appropriate. As these analyses parallel work using life satisfaction, they should be understood as complementary insights relevant to policy.

To calculate the single composite score, a factor scoring approach was used rather than a simplistic summing of raw scores on these items. After finding that a single factor structure fit the data sufficiently, we computed the factor scores, and these are standardised and normally distributed across the included populations when they are calculated. This technique was selected both because of its ability to take into account the different response scales used for measuring the items included in the comprehensive well-being measure and because it could take account of how strongly each item loaded onto the comprehensive well-being factor. This method is validated in forthcoming papers related to this project.

Using this comprehensive measure, we have taken a macro-level approach to looking at key variables associated with well-being. We are particularly interested in understanding the extent to which well-being inequalities exist in Europe. To explore potential drivers of inequalities, we present well-being by highlighting the distance between the highest and lowest 20% on CPWB within groups using specific variables that may provide further insights for policy.

Research Questions

The intended aims for work on this theme addressed the following questions:

1. What is the spread of well-being across Europe for the 21 countries that participated in both Round 3 and Round 6 of the European Social Survey using a comprehensive well-being measure?
2. What is the size of well-being inequality within those 21 countries?
3. What do key demographic categories indicate about well-being and well-being inequality of use to policymakers?

Methods

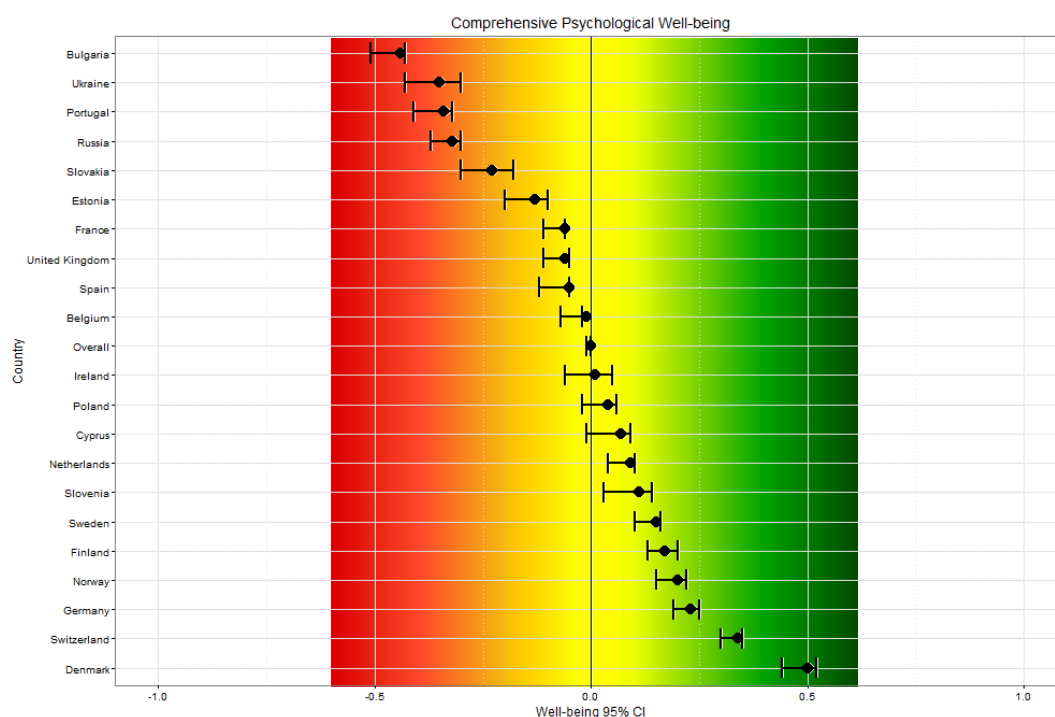
For these analyses, only the 21 countries that completed both Round 3 and Round 6 of the ESS well-being module have been included. The analyses reported here include data from Round 6 only (representing 32,000 participants). For each country, there are a minimum of 800, a maximum of 2400, and an average of 1600 participants, which was reduced slightly by excluding any participants missing data for the items or demographic variables analysed here. Details on the ESS itself are provided in the additional briefing document for this workshop.

