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Looking through the wellbeing kaleidoscope

Results from the European Social Survey

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The Well-being Institute (WBI) is a cross-disciplinary initiative at the University of Cambridge that promotes the highest quality research in the science of well-being, and its integration into first rate evidence-based practice and policy. As a centre for the scientific study of well-being, the WBI's aim is to make major contributions to the development of new knowledge and its application in enhancing the lives of individuals and of the institutions and communities in which they live and work.

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The Centre for Comparative Social Surveys (CCSS), City University London, was established in 2003 and has since built a team of experts specialising in the design, implementation, and analysis of large scale and cross-national surveys. For example the CCSS runs the 36-country European Social Survey.

CCSS experts engage in research on linking other data sources, e.g., administrative and geographical data to surveys. This includes technical solutions to anonymisation, micro simulations, and automatic coding. The CCSS host a variety of externally funded research projects investigating methodological and substantive issues in large scale and comparative surveys.

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New Economics Foundation (NEF) is an independent think-and-do tank that inspires and demonstrates real economic wellbeing. We aim to improve quality of life by promoting innovative solutions that challenge mainstream thinking on economic, environmental and social issues. We work in partnership and put people and the planet first.

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Overview

The ultimate aim of policy making should be to improve people's wellbeing. Drawing on evidence from across Europe, this report explores new ways in which policy can support and encourage high levels of wellbeing, using data from the European Social Survey.

Much of the established evidence and analysis around wellbeing is based on a single measure – life satisfaction. This report combines contributions from City University London, the New Economics Foundation (NEF) and the University of Cambridge to explore new ways of understanding and measuring wellbeing. It looks at the following:

1. Comprehensive psychological wellbeing (CPWB) (University of Cambridge)

This new single score was created by combining measures of ten different aspects of wellbeing (competence, emotional stability, engagement, meaning, optimism, positive emotion, positive relationships, resilience, self-esteem, and vitality) to give a richer and more nuanced picture of people's wellbeing. Using this approach offers a more robust and accurate understanding of overall wellbeing, It also provides invaluable information for policy makers aiming to improve wellbeing, as it allows them to identify those areas specifically in need of improvement.

We find:

- **Examining specific aspects of well-being provides insights beyond a single indicator.** For example, the UK ranks 8th out of 21 countries in terms of optimism, but is 20th of 21 in terms of sense of vitality.
- **Using the comprehensive measure, wellbeing has generally increased, perhaps surprisingly, from 2006 to 2012,** with the percentage of the population with high wellbeing increasing in every country.
- **The greatest variations in the levels of wellbeing occur among countries and groups where average wellbeing is also the lowest.** The greatest opportunity to improve well-being in a country is to begin with those with the lowest wellbeing, particularly unemployed and older individuals, through population-relevant interventions.

2. Inequalities in wellbeing (NEF)

By analysing inequalities in life satisfaction across Europe and over time, we find:

- **Large differences in wellbeing between population groups are not inevitable:** Although those of an ethnic minority, on low incomes or with low education often have lower average wellbeing, this is not always the case, with some countries showing almost no difference. This suggests that policy could aim to reduce or eliminate these inequalities.

- **Economic factors drive inequalities in wellbeing:** Most notably, a country's unemployment rate is strongly associated with higher levels of inequality in wellbeing.

- **Good governance may be one of the best ways of reducing wellbeing inequality.** Having low levels of corruption and high levels of voice and accountability, for example, are associated with lower inequalities in wellbeing. This effect goes above and beyond the effect of governance on unemployment or economic growth.

3. Five ways to wellbeing (NEF)

The five ways to wellbeing are a set of actions that evidence suggests promote wellbeing. They are: Connect, Be Active, Take Notice, Keep Learning, and Give.

We explored who is and who isn't participating in the five ways, in order to suggest ways of boosting involvement.

With the exception of those aged 65 and over, the UK generally had low levels of participation in the five ways, when compared to countries such as Germany or France. Two key findings were:

- **Young women (15–24), parents, and people doing housework or childcare in the UK reported very low rates on Take Notice** (whether people take notice and appreciate their surroundings). This finding was not replicated across Europe, suggesting there may be particular barriers in the UK for these population groups which may be amenable to policy.

- **People of working age in the UK connected socially less** than their European peers. This suggests that this age group may need particular attention, contrasting with existing policy approaches which often focus on the young and the old.

4. Perceived quality of society (City University London)

What are people's assessments of the key institutions in society: their trust in the police, politicians, parliament or legal institutions, or satisfaction with public services, government, the economy, or democracy in their country? By measuring this Perceived Quality of Society (PQOS), we find that:

- **The more marginalised groups in society** – women, those who claim membership of a discriminated group, and those with lower education – **have a more negative view of these institutions.** Those in middle aged groups (25 to 64) also have more negative views. This suggests that our democratic and legal institutions may need to do more to engage with these groups.

- **Democratic satisfaction is consistently higher than satisfaction with the economy and the government** in the UK, with a similar pattern elsewhere in Europe

- **Nearly all countries exhibited a considerable dip in economic satisfaction in 2008,** at the height of the recession, although this dip was particularly pronounced in the UK.

- **There are marked regional inequalities in PQOS within the UK,** with London and the South East having high levels of economic and governmental satisfaction compared to other regions, particularly the Midlands.

Introduction

Eric Harrison (City University London) and Saamah Abdallah (NEF)

Making wellbeing count for policy

Across the world, there is growing recognition that it makes sense to measure people's wellbeing and treat it as a central policy objective. For some this is integral to moving away from a narrow focus on economic growth as the driving force of policy.[1] For others it provides a more democratic perspective on how we understand societal success, as it places people at the heart of the story.[2] Some are particularly interested in the opportunities for double dividends in terms of policies that could improve wellbeing whilst enhancing environmental sustainability.[3, 4, 5] Whilst others hope that a shift in policy focus towards wellbeing will also place mental health issues centre-stage and address the imbalance in funding towards tackling them.[6] In all cases, there is a shared belief that a better understanding of the things that are important to wellbeing, and better monitoring of trends and patterns across nations, will improve policy.

The UK has been one of the pioneers in the move towards measuring wellbeing. In 2011, the Office for National Statistics (ONS) launched its Measuring National Wellbeing Programme, with support from Prime Minister David Cameron.[7] Central to the ONS initiative is the addition of four questions on personal wellbeing to the huge Annual Population Survey, which reaches some 160,000 individuals each year.

Eurostat, the European statistics agency, has also been an early mover. In 2013, the Europe-wide Statistics on Individual Living Conditions included a module of 20 questions on wellbeing, which was answered by some 366,650 individuals across the European Union.[8]

Major initiatives for measuring wellbeing are ongoing across the globe, from Bogota[9] to Bhutan,[10] including Canada,[11] Mexico,[12] many towns and cities in the USA, Ecuador, most countries in Europe, Turkey, Australia, New Zealand, and even the tiny island nation of Vanuatu.

Whilst there are several examples of wellbeing evidence being used in local policy-making[13, 14, 15] and by community organisations and funders,[16] it is fair to say that the influence of these initiatives on national policy has remained limited. In a recent Environmental Audit Committee inquiry into the use of wellbeing in national policy, the examples referred to by civil servants were at best embryonic.[17] Often it is difficult to draw direct links – for example, the National Citizen Service has recently been extended, and was subject to an innovative evaluation approach assessing its impact on subjective wellbeing. But it is not clear how much of a role the wellbeing evidence played in this decision.

In 2014, *Beyond GDP – From Measurement to Policy and Politics* was published by the BRAINPOoL project (Bringing Alternative Indicators into Policy) based on research exploring why alternative indicators in general (including wellbeing) have not had as much traction as hoped in policy and politics. The report concluded with several recommendations,

amongst them the need to translate wellbeing evidence into simple, clear messages and examples for policy.[18]

About this report

This report attempts to contribute to that objective by moving beyond the dominant single measure of personal wellbeing which has been the focus of much analysis – life satisfaction – to considering four sets of wellbeing-related outcomes:

- A measure of comprehensive psychological wellbeing
- Inequalities in wellbeing
- Participation in behaviours believed to improve wellbeing (five ways to wellbeing)
- Perceived quality of society

Looking at these four outcome variables offers different perspectives in wellbeing and moves us towards a clearer understanding of policies that might make a difference. The four chapters of this report consider each of these four foci in turn, using data from the European Social Survey.

The report follows a series of three policy seminars where we have engaged with policymakers, practitioners, and academics from other disciplines, to sense check our findings, explore their implications for policy, and move towards genuine policy action.

What is wellbeing?

The term 'wellbeing' has been used in many different contexts, with various interpretations including 'personal wellbeing', 'subjective wellbeing', 'community wellbeing', 'national wellbeing', and 'economic wellbeing'.

Chapters 1 to 3 consider the wellbeing of individuals. Wellbeing in this context can be understood a sustainable condition that allows an individual to develop and thrive. It is the combination of feeling good and functioning well; the experience of positive emotions such as happiness and contentment as well as the development of one's potential, having some control over one's life, having a sense of purpose, and experiencing positive relationships.[19] The measure of comprehensive psychological wellbeing presented in Chapter 1 attempts to capture this multidimensional concept, using the in-depth wellbeing modules included in Rounds 3 and 6 of the European Social Survey. In Chapter 2, we use life satisfaction as a summary measure of wellbeing, as the questions used to create the comprehensive measure in Chapter 1 were not available in all six rounds.

Chapter 4 turns to a less commonly explored topic – the perceived quality of society (which can be understood as societal wellbeing) – which we claim to be something distinct from the average of individuals' wellbeing in a society. Perceived quality of society is measured through a combination of questions covering satisfaction with society, trust in public institutions, and perceptions of public services.

As summarised in Chapter 1, there is growing evidence of the ways that wellbeing interlinks with a range of policy issues. It is both affected by the factors often influenced by policy, and can have an impact on outcomes relevant to policy. As such its measurement is a policy issue. Organisations such as the ONS[20] and the Organisation for Economic Cooperation and Development (OECD)[21] acknowledge the importance of measuring wellbeing from the perspective of developing wise policy.

European Social Survey (ESS)

This report draws on data from the first six rounds of the ESS, an academically driven cross-national survey that has been conducted every two years across Europe since 2001. It has now undergone seven rounds and throughout its life course has incorporated the attitudes, beliefs, and behaviour patterns of more than 300,000 respondents from over 30 countries. Utilising random sampling measures, the ESS provides a representative sample of the European population for people aged 15 and over.

The main aims of the ESS are to:

- Chart stability and change in social structure, conditions, and attitudes.
- Achieve high standards of rigour in cross-national research.
- Introduce sound indicators of national progress based on citizens' perceptions of their societies.
- Improve the visibility and outreach of data on social change among academics, policymakers, and the wider public.

About this project

This report is the final output of a one-year project entitled *Making Wellbeing Count for Policy* led by City University London, in collaboration with the University of Cambridge and the New Economics Foundation (NEF). The project was funded by a grant from the UK Economic and Social Research Council (ESRC), as part of its Secondary Data Analysis Initiative.

The project focused on the ESS, taking advantage of several of its features:

- Two specially designed wellbeing modules (conducted in 2006 and 2012), provided in-depth information on wellbeing, and allowed the construction of the comprehensive psychological wellbeing scale.
- Large sample sizes, and detailed demographic information, allowed for the study of inequalities in wellbeing between population groups.
- Reasonable time series (we used six rounds over ten years) allowed for change over time to be considered. This allowed us to carry out more rigorous econometric analysis. Furthermore, given that the time series straddles the start of the economic crisis in 2008, it has allowed us to explore the impacts of that crisis.

CHAPTER 1
Comprehensive psychological wellbeing

Kai Ruggeri, Eduardo Garcia Garzon, Áine Maguire, and Felicia A. Huppert
(University of Cambridge)

Introduction

Wellbeing is a sustainable condition that allows the individual or population to develop and thrive. It is the combination of feeling good and functioning well; the experience of positive emotions such as happiness and contentment as well as the development of one's potential, having some control over one's life, having a sense of purpose, and experiencing positive relationships.[22] According to Huppert (2009),[23] the term wellbeing is synonymous with positive mental health. The World Health Organization (WHO) defines positive mental health as 'a state of wellbeing in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community'.[24] This wellbeing goes beyond the absence of mental ill health and encompasses the perception that life is going well.