Findings

Distribution of well-being in Europe

Using the combined single score for CPWB, well-being ranged from -0.41 in Bulgaria to 0.46 in Denmark. The overall mean is automatically zero based on the calculation technique. While the pattern is typically that northern and Scandinavian countries are doing the best and that eastern countries have the lowest means, exceptions exist. The most notable exception to this is Portugal, which has the third-lowest mean and is not significantly (confidence intervals overlap) higher than Ukraine, which is second lowest. Switzerland and Germany are second and third highest respectively, and show generally similar patterns to the Scandinavian countries. Figure 1 presents these with a colour gradient to simplify understanding of the pattern.

Figure 1. Distribution of national CPWB means and confidence intervals across Europe.

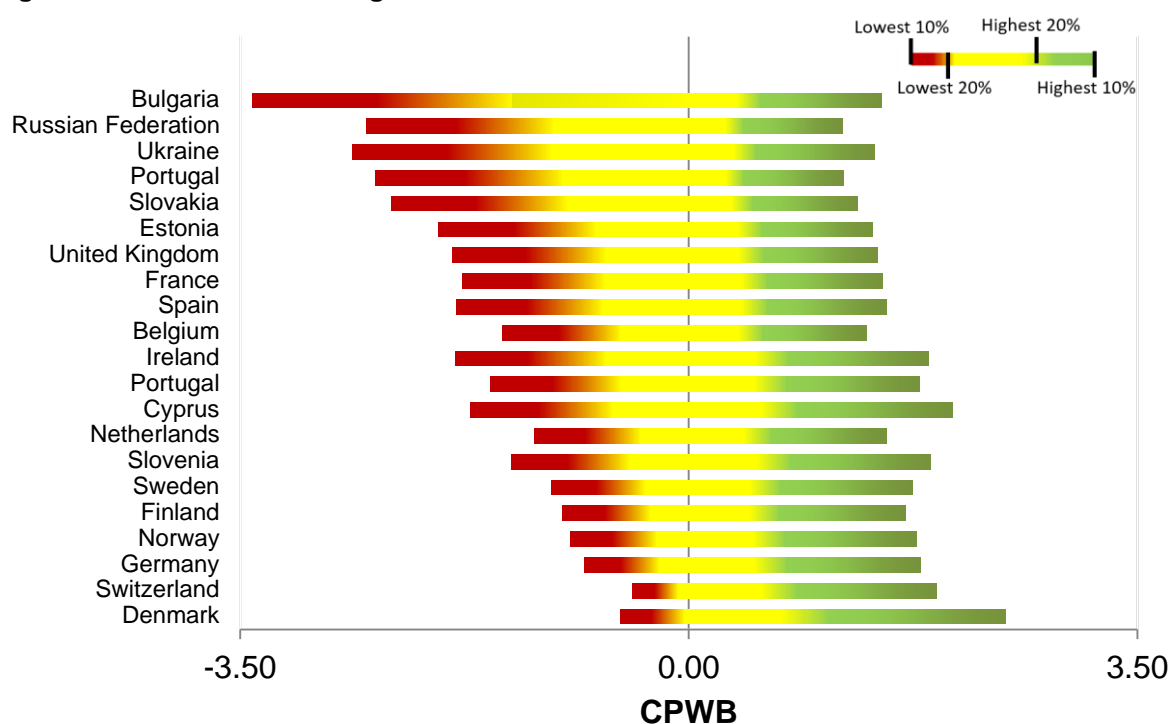


Inequalities in well-being

One of the primary aims of this research was to better understand inequalities in well-being. As seen in Figure 2, the general pattern is that the countries with the highest scores on CPWB have the lowest scores for inequalities, with 0 representing the average across all participants included in the analysis. There is a visible inverse relationship between the well-being gap and national CPWB mean. This means that countries with lower CPWB means tend to have greater well-being inequality.