A bounty of evidence demonstrating the positive impact that high levels of wellbeing can have at the individual and population level exists. Veenhoven reported that those populations high in mental wellbeing also tended to be in better health and live longer lives.[25] Wellbeing has also been associated with success at both professional and personal levels, with those individuals high in wellbeing exhibiting greater productivity in the workplace, more effective learning, increased creativity, and more prosocial behaviours and positive relationships.[26, 27, 28] Further, longitudinal data indicates that wellbeing in childhood goes on to predict future wellbeing in adulthood.[29]

Those with very high levels of wellbeing can be considered to be flourishing; they 'have enthusiasm for life and are actively and productively engaged with others and in social institutions'.[30] It is not only important to consider wellbeing as a driver for other outcomes, we must also consider wellbeing as the outcome of interest. We need to identify those who flourish, in order to learn what characterises and facilitates their high levels of wellbeing. As Dunn and Doughtery state: 'As a society, we need to know how people can flourish.'[31]

The measurement of population wellbeing should therefore be of critical concern for all those engaged with policy, as it is often policy which can ultimately exert a critical influence on the lives and wellbeing of a population. Organisations such as the ONS[32] and the OECD[33] acknowledge the importance of measuring wellbeing from the perspective of developing wise policy.

Measurement of wellbeing

Often in economic or political research, population wellbeing is assessed using a single item about life satisfaction or happiness. Yet, wellbeing is a multidimensional construct, and cannot be adequately assessed in this manner. Wellbeing goes beyond hedonism and the pursuit of pleasurable experience (e.g. happiness), and beyond a global evaluation (life satisfaction): it expands to the assessment of how well people are functioning in the domains that underlie wellbeing, i.e., eudemonic or psychological wellbeing. Assessing wellbeing through a single, subjective item approach fails to offer any insight into how people experience the aspects of their life that are key to wellbeing. In order for wellbeing to be fully assessed, its measurement must encompass all the major components of wellbeing, both hedonic and eudemonic aspects, and cannot be simplified to a unitary item of life satisfaction or happiness.

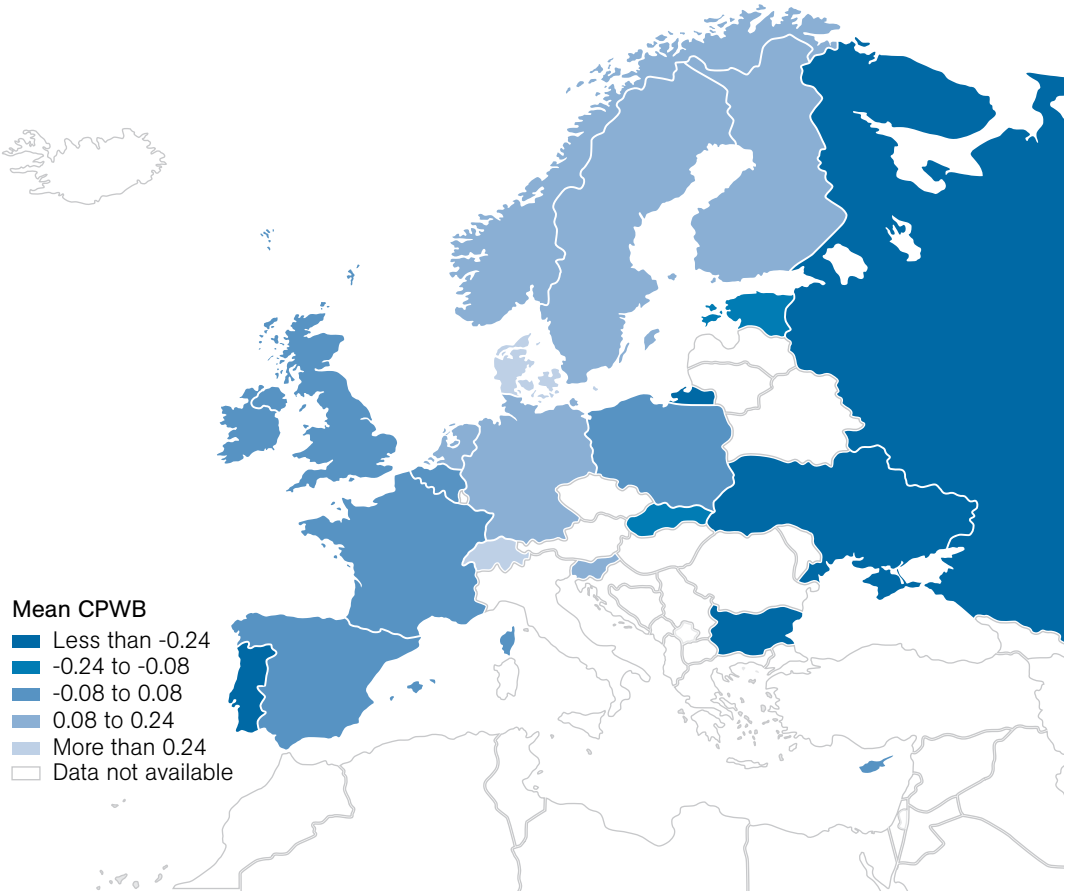
Huppert and So[34] attempted to take a systematic approach to comprehensively measure wellbeing, following acknowledgement that its measurement is generally 'haphazard, with different studies assessing different concepts in different ways'.[35] They proposed that positive mental health or wellbeing can be viewed as the complete opposite to mental ill health. They attempted to define mental wellbeing in terms of the opposite of the symptoms of common mental disorders. Using the standard American Psychiatric Association[36] and World Health Organisation[37] symptom criteria for both anxiety and depression, ten features of psychological wellbeing were identified by defining the opposite of common symptoms. The features encompassed both hedonic and eudemonic aspects of wellbeing: competence, emotional stability, engagement, meaning, optimism, positive emotion, positive relationships, resilience, self-esteem, and vitality.

From these ten features an operational definition of flourishing, or high wellbeing, was developed using data from Round 3 of the ESS. This definition used a categorical approach to defining flourishing, which was guided by the diagnostic approach to mental disorders.

Comprehensive psychological wellbeing

In more recent analyses, we have taken a slightly different approach. Rather than categorising an individual as flourishing or not flourishing, we have developed a composite measure of wellbeing, which yields an overall score for each individual. From the ten features identified by Huppert and So,[38] a single score was extrapolated to represent what we refer to as Comprehensive Psychological Wellbeing (CPWB, see Figure 1). This allows us to report on CPWB as a composite measure as well as on the individual dimensions of wellbeing where appropriate. As these analyses parallel work using life satisfaction – a global evaluation of wellbeing – they should be understood as complementary insights relevant to policy.

Figure 1: Comprehensive psychological wellbeing, 2012[39]



How has wellbeing been linked to economic indicators?

Research has shown that there are close ties between economic indicators and wellbeing. For instance, there is an association between lower reported levels of subjective social status and poorer mental health outcomes.[40, 41] However, although there is a relationship between income and gross domestic product (GDP) with subjective wellbeing, a considerable amount of variance remains unaccounted for.[42] Critically, economic crises and financial distress have continuously been associated with poorer mental health outcomes.[43] For instance, debt and financial difficulties, such as housing payment problems, have been associated with a higher risk of many common mental disorders. As people's socioeconomic status lowers due to loss of jobs and income, their health is at risk of being adversely affected.[44]

Globally, Gallup wellbeing studies have observed that the percentage of adults rating themselves as 'suffering' increased after the 2008 crisis and continues to remain at a high level.[45] The financial crisis in 2008 affected European economies to varying extents, yet the full consequences of the financial crisis on health have yet to be adequately established. There have been several reports of negative mental health effects, however, and increases in the rate of suicides following the onset of the recession were observed in both Ireland and England.

Inequalities in wellbeing

Public service budgets can be seriously affected by financial crises. Education, health care, and social protection services are often most affected by the implementation of austerity measures to counteract economic shortfall. This may hold long-term consequences for both mental and physical health, creating further barriers to economic recovery.[46] Policy choices can therefore influence the effect of economic crises on the wellbeing and health outcomes of a population, particularly for those most vulnerable in society who already relied on social protection prior to recession.

One of the most common approaches to understanding economic inequalities is the Gini coefficient, which the OECD defines as the distribution of incomes among individuals within an economy as in terms of deviation from perfectly balanced distribution. While there are various approaches to calculating Gini values, we employ the inequality measures based on the Pareto Approach[47] within a wellbeing context to assess the difference or distance between those with the highest levels (top 20%) of wellbeing and those with the lowest levels (bottom 20%) of wellbeing on a continuous scale. Chapter 2 explores further ways to look at wellbeing inequalities.

General approach and key questions

Using data from the wellbeing module of Round 3 and Round 6 from the ESS, we aim to establish a method to assess wellbeing across Europe and establish whether levels of wellbeing have changed from 2006 to 2012 in light of the recent financial crisis. For the purposes of this report we have used a decrease in annual GDP growth rate as a loose indicator of recession. We are also particularly interested in understanding the extent to which wellbeing inequalities exist in Europe. That is, what is the difference in wellbeing scores, between those with the highest and those with the lowest wellbeing? We are keen to understand the drivers of inequalities between the two groups. In order to address these questions, we have developed a comprehensive measure of psychological wellbeing and have taken a macro-level approach to looking at key variables associated with wellbeing in order to develop further insights for policy.

Method

The ESS wellbeing modules

Both Round 3 and Round 6, which took place in 2006/2007 and 2012/2013, respectively, contained a supplementary wellbeing module. This module contained over 50 items related to all aspects of wellbeing including psychological, social, and community wellbeing, as well as incorporating a brief measure of negative emotions (Center for Epidemiologic Studies Depression Scale, CES-D). Twenty-one countries completed these modules in their entirety in Rounds 3 and 6, so analyses in this chapter cover those countries.

Measurement of wellbeing

Huppert and So[48] defined a measurement of wellbeing using ten items extracted from the Round 3 items. This original scale was intended to reflect ten dimensions of wellbeing, each of the components represented by a unique item from the ESS. These dimensions were competence, emotional

stability, engagement, meaning, optimism, positive emotion, positive relationships, resilience, self-esteem, and vitality.

However, the items used in Round 3 to represent positive relationships and engagement exhibited ceiling effects and were removed from the questionnaire in Round 6. Four alternatives were available to replace each question. Based on their psychometric properties, and the best fit in factor analysis models, new items were chosen for positive relationships and engagement. The new items and those they replaced can be seen in Table 1.

Table 1: ESS items by dimension for Round 3 and Round 6

Dimension	Rounds used	Item
Positive relationships	Round 3	There are people in my life who care about me
Engagement	Round 3	Love learning new things
Vitality	Both	Had lot of energy, how often past week
Emotional stability	Both	Felt calm and peaceful, how often past week
Competence	Both	Feel accomplishment from what I do
Resilience	Both	When things go wrong in my life it takes a long time to get back to normal
Optimism	Both	Always optimistic about my future
Self-esteem	Both	In general feel very positive about myself
Happiness	Both	How happy are you
Meaning	Both	Feel what I do in life is valuable and worthwhile
Engagement	Round 6	Absorbed in what you are doing, how much of the time
Positive relationships	Round 6	Receive help and support from people you are close to

Psychometric approach and alternatives considered

Ten items from Round 3 and Round 6 were selected from the wellbeing module. Negatively worded items were recoded in line with the positively worded items such that all responses were interpreted in the same direction (i.e., higher scores were more positive; lower scores more negative). Exploratory structural equation modelling (ESEM) was then performed in order to explore how well the ten validated items fit an overall model for wellbeing.

Ultimately, a hierarchical model was chosen and factor scores were then used to produce the CPWB score. Details on this methodology, these findings and alternative approaches considered to ensure best model fit as well as overall utility will be published elsewhere.

General analyses

In order to test specific differences and patterns within and between groups, various inferential tests were used systematically. In most cases these have been identified by nationality, age, gender, education, and employment. Further subgroup analyses are certainly possible for future work, but as this current piece is primarily taking a macro-level perspective, these primary demographic indicators have been utilised in order to identify population-level patterns of most interest to policymakers.

Practical definition of flourishing

While this work is primarily guided by Huppert and So's framework for wellbeing[49] and by identifying individuals who are flourishing, the necessary modification to two of the items used required adaptation for the present work. As such, flourishing is only considered on a descriptive level for the eight items used in both rounds. In this way, *flourishing i*s practically defined as any individual who responds positively to all eight items. In the case of happiness, which was scored on a scale from 0 to 10, a positive score corresponded to an answer in the three highest values (i.e., 8, 9, or 10).