Figure 2 includes 80% of the population for each of the 21 countries, excluding the highest and lowest 10%. This is done in order to emphasise the yellow section, which represents the difference between the highest 20% and the lowest 20%. In other words, the yellow represents the size of the inequality within each country. The relevant pattern is slightly less visible when including the extreme ends, thus they have been removed in this visual. This is not to ignore the extremes but rather to highlight the size of inequality within each country.

Figure 2. Distance between highest and lowest 20% in CPWB for 21 countries.

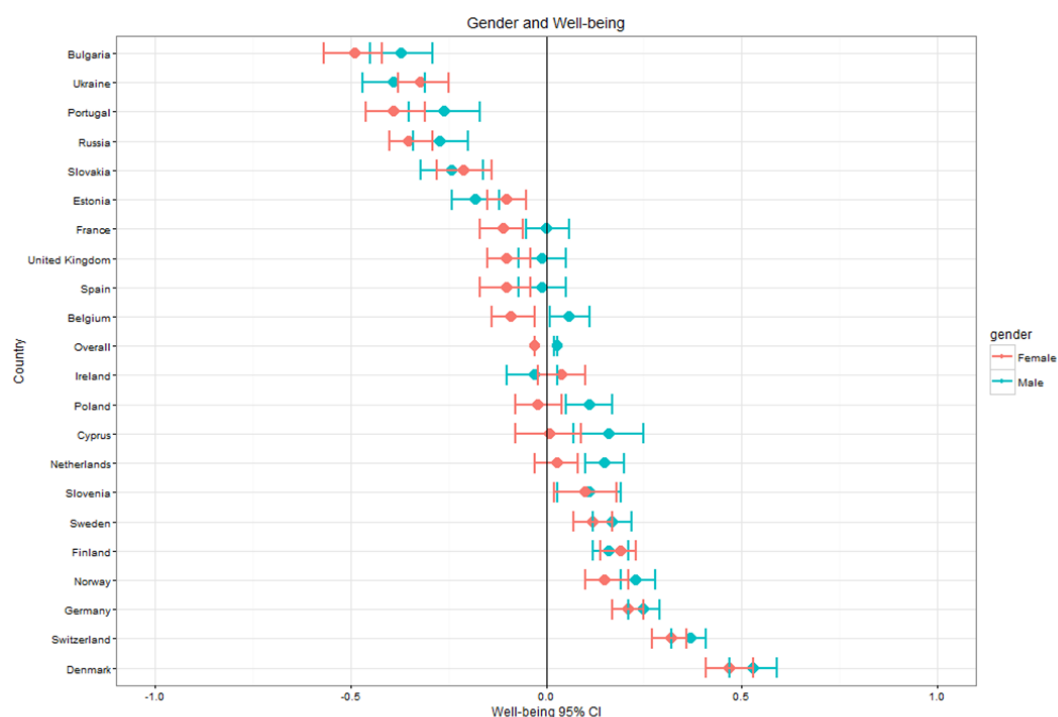


Gender and well-being

For the most part, women exhibited lower CPWB scores than men across Europe. However, these results must be interpreted with caution due to considerable overlap in confidence intervals for many of the countries, and greater exploration of related variables is required. This is particularly true for the four exceptions where women have higher means than men. Perhaps more critically, though, is the continued pattern of increased gender difference for countries with lower national well-being. These patterns are visible in Figure 3.

Further insights on patterns identified for other demographic variables such as age, education, and employment will be presented in the workshop. However, these present a similar narrative as with gender, which is why it has been selected as a case example.

Figure 3. Gender means and confidence intervals for CPWB by country.



Conclusions

Policy considerations

These findings provide useful insights for policymakers to develop actions that can recognise well-being as a desired outcome of policy. The thresholds for high and low well-being make it possible to recognise inequalities such that organisations undertaking population-based interventions know which groups are likely to benefit.