Results

Descriptives

Our data set included a total of 81,624 people from 21 countries for analysis.[50]

After applying weights as advised by ESS guidance, 39,888 respondents in Round 3 (51.9% female) across the 21 countries were included. Participants were aged between 14 and 101 (M=45.64, SD=18.57). In Round 6, 52.6% of a total sample of 41,825 people was female. Participants from the 21 countries included in Round 6 were aged between 15 and 103 years (M=47.85, SD=18.9).

As the focus of this work was set within the context of the financial crisis, Table 2 outlines general economic indicators for the 21 countries included. This gives an overview of when each country joined the EU, when they joined the Schengen area, when they joined the Eurozone, key dates for being considered as in recession by various international organisations, and overall flourishing results in and between 2006 and 2012.

Table 2: National recession timeline and prevalence of flourishing using the eight repeated items

Country	Joined the EU	Joined Schengen	Joined the Eurozone	Recession period 1	Recession period 2	Flourishing % 2006	Flourishing % 2012	Flourishing % change
Belgium	1958	1995	1999/2002	2009	–	10.8	14.1	3.3
Bulgaria	2007	–	–	2009	–	2.6	7.6	5.0
Cyprus	2004	–	2008	2009	2012–2014	8.4	15.7	7.4
Denmark	1973	2001	–	2008–2009	2012–2013	27.6	32.5	4.9
Estonia	2004	2007	2011	2008–2009	–	8.3	13.1	4.8
Finland	1995	2001	1999/2002	2009	2012–2013	17.5	21.6	4.2
France	1958	1995	1999/2002	2009	–	6.6	9.9	3.3
Germany	1958	1995	1999/2002	2009	–	13.8	23.8	10.0
Ireland	1973	–	1999/2002	2008–2010	2012	16.8	19.6	2.8
Netherlands	1958	1995	1999/2002	2009	2012–2013	16.0	24.5	8.5
Norway	–	2001	–	2009	–	18.1	26.5	8.4
Poland	2004	2007	–	–	–	8.9	14.3	5.3
Portugal	1986	1995	1999/2002	2009	2011–2013	6.8	7.3	0.5
Russian Federation	–	–	–	2009	–	4.7	6.5	1.8
Slovakia	2004	2007	2009	2009	–	7.4	9.1	1.7
Slovenia	2004	2007	2007	2009	2012–2013	10.9	20.1	9.2
Spain	1986	1995	1999/2002	2009	2012–2013	9.2	10.6	1.4
Sweden	1995	2001	–	2008–2009	2012	19.0	23.4	4.4
Switzerland	–	2008	–	2009	–	23.5	26.4	2.9
Ukraine	–	–	–	2009	2014	4.0	5.7	1.7
United Kingdom	1973	–	–	2008–2009	–	12.5	16.3	3.7

Note: Recession was defined in this context as negative GDP growth a whole year.

Table 3: Wellbeing item means for 2006 (Round 3) ordered by national life satisfaction means

	Life satisfaction	Competence	Emotional stability	Engagement	Meaning	Optimism	Positive emotion	Positive relationships	Resilience	Self-esteem	Vitality
Possible range	0–10	1–5	1–4	0–10	1–5	1–5	0–10	0–6	1–5	1–5	1–4
Denmark	8.46	1.95	2.98	1.96	1.79	2.10	8.34	1.33	3.61	2.07	2.67
Switzerland	8.10	1.96	2.77	1.88	1.89	2.12	8.11	1.61	3.49	2.01	2.77
Finland	7.97	2.16	2.66	1.89	2.03	2.23	7.99	1.56	3.53	2.11	2.49
Sweden	7.82	2.07	2.80	2.00	2.09	2.22	7.88	1.56	3.50	2.09	2.47
Norway	7.75	2.16	2.84	1.81	2.03	2.24	7.94	1.58	3.59	2.33	2.55
Netherlands	7.58	2.33	2.72	1.98	2.07	2.36	7.72	1.61	3.34	2.30	2.74
Ireland	7.51	2.19	2.67	1.89	1.92	2.13	7.76	1.52	3.35	2.08	2.65
Spain	7.45	2.43	2.61	1.91	2.11	2.31	7.64	1.50	3.28	1.99	2.25
Cyprus	7.44	2.18	2.49	1.78	1.92	1.95	7.74	1.52	3.16	1.92	2.44
Belgium	7.33	2.19	2.61	1.92	2.02	2.44	7.61	1.70	3.25	2.37	2.51
United Kingdom	7.21	2.34	2.48	1.99	2.10	2.35	7.52	1.45	3.36	2.21	2.42
Slovenia	6.97	2.39	2.69	2.11	2.03	2.21	7.25	1.88	3.02	2.06	2.82
Europe	6.83	2.21	2.65	1.96	2.06	2.30	7.23	1.65	2.15	3.27	2.58
Germany	6.78	2.12	2.81	2.09	2.19	2.27	7.03	1.66	3.32	1.98	2.69
Poland	6.68	2.42	2.45	2.40	2.10	2.46	6.96	1.78	3.18	2.09	2.59
Estonia	6.41	2.41	2.73	2.06	2.17	2.28	6.82	1.64	3.12	2.17	2.62
France	6.37	2.12	2.49	1.58	1.97	2.56	7.22	1.98	3.24	2.56	2.64
Slovakia	6.08	2.46	2.71	2.13	2.12	2.43	6.51	1.95	3.11	2.31	2.61
Portugal	5.60	2.32	2.59	1.93	1.99	2.43	6.64	1.70	3.19	2.07	2.56
Russian Federation	5.31	2.01	2.50	2.02	2.30	2.39	6.04	1.83	3.07	2.16	2.56
Bulgaria	4.72	2.21	2.42	1.98	2.10	2.38	5.41	1.52	2.73	2.06	2.51
Ukraine	4.44	2.03	2.67	1.89	2.10	2.23	5.83	1.68	2.91	2.11	2.64

Table 4: Wellbeing item means for 2012 (Round 6) ordered by nationallife satisfaction means

Country	Life satisfaction	Competence	Emotional stability	Engagement	Meaning	Optimism	Positive emotions	Positive relationships	Resilience	Self-esteem	Vitality
Possible range	0–10	1–5	1–4	0–10	1–5	1–5	0–10	0–6	1–5	1–5	1–4
Denmark	8.57	4.13	3.08	8.08	4.22	4.04	8.44	5.34	3.86	4.05	2.73
Switzerland	8.19	4.09	2.88	7.61	4.13	4.01	8.07	5.21	3.56	4.01	2.92
Norway	8.14	3.95	3.06	6.50	4.08	3.91	8.18	5.24	3.80	3.80	2.66
Finland	8.11	3.82	2.76	7.71	4.03	3.88	8.11	5.07	3.64	3.98	2.56
Sweden	7.87	4.00	3.03	6.45	3.97	3.92	7.85	5.30	3.62	3.99	2.59
Netherlands	7.77	3.73	2.94	7.88	3.99	3.69	7.81	5.05	3.50	3.78	2.71
Germany	7.48	4.00	2.94	7.66	3.99	3.95	7.62	5.29	3.50	4.06	2.79
Belgium	7.44	3.84	2.69	7.67	4.01	3.63	7.70	4.81	3.38	3.69	2.53
United Kingdom	7.28	3.74	2.58	7.10	3.98	3.73	7.55	5.07	3.49	3.83	2.44
Poland	7.10	3.80	2.68	7.93	4.03	3.72	7.33	4.99	3.37	3.93	2.73
Slovenia	6.98	3.79	3.04	7.17	4.03	3.90	7.21	5.19	3.28	4.09	2.98
Europe	6.92	3.78	2.81	7.37	3.99	3.75	7.26	5.01	3.38	3.91	2.67
Cyprus	6.90	3.75	2.75	7.62	4.17	3.74	7.20	5.01	3.32	3.96	2.95
Spain	6.90	3.57	2.65	7.93	3.99	3.64	7.62	5.12	3.27	4.05	2.27
Ireland	6.72	3.78	2.85	7.23	4.07	3.85	6.98	4.91	3.41	3.94	2.73
Slovakia	6.55	3.57	2.91	6.82	3.88	3.60	6.81	4.80	3.22	3.82	2.70
France	6.40	3.86	2.57	7.52	4.08	3.50	7.18	5.05	3.34	3.58	2.76
Estonia	6.18	3.62	2.82	7.62	3.92	3.72	6.86	4.70	3.25	3.90	2.64
Portugal	5.96	3.57	2.62	6.97	3.95	3.35	6.31	4.62	3.23	3.95	2.49
Russian Federation	5.79	3.46	2.70	7.36	3.73	3.78	6.29	4.53	3.13	3.98	2.65
Ukraine	5.04	3.67	2.80	6.69	3.71	3.75	5.99	4.81	2.99	3.82	2.72
Bulgaria	4.34	3.69	2.67	7.18	3.74	3.43	5.34	5.06	2.83	3.83	2.57

Table 5: Wellbeing item means by sociodemographic categories for 2012 (Round 6)

		Competence	Emotional stability	Engagement	Meaning	Optimism	Positive emotion	Positive relationships	Resilience	Self-esteem	Vitality
	Possible range	1–5	1–4	0–10	1–5	1–5	0–10	0–6	1–5	1–5	1–4
Overall	All	3.78	2.81	7.37	3.99	3.75	7.26	5.01	3.38	3.91	2.67
All ages	Male	3.77	2.92	7.39	3.95	3.77	7.27	4.99	3.43	3.96	2.70
	Female	3.76	2.76	7.29	3.97	3.72	7.30	5.11	3.27	3.85	2.56
Under 24	All	3.77	2.84	7.34	3.96	3.75	7.29	5.05	3.35	3.91	2.63
	Male	3.72	2.93	7.29	3.89	3.91	7.45	5.11	3.59	4.06	2.94
	Female	3.74	2.77	7.28	3.92	3.85	7.72	5.23	3.41	3.89	2.80
25–44	All	3.73	2.85	7.29	3.91	3.88	7.59	5.17	3.50	3.98	2.87
	Male	3.78	2.86	7.40	3.99	3.84	7.33	4.95	3.51	4.00	2.82
	Female	3.81	2.73	7.38	4.06	3.79	7.49	5.07	3.42	3.90	2.70
44–65	All	3.80	2.80	7.39	4.03	3.82	7.41	5.01	3.47	3.95	2.76
	Male	3.79	2.86	7.43	3.99	3.73	7.04	4.84	3.46	3.89	2.74
	Female	3.81	2.73	7.38	4.03	3.69	7.14	5.01	3.29	3.86	2.62
65–74	All	3.80	2.80	7.41	4.01	3.71	7.09	4.93	3.38	3.88	2.68
	Male	3.82	2.98	7.49	3.95	3.73	7.32	4.98	3.36	3.95	2.64
	Female	3.77	2.75	7.33	3.98	3.62	7.06	5.08	3.17	3.80	2.50
75+	All	3.80	2.87	7.41	3.97	3.68	7.19	5.03	3.27	3.88	2.57
	Male	3.75	2.95	7.33	3.91	3.66	7.24	5.06	3.27	3.91	2.43
	Female	3.67	2.81	7.09	3.87	3.64	7.14	5.17	3.07	3.82	2.27
Education	Low	3.74	2.79	7.25	3.93	3.71	7.15	4.98	3.30	3.88	2.64
	Medium	3.83	2.85	7.52	4.04	3.81	7.4	5.11	3.44	3.94	2.70
	High	3.86	2.86	7.62	4.09	3.82	7.54	5.10	3.55	3.95	2.74
Employment	Student	3.78	2.88	7.41	4.00	3.95	7.75	5.23	3.54	4.02	2.88
	Employed	3.87	2.84	7.52	4.07	3.82	7.43	5.02	3.51	3.95	2.79
	Unemployed	3.49	2.63	6.98	3.76	3.6	6.49	4.73	3.15	3.82	2.58
	Retired	3.66	2.71	7.16	3.92	3.66	7.09	4.97	3.19	3.79	2.50

Change in wellbeing 2006–2012

Using the adapted definition for flourishing with the eight repeated wellbeing items, 16.2% of Europe could be categorised as having high wellbeing in Round 6 compared to 12.1% in Round 3 (Table 2). While the prevalence of flourishing increased between the two rounds for every country in this European sample, there were considerable differences in the percentage change between countries, with Germany increasing the most, by 10.0% and Portugal the least, by 0.5%. Tables 3 and 4 provide all the scores for all items for all countries in 2006 (round 3) and 2012 (round 6). Table 5 disaggregates results into age groups, gender, educational and employment status for round 6.

There was a general increase in the percentage achieving high scores on each of the eight repeated items across the entire population. Specific examples include emotional stability which increased by 8.3%, while resilience and vitality both increased by 4.5% across the 21 countries. Notably, seven countries increased on emotional stability by more than 10% (Table 6). Despite the overall increase in flourishing across the whole sample and within each country, there were some item-specific decreases in some countries as well. The percentage meeting criteria for positive emotion decreased by 15.0% in Ireland and by 12.1% in Cyprus from 2006 to 2012. High scores in optimism in Cyprus and Portugal also decreased by 13.3% and 10.5%, respectively. Competence decreased in Russia (30.4%) and Ukraine (11.9%) between rounds.

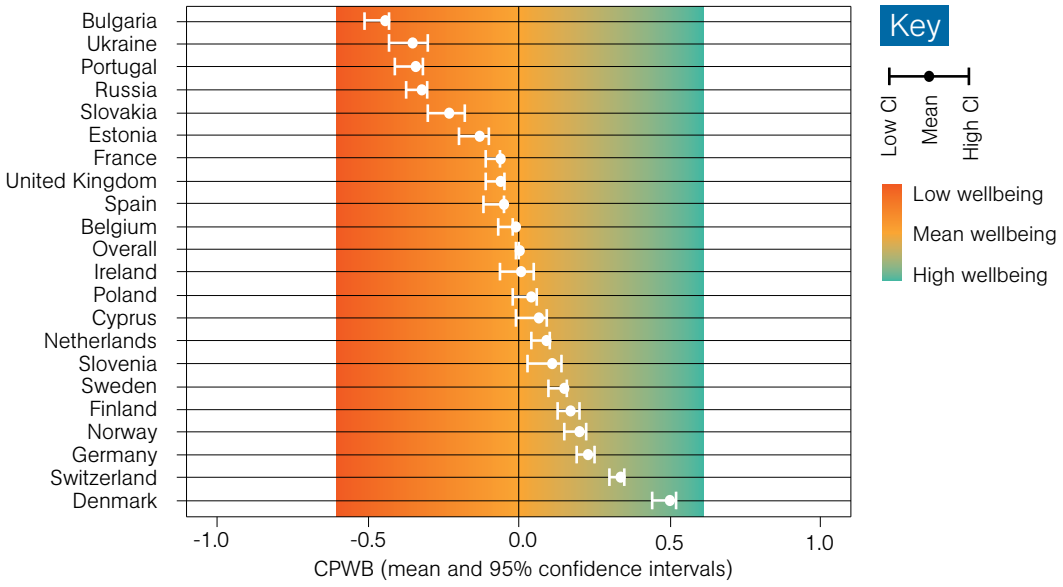
Table 6: Change in feature prevalence between Round 3 and Round 6

Component	% change	Increased 10% or more	Decreased 10% or more
Competence	-0.7	—	Russia, Ukraine
Emotional stability	8.3	Bulgaria, Cyprus, Netherlands, Poland, Russian Federation, Slovakia, Slovenia	—
Meaning	1.2	Germany	—
Optimism	1.7	Germany	Cyprus, Portugal
Positive emotion	1.2	—	Ireland, Cyprus
Resilience	4.5	Germany, Slovenia	—
Self-esteem	2.9	—	—
Vitality	4.5	Cyprus	—

Using the composite score

For the combined single score for CPWB, which could fall between -1.5 and 1.5, wellbeing 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 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 2 presents these with a colour gradient to simplify understanding of the pattern.

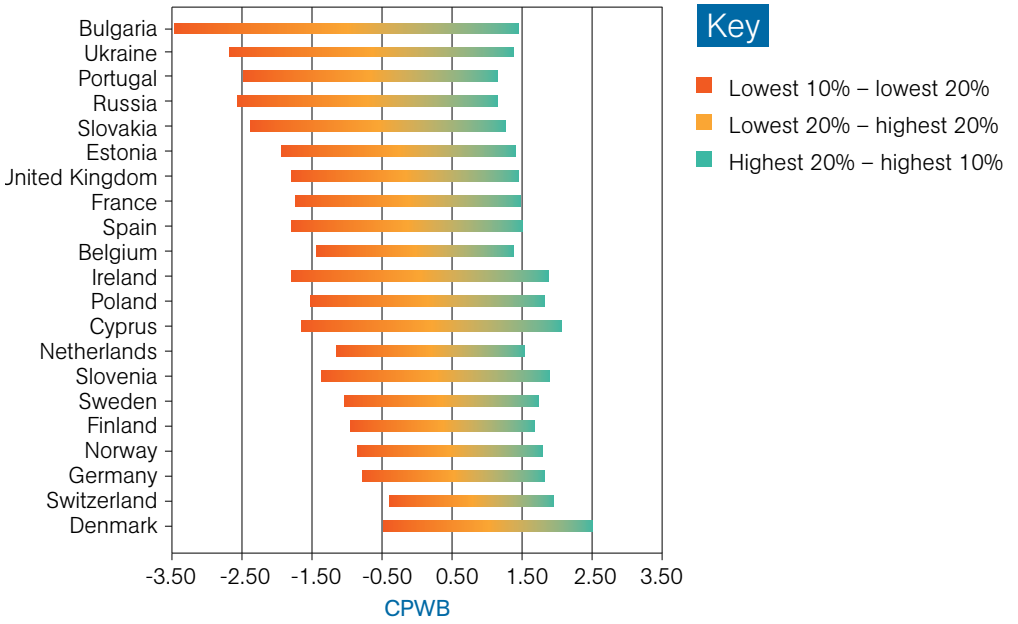
Figure 2: Distribution of national CPWB means and confidence intervals across Europe



One of the primary aims of this research was to better understand inequalities in wellbeing. As seen in Figure 3, 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 wellbeing gap and the national CPWB mean. This means that countries with lower CPWB means tend to have greater wellbeing inequality.

Figure 3 includes the middle 80% of the population for each of the 21 countries, excluding the extreme values (i.e. the highest and lowest 10%). This is done in order to emphasise the yellow section, which represents the size of the typical inequality within each country.

Figure 3: Distance (in yellow) between highest and lowest 20% in CPWB for 21 countries



Profiles

Each of the 21 countries was ranked on each of the 10 components of wellbeing in Round 6 based on the percentage of the population that agreed with the respective items. Country ranking on overall wellbeing was based on means of the general factor. Figure 4 demonstrates the differences in country ranking across the ten components of wellbeing as well as the composite/ comprehensive wellbeing score. Figure 5 demonstrates how two countries, the UK and Belgium, with similar mean life satisfaction scores, have two very different wellbeing profiles, both in terms of overall wellbeing and the components of wellbeing.

Critically, Figure 4 represents the diversity of how countries reach an overall wellbeing score. While the countries with overall high wellbeing have typically higher ranks on individual items, there are clearly weak items for individual countries. Alternatively, even countries with overall low wellbeing have positive scores on some dimensions. As such, the lower items can be seen as potential policy levers in terms of targeting areas of concern through evidence-based interventions that should improve them. Similarly, stronger areas can be seen as learning opportunities to understand what may be driving results and thus used to both sustain those levels as well as potentially to translate for individuals or groups not performing as well in that dimension. Figure 5 complements this insight more specifically by showing how the UK and Belgium, with very similar life satisfaction scores (7.3 and 7.4, respectively) in Round 6, arrive at similar single CPWB scores with very different individual items.

Figure 4: Country rankings on comprehensive psychological wellbeing and each of its ten dimensions

Ranking	Competence	Engagement	Emotional stability	Meaning	Optimism	Positive emotion	Positive relationships	Resilience	Self-esteem	Vitality	CPWB
1	Switzerland	Denmark	Slovenia	Switzerland	Switzerland	Denmark	Denmark	Denmark	Germany	Slovenia	Denmark
2	Sweden	Netherlands	Denmark	Norway	Germany	Finland	Norway	Norway	Slovenia	Switzerland	Switzerland
3	Germany	Spain	Norway	Denmark	Denmark	Norway	Sweden	Finland	Portugal	Cyprus	Germany
4	Denmark	Poland	Netherlands	Netherlands	Ireland	Switzerland	Germany	Netherlands	Switzerland	Netherlands	Norway
5	Norway	Finland	Sweden	Cyprus	Sweden	Netherlands	Switzerland	Sweden	Spain	Germany	Finland
6	Belgium	Belgium	Germany	Ireland	Norway	Sweden	Slovenia	Switzerland	Sweden	France	Sweden
7	Netherlands	Estonia	Slovakia	France	Finland	Belgium	Finland	UK	Ireland	Ireland	Slovenia
8	France	Germany	Switzerland	Portugal	UK	Germany	Netherlands	Germany	Finland	Ukraine	Netherlands
9	Ireland	Cyprus	Estonia	Belgium	Slovenia	UK	Spain	Ireland	Denmark	Denmark	Cyprus
10	Finland	Switzerland	Finland	UK	Estonia	Spain	France	Belgium	Cyprus	Estonia	Poland
11	Slovenia	France	Ireland	Slovenia	Cyprus	Poland	Bulgaria	Poland	UK	Russia	Ireland
12	UK	Ireland	Ukraine	Sweden	Netherlands	Slovenia	Belgium	France	Poland	Poland	Belgium
13	Poland	Bulgaria	Belgium	Finland	Poland	Cyprus	Poland	Portugal	Estonia	Norway	Spain
14	Cyprus	Russia	Russia	Poland	Belgium	France	Cyprus	Estonia	Netherlands	Slovakia	France
15	Portugal	Slovenia	Bulgaria	Germany	Ukraine	Ireland	Ireland	Slovenia	Russia	Bulgaria	UK
16	Bulgaria	UK	Cyprus	Spain	Spain	Estonia	UK	Spain	Bulgaria	Sweden	Estonia
17	Estonia	Portugal	Spain	Estonia	Russia	Slovakia	Ukraine	Cyprus	Norway	Finland	Slovakia
18	Ukraine	Ukraine	Poland	Slovakia	France	Portugal	Estonia	Slovakia	Slovakia	Belgium	Russia
19	Spain	Slovakia	UK	Bulgaria	Bulgaria	Ukraine	Slovakia	Russia	Belgium	Portugal	Portugal
20	Slovakia	Norway	France	Ukraine	Slovakia	Russia	Portugal	Ukraine	Ukraine	UK	Ukraine
21	Russia	Sweden	Portugal	Russia	Portugal	Bulgaria	Russia	Bulgaria	France	Spain	Bulgaria

Figure 5: Rankings of two countries with similar life satisfaction (the UK and Belgium) on ten items and comprehensive score

Ranking	Competence	Engagement	Emotional stability	Meaning	Optimism	Positive emotion	Positive relationships	Resilience	Self-esteem	Vitality	CPWB
1											
2											
3											
4											
5											
6	Belgium	Belgium									
7						Belgium		UK			
8					UK						
9				Belgium		UK					
10				UK				Belgium			
11									UK		
12	UK						Belgium				Belgium
13			Belgium								
14					Belgium						
15											UK
16		UK					UK				
17											
18										Belgium	
19			UK						Belgium		
20										UK	
21											

Demographics

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. 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 wellbeing. Older individuals exhibited lower CPWB scores compared to younger age groups across Europe. Typically, there was a broader spread between age groups for countries with lower overall wellbeing.

CPWB score is consistently higher for employed individuals and students than for retired or unemployed individuals. Unemployed groups were lowest in nearly all of the 21 countries, though the size of the distance from other groups was not consistently related to the national CPWB mean. The CPWB score increased with education level, though the differences were most pronounced between low – and middle-education groups, whereas individuals with high education were not typically significantly higher on CPWB than those with middle education. Differences between groups were noticeably larger for countries with lower overall wellbeing.