Using these insights, policies can be nuanced to address those most in need of change by identifying those groups with the largest gaps. It is then critical to understand both ends of the well-being spectrum to ensure that improvements for those doing worst do not negatively impact those at the top. Applying thresholds would further provide effective benchmarking for setting targets and establishing what can be considered meaningful change.

In this report, we have presented several macro-level analyses of population well-being across Europe, broken apart by key demographic variables. Results generally show that the countries and groups with lower well-being consistently have greater inequality within. In the workshop, we will present how this applies for gender, age, employment, and education. Additionally, the link between employment and well-being is unmistakable, which is particularly clear in the United Kingdom.

References

Aked, J., Marks, N., Cordon, C., & Thompson, S. (2008). *Five ways to well-being: The evidence*. London: nef.

Dolan, P., & Metcalfe, R. (2011). Measuring subjective wellbeing for public policy: Recommendations on measures. Report to the Office for National Statistics, Special Paper No. 23.

Huppert, F. A., & So, T. T. (2013). Flourishing across Europe: Application of a new conceptual framework for defining well-being. *Social Indicators Research*, 110(3), 837-861.

Wellbeing inequalities roundtable:

Summary of discussion

Making Wellbeing Count for Policy

City University, January 12 2016

Summary of priorities

Key next steps identified:

- Inequalities in wellbeing should be more widely measured and reported, particularly at local and super-local levels (e.g. schools).
- Further work is urgently needed on how best to measure inequality. This will require: public and political debate on what is the outcome of most interest; technical work on the robustness of different measures
- Development is needed on how to communicate inequalities in wellbeing to create compelling statistics and gain public traction
- More work may be needed to explore the negative outcomes of inequalities in wellbeing, and their monetary cost, in order to make the case for a reduction in wellbeing inequalities.

Discussion

There was strong agreement in the roundtable that wellbeing inequality is important.

- Participants noted that people want to be able to drill down into wellbeing in the UK. The ONS presents the mean wellbeing at local levels, but there is a lot of demand for further data on inequalities.
- Participants were particularly interested in wellbeing inequalities between different groups of the population.
- One of the arguments raised for the reduction of economic inequality is that almost everyone is better off – even those higher up the income ladder. Participants questioned whether this was also the case for wellbeing inequality, and whether this case could be clearly pushed.
- Talking about wellbeing inequality in relation to the wellbeing debate more generally, people suggested that the addition of wellbeing inequality is a natural step and makes the debate more sophisticated and nuanced. Some participants suggested that wellbeing inequality might help get wellbeing into government departments where it wouldn't normally be considered.
- Some participants questioned where it would fit in with priorities in reducing other forms of inequality, for example, should we care if a country has high income inequality as long as it has low wellbeing inequality?
- There was however no consensus on the prioritisation of mean wellbeing versus inequalities in wellbeing. For some, the main way in which to 'sell' the

reduction of inequalities in wellbeing is that it should improve average wellbeing (a case that has been made for health inequalities).

However, there is still work needed on how to measure wellbeing inequality. Firstly, this involved deciding what is important to measure when it comes to inequalities in wellbeing.

- As there's no standardised measure of wellbeing inequality, participants felt that a key next step for the wellbeing inequalities agenda would be to develop some consensus over the best measures, or at least which measures are suited for which purposes.
- There was extensive discussion about which bit of the distribution is most important, for example, should we value an improvement from 1 to 3 on the life satisfaction scale in the same way that we value an improvement from 6 to 8? Many participants felt that our political priority must be to improve the wellbeing of the wellbeing impoverished. However, others felt that wellbeing should maintain its aspirational focus on high wellbeing, not just on preventing low wellbeing, which would benefit from a focus on the overall distribution.
- The decision on how to prioritise different aspects of the distribution leads to different measurement approaches. Some participants suggested a measure of the percentage of people below a certain wellbeing threshold (as the ONS do with life satisfaction), while others suggested a positive threshold.
- Participants highlighted that these were not technical measurement issues, but questions of judgement and values which could usefully be explored through public consultation and dialogue. Another input could be cost benefit analysis to explore how costly wellbeing improvements are at different points of the distribution, and which improvements create more or less positive outcomes in other domains of interest (e.g. improved health, more pro-social behaviour etc.)