Health and illness

Table 7 shows correlations between CPWB and two questions used as indicators of health and illness: general health evaluation (*How is your health in general?*) and presence of physical and mental disturbances (*Are you hampered in your daily activities in any way by any longstanding illness, or disability, infirmity, or mental health problem?*). Illness scores are inverted such that higher values indicate lower illness, thus generally aligning with the health item.

Both general health (r=0.53) and the presence of illness (0.36) correlated highly with CPWB. The relationship between health measures and wellbeing was greater for older, unemployed, retired, and low-educated individuals. There was no visible gender difference.

Table 7: Relationship between CPWB and health for gender, age, education, and employment

	General health	Presence of illness
Education		
Low	0.57	0.39
Median	0.49	0.31
High	0.42	0.28
Age		
<24	0.36	0.19
25–44	0.42	0.27
45<64	0.54	0.35
65<74	0.70	0.47
75+	0.63	0.40
Gender		
Female	0.54	0.36
Male	0.56	0.40
Employment		
Employed	0.40	0.19
Student	0.36	0.17
Unemployed	0.50	0.29
Retired	0.74	0.58

Note: All correlations are significant at the 0.01 level.

Change in comprehensive psychological wellbeing

In order to compare the scores obtained in both rounds, the CPWB scores were calibrated by establishing a common metric for the two rounds. To ensure that change between rounds was not confounded by the use of different items across rounds, a common mean and standard deviation was applied to the CPWB scores.

For older people, individuals with lower education, women, and students, CPWB scores improved between rounds. Overall however, the CPWB scores remained constant between 2006 and 2012.

Table 8 presents simple mean values for CPWB by demographic variables in Round 3 and Round 6 for all countries combined. Six of the fourteen demographic groups showed an increase, one showed no change, and seven showed a decrease. However, increases were typically larger than decreases, so the estimated change is likely less indicative in these instances. Table 10 presents CPWB means for Rounds 3 and 6, and the difference between them, for each individual country. Eleven countries showed an

increase, one showed no change, and nine decreased. No specific pattern is clear, though typically the countries which were near the bottom in Round 3 showed the greatest declines.

Table 8: Means for CPWB by demographic variable for Round 3, Round 6, and change between rounds

Variable	CPWB Round 3	CPWB Round 6	Change
Education			
Low	-0.18	-0.07	0.11
Median	0.03	0.06	0.03
High	0.16	0.15	-0.01
Age			
<24	0.09	0.08	-0.01
25–44	0.09	0.05	-0.04
45<64	-0.01	-0.01	0.00
65<74	-0.12	-0.05	0.07
75+	-0.31	-0.16	0.15
Gender			
Female	0.07	0.05	-0.02
Male	-0.06	-0.04	0.02
Employment			
Employed	0.13	0.13	-0.01
Student	0.11	0.16	0.05
Unemployed	-0.36	-0.38	-0.02
Retired	-0.17	-0.19	-0.02

Table 9: Means by country for Round 3, Round 6, and change between rounds

Country	CPWB Round 3	CPWB Round 6	Change
Denmark	0.46	0.50	0.04
Switzerland	0.34	0.34	0.00
Germany	0.07	0.23	0.16
Norway	0.16	0.20	0.04
Finland	0.16	0.17	0.01
Sweden	0.16	0.15	-0.01
Slovenia	-0.04	0.11	0.15
The Netherlands	-0.04	0.09	0.13
Cyprus	0.17	0.07	-0.10
Poland	-0.20	0.04	0.24
Ireland	0.16	0.01	-0.15
Belgium	-0.02	-0.01	0.01
Spain	-0.03	-0.05	-0.02
United Kingdom	-0.08	-0.06	0.02
France	-0.11	-0.06	0.05
Estonia	-0.12	-0.13	-0.01
Slovakia	-0.25	-0.23	0.02
Russia	-0.20	-0.32	-0.12
Portugal	-0.16	-0.34	-0.18
Ukraine	-0.23	-0.35	-0.12
Bulgaria	-0.21	-0.44	-0.23

Note: Countries are in descending order based on CPWB mean in Round 6.

Change here represents how much the deviation from the mean CPWB has moved from Round 3 to Round 6. This means that for Portugal, the mean of the population decreased by 0.18 of a standard deviation from the mean. Although the change in prevalence results from the eight-item measure and those from the single-score CPWB may appear contradictory, they complement each other and give greater depth to our understanding of the consequences of the financial crises between the two rounds. When we consider both sets of results, it is apparent that while the numbers of people with very high wellbeing have increased, the overall mean of the sample for many countries decreases. This suggests that there may be increasing numbers of people doing less well in these countries in 2012 than in 2006. This may be accounted for by the spread of the wellbeing inequality we see in 2012. Our next line of analysis will compare wellbeing inequalities in Round 3 with those in Round 6, alongside the prevalence of those in both Rounds 3 and 6 who respond to the lowest categories of the eight repeated items.

General limitations

- Loss of two items from Round 3 and replacement in Round 6.
- Different scaling for the ten items used for CPWB.
- Four of the CPWB items (competence, meaning, optimism, and self-esteem) had to be inverted due to negative scoring of responses.
- The factor-scoring approach has considerable strengths, but is highly influenced by the inclusion of specific variables. It is thus sensitive to alterations of variables included, so any changes would need to be re-validated to check for impact on outcomes.

Policy implications

While this work opens up a significant number of insights on a macro-level for 21 countries, further analysis would certainly yield considerably more nuanced lessons within any of the topics presented. However, to summarise what key elements are directly relevant to policymakers to consider, six critical implications for policy have been highlighted here.

- There is an inverse relationship between average national wellbeing and wellbeing inequality. Therefore, if governments or policymakers wish to address inequalities in wellbeing, raising the general level of wellbeing may reduce these inequalities.
- Greater inequalities are also highly related to the largest spread of the bottom 20%. This indicates the greatest opportunity for policy impacts to result in significant population gains is through addressing those with the lowest wellbeing. As such, interventions that are effective with groups represented by this portion of the population should be considered a priority.
- Unemployed individuals consistently have lower wellbeing than employed individuals, though some of this may be accounted for by mental health problems precluding people from working, including mental health problems resulting from physical incapacity.
- Students and young people typically have the highest wellbeing, which means policy interventions should seek to sustain relevant behaviours and functions for those reaching working adult ages.
- Using ten items and reducing to a single score provided far more insights than considering only life satisfaction. This is primarily because it is possible to understand the various dimensions rather than search for minor changes in an overall score. This has added to the robustness of the approach taken. The advantage of the single score is that it heavily reduces the complexity of using a multivariate scale for a large number of countries, which would likely confuse and obscure critical insights. Additionally, the CWPB score has better sensitivity to change, whereas the single, life satisfaction measure showed minimal change in any of the 21 countries.
- Further insights into what predicts highest and lowest wellbeing will be presented in future outputs from this body of work.

CHAPTER 2
Inequalities in wellbeing

Annie Quick and Saamah Abdallah (NEF)

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.[51]

While people may differ in opinion about the extent to which inequality should be reduced, most people would agree that, when societies have very large differences in outcomes for different people, there is room for improvement.

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.

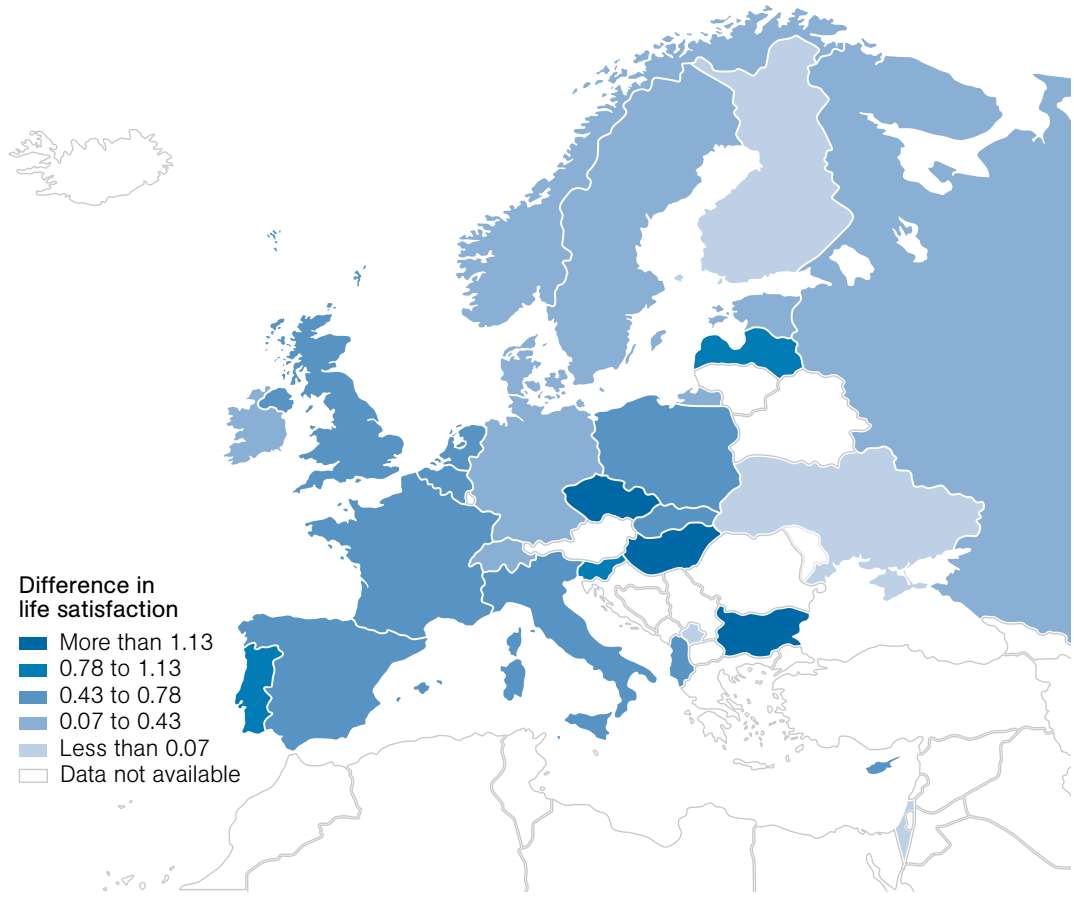
There are at least two ways in which to examine inequalities in wellbeing: inequalities between groups of people (e.g. according to gender or income groups), and inequality in overall wellbeing of the population. We explored both of these using the life satisfaction question which was included in all six waves.[52] Our research questions were:

- How did wellbeing inequalities vary between countries in Europe in 2012?
- How have wellbeing inequalities changed over time in Europe?
- What are the societal-level variables associated with high or low wellbeing inequality?

Chapter 1, written by the University of Cambridge, also looks at inequalities in CPWB, which is measured using ten questions in the 2012 wellbeing module.

Inequalities between population groups

Figure 6: Differences in life satisfaction between those with higher education and those who have not completed secondary education, 2012[53]



In the cases of Norway, Cyprus and the Ukraine, people with lower levels of education actually have marginally higher life satisfaction.

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, to observe how these inequalities change over time, and to see how they are affected by policy changes.

Figure 6 shows the difference in life satisfaction between those with higher education and those who had not completed secondary education in 2012. In Bulgaria, the difference is 2.5 points on the 0–10 life satisfaction scale. That is more than twice the difference in life satisfaction between someone unemployed and someone employed (Appendix 1). In some countries, such as the Ukraine and Finland, there is no difference.

Figures 7 to 10 show some of the other inequalities in life satisfaction between different demographic groups in 2012 for different countries.[54] In some cases, it was not possible to calculate figures for some countries.

Figure 7: Difference in life satisfaction in each country, between people who identify as being part of an ethnic minority, and those who do not

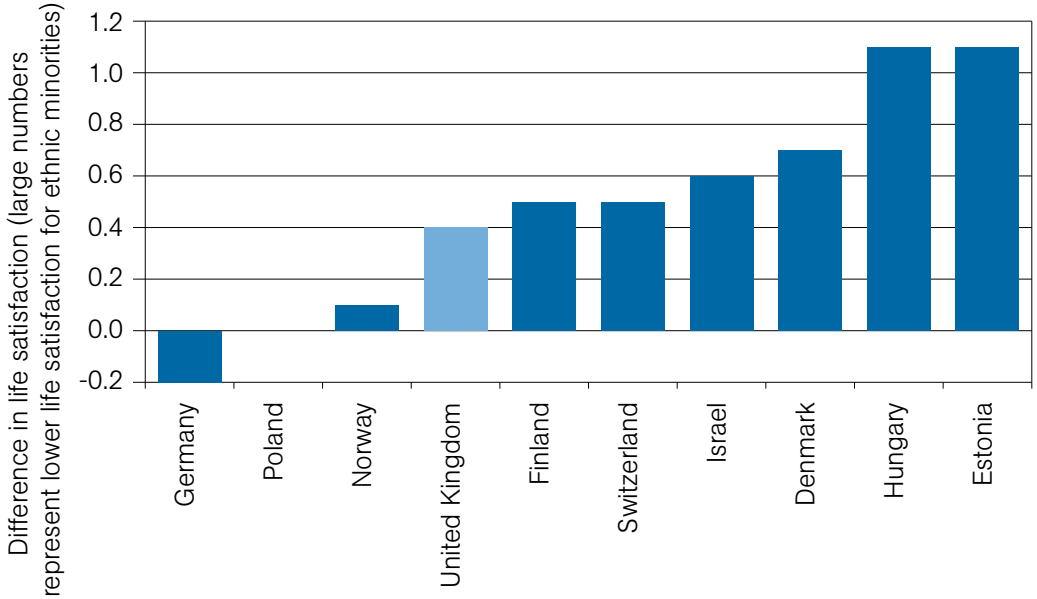


Figure 8: Difference in life satisfaction, in each country, between men and women

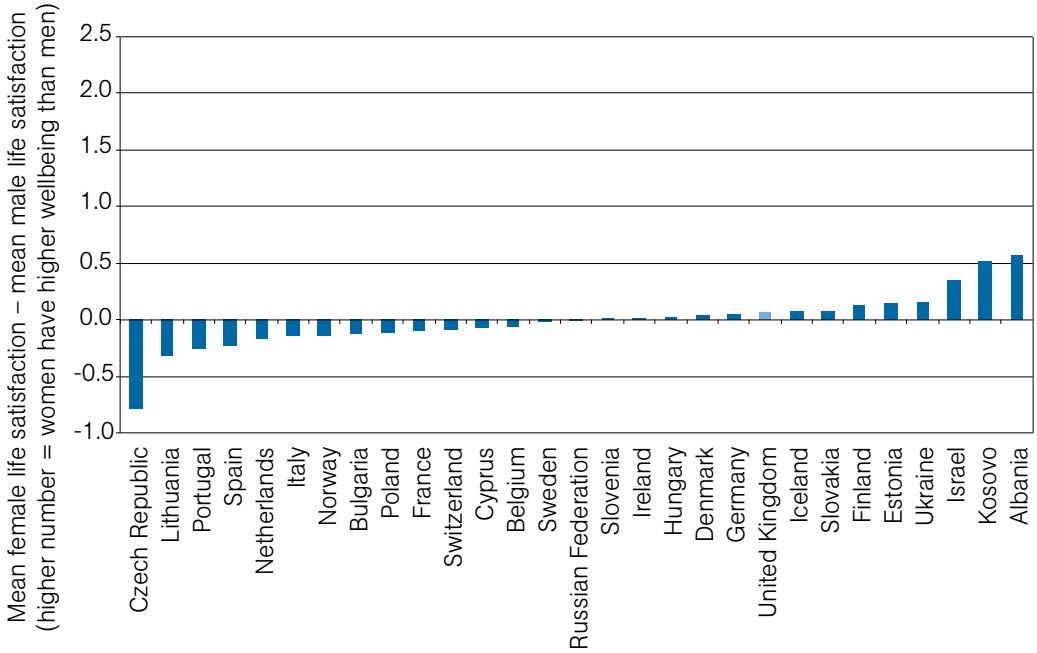
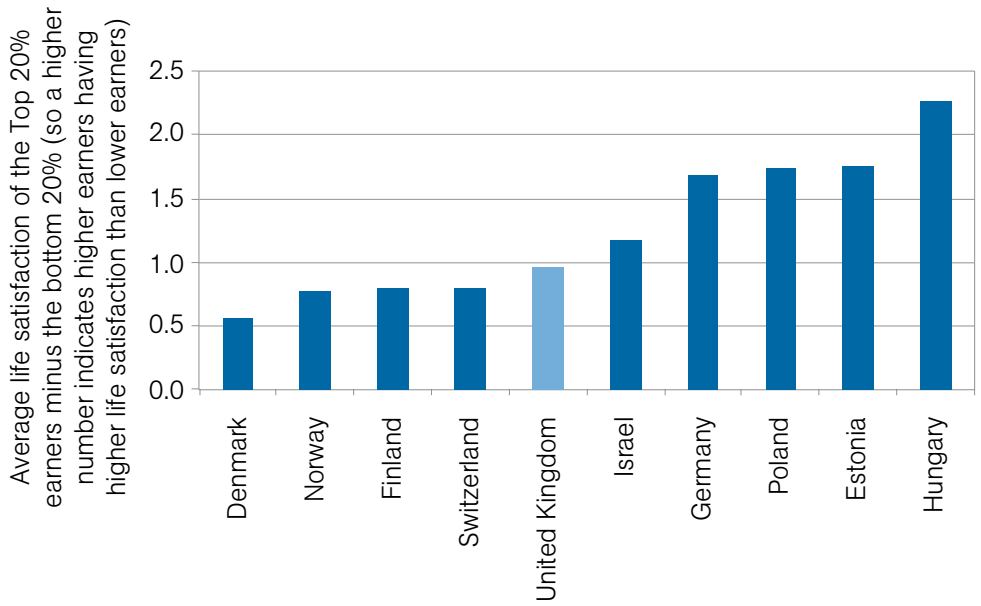
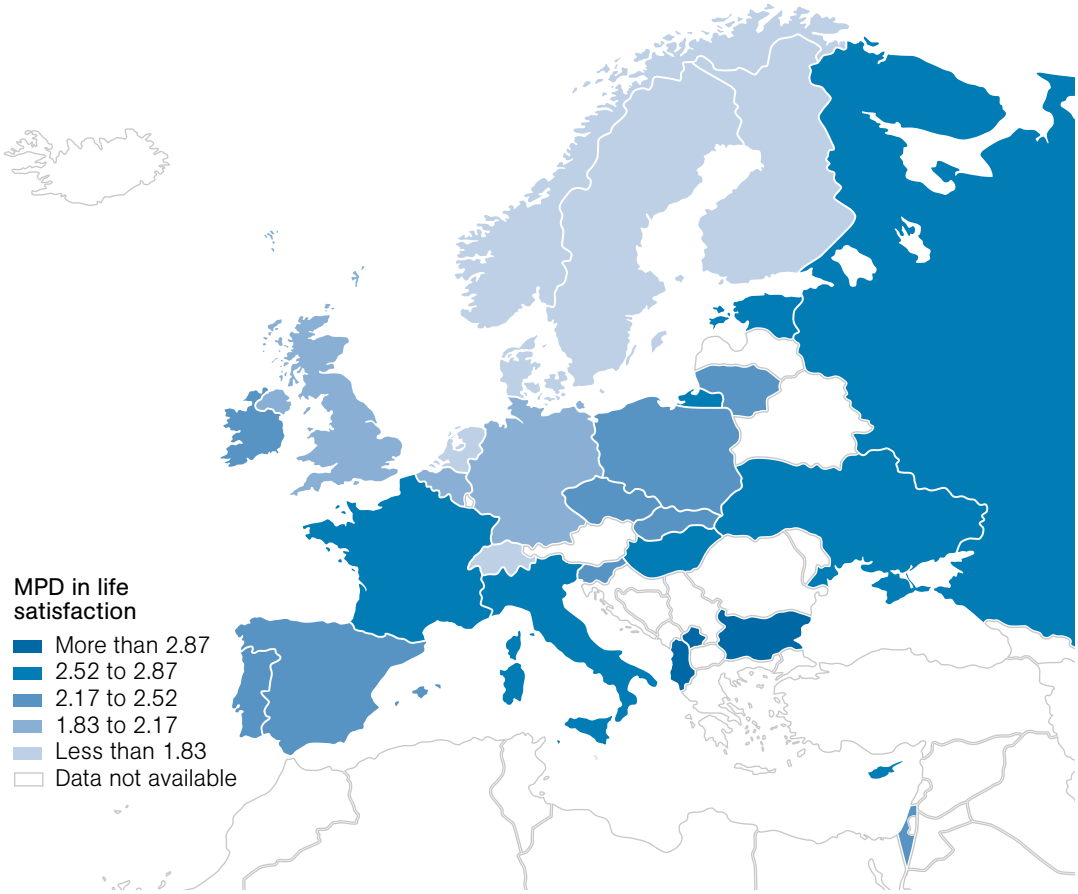


Figure 9: Difference in life satisfaction, in each country, between respondents in the top income quintile in that country and those in the bottom income quintile[55]



Inequality in overall wellbeing in the population

Figure 10: Inequality in life satisfaction (measured in terms of mean pair distance), 2012



The second approach involves looking at the distribution in overall population wellbeing, without considering 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.

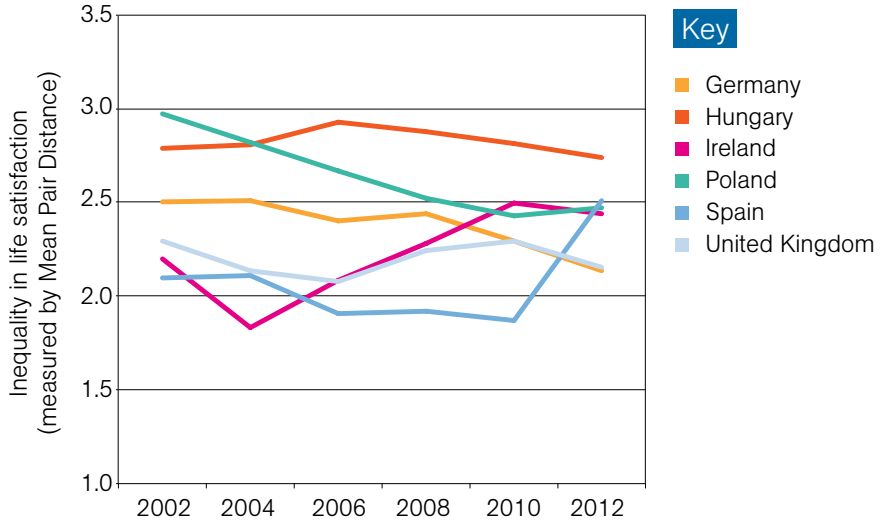
Following previous research, we used a method called Mean Pair Distance (MPD), to measure overall inequality in life satisfaction.[56] This is the average difference in life satisfaction scores between two randomly selected respondents from the survey for each country. In Albania, the average difference is 3.5 points on a 0–10 scale. In Finland it is only 1.5 points.

BOX 1: 80–20 wellbeing ratio

Another way to understand wellbeing inequality is the 80–20 income share ratio used by Eurostat and many other official bodies. The 80–20 income share ratio is the difference in income between the 20% richest people in a country and the 20% poorest people. For wellbeing, we calculated the difference in life satisfaction between the 20% most satisfied people and the 20% least satisfied people. In Albania, the difference is a massive 8.8 points – the top 20% of the population has a life satisfaction score of 9.6 out of 10, whilst the bottom 20% scores on average 0.8 out of 10. In Finland the difference is 3.5 points – the 20% most satisfied score 9.5 on average, while the 20% least satisfied score 6.0 on average. This comparison highlights that, while there are just as many satisfied people in Albania as there are in Finland, those with the lowest wellbeing in Albania have very low wellbeing, whilst those with the lowest wellbeing in Finland are actually still doing relatively well.

Figure 11 shows how wellbeing inequality (as measured using life satisfaction MPD) has changed over time in a few selected countries. For example, it has fallen steadily in Poland, but remained consistently high in Hungary. In Ireland, it rose rapidly between 2004 and 2010. In Spain, it remained roughly the same until a sharp increase in 2012.

Figure 11: Life satisfaction MPD in six selected countries between 2002 and 2012



What determines wellbeing inequality?