More work is needed to tease out clearly communicable measures and messages.

- There are various considerations when it comes to clearly communicating wellbeing inequalities. In terms of the practical application of wellbeing inequality at a local government level statistics need to tell a story. For example, in health the different life expectancy in different local areas (e.g. varying by 11 years in Norwich) is an effective statistic to highlight health inequalities. What is the wellbeing inequality equivalent?
- However, the 'top 10% of the wellbeing scale' is a somewhat abstract measure. The health inequality '11 years' statistic is useful because it is graspable to non-statisticians. We need a single metric that can be couched in a way that speaks to people clearly and that tells a story. It needs to be self-explanatory and applicable at a local level.
- It would be useful to explore how the wellbeing inequality narrative should differ to the narrative on income inequality. Clearly, no-one would want to pursue a reduction in wellbeing for those at the top of the wellbeing distribution, in the way that many call for reductions in income of the very rich.

In terms of finding a clearly communicable message, we need to be clear about the policy goal of wellbeing inequality (linking to the measurement issues identified above).

- A possible alternative measure is the '80:20 difference'. It might be easier to communicate but it might also be less robust. For example people in top 20% have 5 points higher life satisfaction, but we couldn't say they are 'twice as happy' as the rest of the population because of the possible non-equivalence of different parts of the life satisfaction scale.
- Being able to compare population groups is important to people – odds ratios are one way to do that. Another option could be looking at geographies of wellbeing to explore why people who ought to have the same wellbeing if they were in the same place have different wellbeing scores.
- It would be useful to measure wellbeing inequality in smaller settings than nations, i.e. in schools. These might be more useful than international comparisons which are likely to move much more slowly.

Multi-dimensional measures provide useful information for policy makers.

- Participants discussed the value of multidimensional measures and suggested that being able to talk about different dimensions, e.g. resilience is very important.
- But policy makers want single measures/index too, for people working on policy it is important to know which factors have the most impact on general wellbeing – e.g. vitality, resilience. For example, in the criminal justice system a lot of attention is paid to resilience. However, what is the connection between resilience and wellbeing? Are there other factors of wellbeing that would be more important to prioritise?

More understanding is needed on the drivers of inequality in wellbeing.

- There was feedback that the project team should place more emphasis on employment as a driver of wellbeing inequality.
- Further research could examine the relationships between wellbeing inequalities and other inequalities to determine what the drivers are – are the drivers different for wealth inequality and wellbeing inequality? The Picketty wealth database could be used for this.

Participants acknowledged that wellbeing inequality is important in and of itself; however, they argued that if other people haven't yet bought into that idea then we need to translate it into other outcomes (including costs).

- Some participants felt strongly that wellbeing inequality (and wellbeing more generally) should be translated into financial savings, *"It's the only language anyone understands"*, and *"it's not just policy that needs to have wellbeing translated, it's also the public and they prefer monetary units..."*
- Others strongly disagreed, *"Often decisions aren't made on the basis of money; they're made because of values and political views."* Some suggested

that costs can be tied to wellbeing but we have to decide which is the main outcome and which is a means to an end.

Wellbeing inequality needs to be embedded across government.

- A few participants suggested that a robust wellbeing inequality measure could be included in Equality Impact Assessments of policies.

Many participants suggested areas for further research including:

- The wider societal harms of high wellbeing inequality
- The relationship between wellbeing inequality and the Index of Multiple Deprivation
- Whether wellbeing inequality can explain the suicide-happiness paradox (the high prevalence of suicide in countries with high average wellbeing)
- The relationship between wellbeing inequality as a driver of civil/social unrest – one participant pointed to a study suggesting that high levels of wellbeing inequality predicted civil unrest after the Arab Spring.
- Research using datasets that can drill down into wellbeing inequality at a more local level (CLG and Cabinet Office are looking at this at the moment)