As well as *describing* the levels of wellbeing inequality, we wanted to explore what societal factors were associated with high or low wellbeing inequality, as assessed using life satisfaction MPD.[57]

We conducted multilevel modelling which enabled us to explore associations with a number of other variables over time as well as between countries. We tested a range of variables including (see Appendix 2 for more details):

- Macroeconomic indicators (such as GDP per capita, unemployment rate, inflation rate, income inequality, union density and economic freedom)
- Government spending (broken down by category)
- Governance (including six different elements assessing the effectiveness of government and its responsiveness)
- Local environment (air pollution and level of urbanisation)
- Attitudes on the importance of reducing inequality, and values
- Other inequalities (e.g. gender inequality and health inequality)

We developed three sets of models, all presented in Table 10. All the models controlled for country fixed effects. This should capture variables such as cultural biases, reducing the chance of a misleading finding.[58] The numbers in the table indicate the standardised effect size – larger numbers indicate that a variable had a larger effect on life satisfaction MPD. However, only the effects with shaded cells were statistically significant, with green shading indicating the variable was associated with lower wellbeing inequality, and red shading indicating the variable was associated with higher wellbeing inequality. When a cell is not shaded, the effect it refers to was not statistically significant, meaning that any apparent effect has a strong probability of having occurred by chance.

BOX 2: Statistical significance

Throughout this report, we have used the term 'significant' to refer to statistical significance. A finding (e.g. the difference between two population groups in wellbeing) is statistically significant when it is unlikely that the finding could have occurred by chance. Thresholds of 1% and 5% are used in this report. So if a finding is significant at 1% (or 0.01), this means that there is only a 1% chance that the finding was only a matter of chance, and therefore that there is a 99% chance that the finding (e.g. a difference) is a real one.

For each model, we report two sets of figures. The first shows 'between county' effects – i.e., effects which can be seen when comparing between countries. The second shows effects 'over time' within countries. For example, it seems that countries which have greater political stability have lower wellbeing inequality, but that when political stability increases within a country, wellbeing inequality actually goes up.

In the first set of models, we also controlled for mean life satisfaction, so the results showed the association between various indicators and wellbeing inequality over and above any association with average wellbeing.[59] The strongest effect we found was for unemployment, over time. When a country's unemployment rate increases, levels of wellbeing inequality also tend to increase.[60]

Other variables that had a significant association with wellbeing inequality included government spending on social protection (as spending increases, wellbeing inequality goes down), GDP (as GDP per capita rises, wellbeing inequality goes down), economic freedom (as economic freedom rises, wellbeing inequality goes up), and the perceived importance of reducing inequality (as this importance goes up, wellbeing inequality goes down). Furthermore, a cluster of significant findings related to the governance indicators – as regulatory quality and voice and accountability increase, wellbeing inequality goes down; and countries with greater political stability and voice and accountability tend to have lower wellbeing inequality.

One potential criticism of these findings is that it is economic development in general that leads to low wellbeing inequality, and that many of the variables that we found to be significant are associated with the economic development of a country or the current economic condition of that country. So it is not the unemployment rate that leads to lower levels of wellbeing inequality, but simply that unemployment goes up in moments when the economy is suffering, and it is that general poor economic condition that is associated with wellbeing inequality.

Table 10: Multilevel models for all variables with MPD of life satisfaction as the dependent variable, controlling for mean life satisfaction only; mean life satisfaction and unemployment; mean life satisfaction, unemployment, and GDP

Variable	N	Controlling for mean life satisfaction only				Controlling for mean life satisfaction and GDP				Controlling for mean life satisfaction, unemployment, and GDP			
		Between countries		Over time		Between countries		Over time		Between countries		Over time	
		Standardised coefficient	p	Standardised coefficient	p	Standardised coefficient	p	Standardised coefficient	p	Standardised coefficient	p	Standardised coefficient	p
Macroeconomics													
Unemployment	147	0.10	0.22	0.07	0.00**	0.08	0.38	0.07	0.00**				
GDP	148	-0.08	0.35	-0.05	0.01**								
Inflation	148	-0.05	0.46	-0.02	0.31	-0.06	0.37	-0.01	0.59	-0.01	0.94	0.02	0.24
Gini	102	0.00	0.97	0.00	0.93	0.01	0.93	0.00	0.98	-0.04	0.69	0.01	0.58
Union density	115	-0.03	0.70	0.03	0.15	-0.06	0.42	0.03	0.08	-0.07	0.34	0.02	0.23
Economic freedom Fraser	147	-0.08	0.35	0.04	0.03*	-0.10	0.36	0.03	0.04*	-0.11	0.28	0.02	0.28
Economic freedom Heritage	143	-0.05	0.52	0.04	0.02*	-0.07	0.45	0.03	0.11	-0.10	0.32	0.03	0.12
Government spending as a percentage of GDP	113	-0.03	0.27	0.01	0.85	-0.03	0.24	0.00	0.99	0.02	0.51	0.00	0.97
Government spending on economic affairs	114	0.01	0.86	-0.01	0.58	0.02	0.81	-0.01	0.76	0.02	0.74	0.00	0.89
Government spending on education	114	-0.10	0.19	-0.03	0.11	-0.11	0.15	-0.03	0.19	-0.12	0.12	-0.02	0.31
Government spending on health	114	-0.05	0.51	-0.01	0.47	-0.07	0.37	-0.02	0.38	-0.07	0.35	0.00	0.92
Government spending on order and safety	114	-0.08	0.37	-0.01	0.66	-0.07	0.50	-0.01	0.69	-0.06	0.59	0.00	0.93
Government spending on recreation and culture	114	-0.02	0.79	0.01	0.55	-0.02	0.71	0.01	0.54	-0.02	0.72	0.01	0.49
Government spending on sickness and disability	98	-0.13	0.14	-0.02	0.32	-0.17	0.08	-0.01	0.53	-0.18	0.07	-0.01	0.49
Government spending social protection	114	0.05	0.48	-0.06	0.00**	0.05	0.49	-0.06	0.00**	0.05	0.55	-0.01	0.77
Government spending on unemployment (controlling for unemployment)	98	-0.09	0.35	0.01	0.75	-0.11	0.27	0.01	0.70	-0.11	0.29	0.01	0.71

Variable	N	Controlling for mean life satisfaction only				Controlling for mean life satisfaction and GDP				Controlling for mean life satisfaction, unemployment, and GDP			
		Between countries		Over time		Between countries		Over time		Between countries		Over time	
		Standardised coefficient	p	Standardised coefficient	p	Standardised coefficient	p	Standardised coefficient	p	Standardised coefficient	p	Standardised coefficient	p
Governance													
Control of corruption	148	-0.14	0.12	0.00	0.97	-0.32	0.02*	-0.01	0.65	-0.33	0.02*	0.00	0.56
Government effectiveness	148	-0.14	0.08	0.01	0.53	-0.31	0.01*	0.00	0.84	-0.31	0.02*	0.02	0.29
Political stability	148	-0.16	0.03*	0.03	0.13	-0.21	0.01*	0.02	0.26	-0.19	0.04*	0.05	0.00**
Regulatory quality	148	-0.14	0.07	-0.04	0.01**	-0.20	0.05	-0.04	0.01**	-0.19	0.08	-0.02	0.24
Voice and accountability	148	-0.15	0.05*	-0.04	0.02*	-0.23	0.02*	-0.04	0.01*	-0.25	0.02*	-0.03	0.07
Rule of law	148	-0.14	0.08	-0.02	0.16	-0.28	0.02*	-0.02	0.27	-0.28	0.03*	-0.01	0.44
Environment													
Urban population	147	-0.11	0.17	0.01	0.47	-0.15	0.11	0.00	0.96	-0.15	0.10	0.04	0.03*
Air pollution	48	0.07	0.34	-0.01	0.78	0.04	0.58	-0.01	0.71	0.05	0.51	-0.01	0.61
Values													
Self-enhancement values	146	-0.07	0.40	-0.02	0.28	-0.08	0.43	-0.02	0.33	-0.11	0.28	-0.01	0.50
Belief that it is important to reduce inequality	148	-0.03	0.74	-0.04	0.03*	-0.04	0.69	-0.04	0.01**	-0.06	0.61	-0.02	0.14
Inequalities													
Gender inequalities	75	0.08	0.39	0.04	0.15	0.13	0.22	0.06	0.04*	0.20	0.06	0.03	0.23
Life expectancy difference in education	38	0.13	0.21	-0.01	0.58	0.08	0.38	-0.02	0.34	0.07	0.50	-0.02	0.37

To test for this, in the second set of models, we controlled for GDP per capita (as well as average life satisfaction), which we took to be a proxy for the general economic condition of the country. Furthermore, given a context where increasing GDP per capita is often the primary goal of policymakers,[61] controlling for it allows us to ask what else is important, that GDP per capita is not accounting for?

The second set of models allows us to reject the potential criticism that economic development in general is behind low wellbeing inequality. Most of the variables that were significant before including GDP per capita in the model remained significant – including unemployment, government spending on social protection, regulatory quality, voice and accountability, and the perceived importance of reducing inequality.

The persistent effect of unemployment rate is worth highlighting. It means that if a country's GDP and average life satisfaction remain the same over two years, but unemployment increases, then one would expect wellbeing inequality to increase as well. In the case of unemployment rate, this association held true not only for the MPD of life satisfaction, but also when we used various other measures of wellbeing inequality based on life satisfaction, highlighting the strength of this relationship.[62] It is also worth noting that the unemployment effect overshadows that of GDP per capita. Including both variables in a model, it is GDP which stops being significant, suggesting that it is the rise in unemployment often associated with falling GDP that increases wellbeing inequality, rather than the fall in GDP itself.[63]

The only variable which ceases to be significant when including GDP in the model is economic freedom as measured by the Heritage Foundation. This seems to be because GDP per capita tends to go down when a country's economic freedom goes up, and so the additional value of economic freedom to explain wellbeing inequality is negligible. It may be because increasing economic freedom leads to reduced GDP per capita, which in turn leads to higher wellbeing inequality; or it may be that there is no causal link between economic freedom and wellbeing inequality at all. Note however, that the other measure of economic freedom we used (developed by the Fraser Institute) did still significantly predict wellbeing inequality, even after controlling for GDP per capita.

The other change worth noting is that all six governance variables are now significant in one way or another, with better governance associated with lower wellbeing inequality. Specifically, five of the six variables are significant when comparing between countries, when only two were before (though p values were still very low for those that were not significant, suggesting that this lack of significance may just be a result of low statistical power). It appears that, when GDP per capita is used to explain some of the variance in wellbeing inequality, what remains is more clearly associated with governance.

Given the strength of the unemployment effect, our third set of models also controlled for unemployment rate. Now, many of the factors that had been found to be significant earlier, ceased to be significant, including GDP per capita, both measures of economic freedom, government spending on social protection, and the perceived importance of reducing inequality.

This could mean one of two things. The first is that the variables in question do not actually influence wellbeing inequality, but that when the variable increases,

unemployment increases (or decreases) because of some other factor. In this instance, what we thought was the effect of that variable, was just the effect of unemployment – this is called a confounding effect; attempting to influence the variable is unlikely to impact wellbeing inequality. However, the second possibility is that the variable in question is mediated by unemployment. For example, this could be the case for economic freedom. The fact that economic freedom (as measured by the Fraser Institute) is associated with an increase in wellbeing inequality, but this association disappears when controlling for unemployment, would be consistent with a theory that greater economic freedom leads to increased unemployment, which in turn increases wellbeing inequality.

One variable that only becomes significant with the addition of unemployment rate to the model is urban population – when a country's urban population rises, wellbeing inequality rises, holding GDP per capita and unemployment rate constant.

It is worth noting that the only set of variables which predicted wellbeing inequality whether GDP and unemployment have been controlled for or not is related to governance – countries with better governance seem to have lower wellbeing inequality even after controlling for GDP, unemployment, and average wellbeing. Indeed, in the case of voice and accountability, a significant effect was only seen on wellbeing inequality, not average wellbeing. However, note the one anomaly – that improvements in political stability seem to lead to greater wellbeing inequality even though countries with higher political stability have lower wellbeing inequality.

Policy implications and further research

It is still early days when it comes to drawing policy conclusions based on analyses of drivers of wellbeing inequality. However, our research points to a few conclusions. First, our findings corroborate existing research that suggests improvements in governance are particularly important for reducing inequalities in wellbeing.[64–66] Further research could be undertaken to explore which aspects of governance (below the level of the World Bank indicators) make the most difference, and how these can be strengthened.

Our research found that economic freedom is associated with higher inequalities in wellbeing, and that higher government spending is associated with lower inequalities in wellbeing (also supported by existing studies[67, 68]). In both cases, however, our findings suggest that this association may be mediated through unemployment. This suggests that decisions about economic liberalisation and government spending should pay particular attention to its effects on unemployment if it aims to reduce wellbeing inequalities.

Furthermore, there is still work to be done to identify a measure of wellbeing inequality that reflects the inequality we most care about. The MPD we used treats the difference between a 2 and a 4 in life satisfaction, the same as the difference between a 7 and a 9. Is this right? This question is a matter of judgement for policymakers and politicians. It could be argued that that more attention should be given to supporting those at the bottom of the wellbeing spectrum to improve their wellbeing, in which case other measures of wellbeing inequality may be more appropriate.

CHAPTER 3
Five ways to wellbeing

Saamah Abdallah (NEF)

Introduction

The five ways to wellbeing are a set of actions that evidence suggests promote wellbeing. They are: Connect, Be Active, Take Notice, Keep Learning, and Give.

They were developed by NEF based on evidence gathered in the UK government's 2008 Foresight Project on Mental Capital and Wellbeing. The aim was to identify simple, universal actions that anyone can do on an individual level.[69] They were not intended to be understood as the five *strongest* determinants of wellbeing. Since their publication, the five ways have had an enormous reach. They have been used as evaluation frameworks, in school curricula, and for procurement decisions, among many other uses.[70] Their use has far outstripped expectations, and there have been calls to explore the evidence base further.[71]

In 2012, the ESS was the first international survey to include questions directly on all five ways to wellbeing, allowing us to explore patterns of five ways behaviour across Europe for the first time, and to confirm that there was a relationship between five ways participation and levels of wellbeing.

We set out to address the following questions:

1. How does participation in five ways activities vary between countries?
2. How does participation in five ways activities vary by age, gender, and education level? What are the intersections between age and gender?
3. In which countries are patterns of activity by age, gender, and education level different?

We then identified two areas where five ways participation for a particular demographics group was lower in the UK than in other countries – levels of taking notice amongst young females, and levels of connecting amongst middle-aged people in the UK – and attempted to identify explanations.

Table 11: Five Ways questions and the response threshold used

Five Ways	Question	People were categorised as doing this activity if they responded… [72]
Connect	How often do you meet socially with friends, relatives, or work colleagues?	Several times a month or more
Take Notice	On a typical day, how often do you take notice of and appreciate your surroundings?	7 or more on a scale of 0 (never) to 10 (always)
Keep Learning	To what extent do you learn new things in your life?	5 or more on a scale of 1 (not at all) to 7 (a great deal)
Be Active	On how many of the last 7 days were you physically active continuously for 20 minutes or longer?	Three days a week or more
Give	To what extent do you provide help and support to people you are close to when they need it?	6 or more on a scale of 1 (not at all) to 7 (completely)

Figure 12: Percentage of population who meet the threshold for Connect[73]

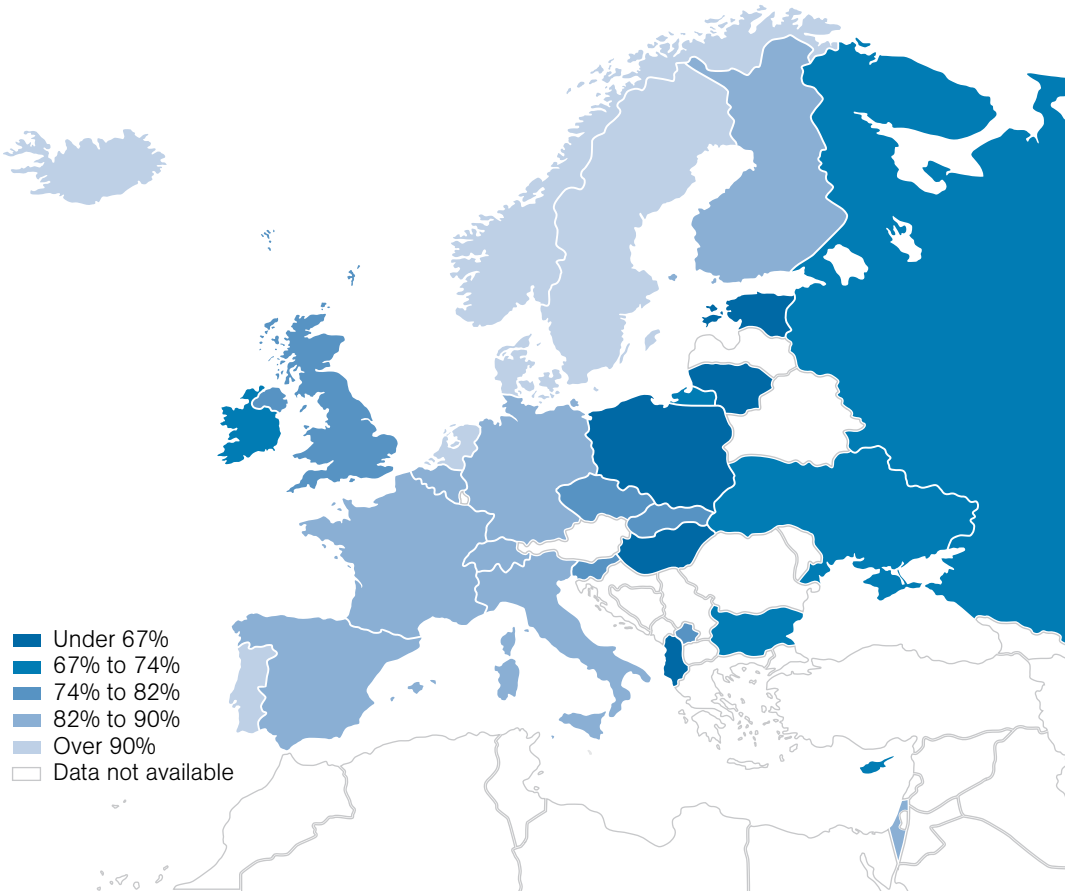


Figure 13: Percentage of population who meet the threshold for Take Notice

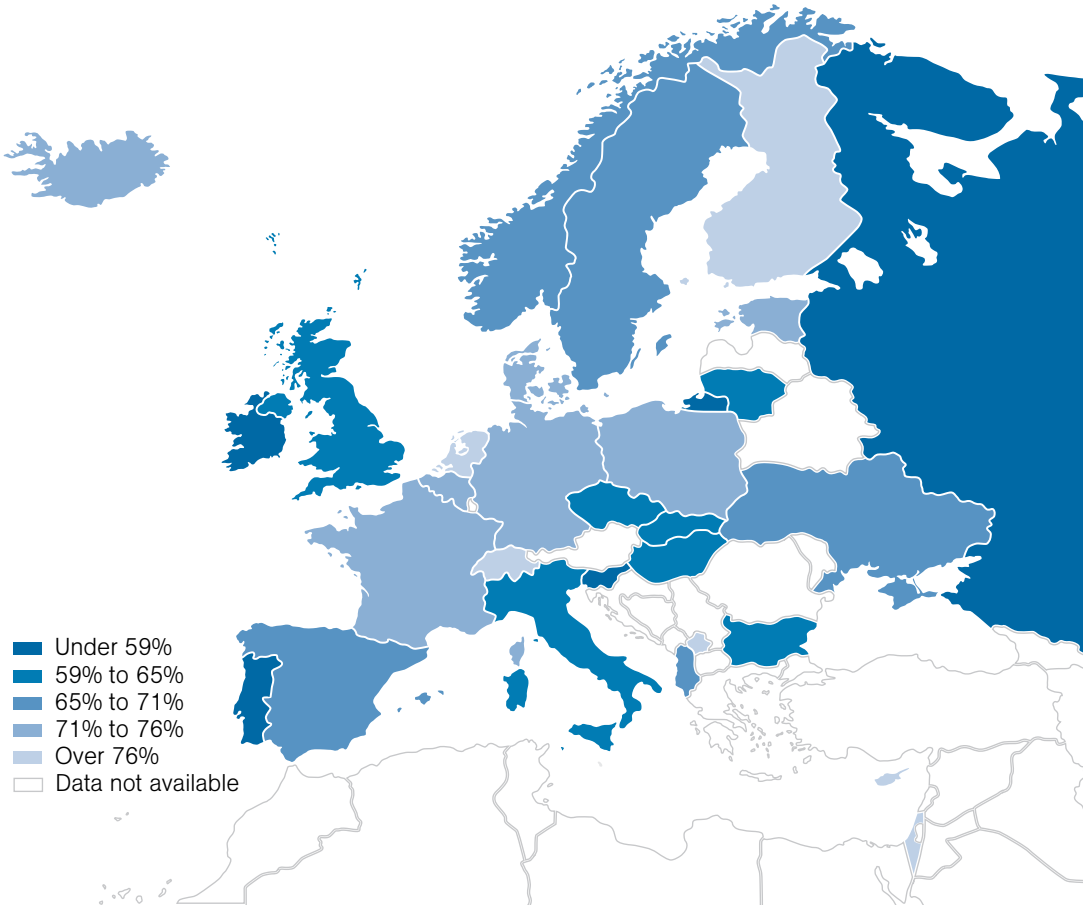


Figure 14: Percentage of population who meet the threshold for Keep Learning

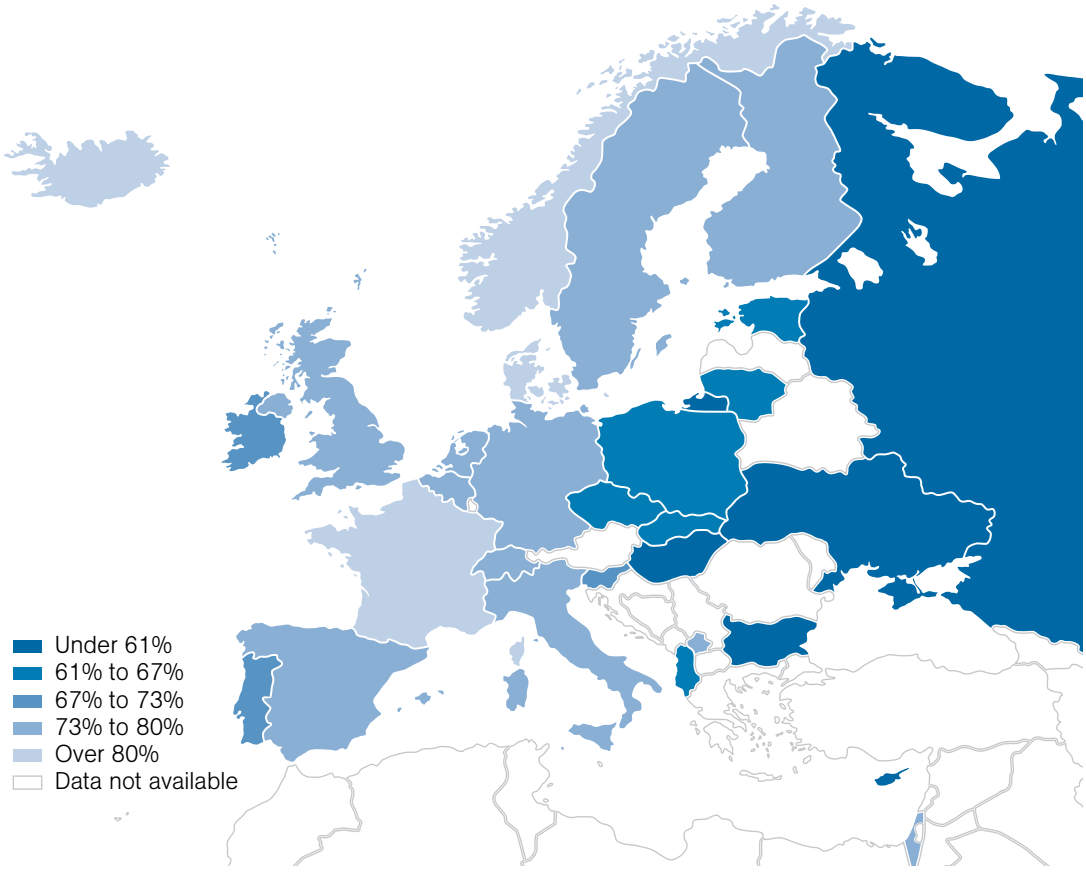


Figure 15: Percentage of population who meet the threshold for Be Active

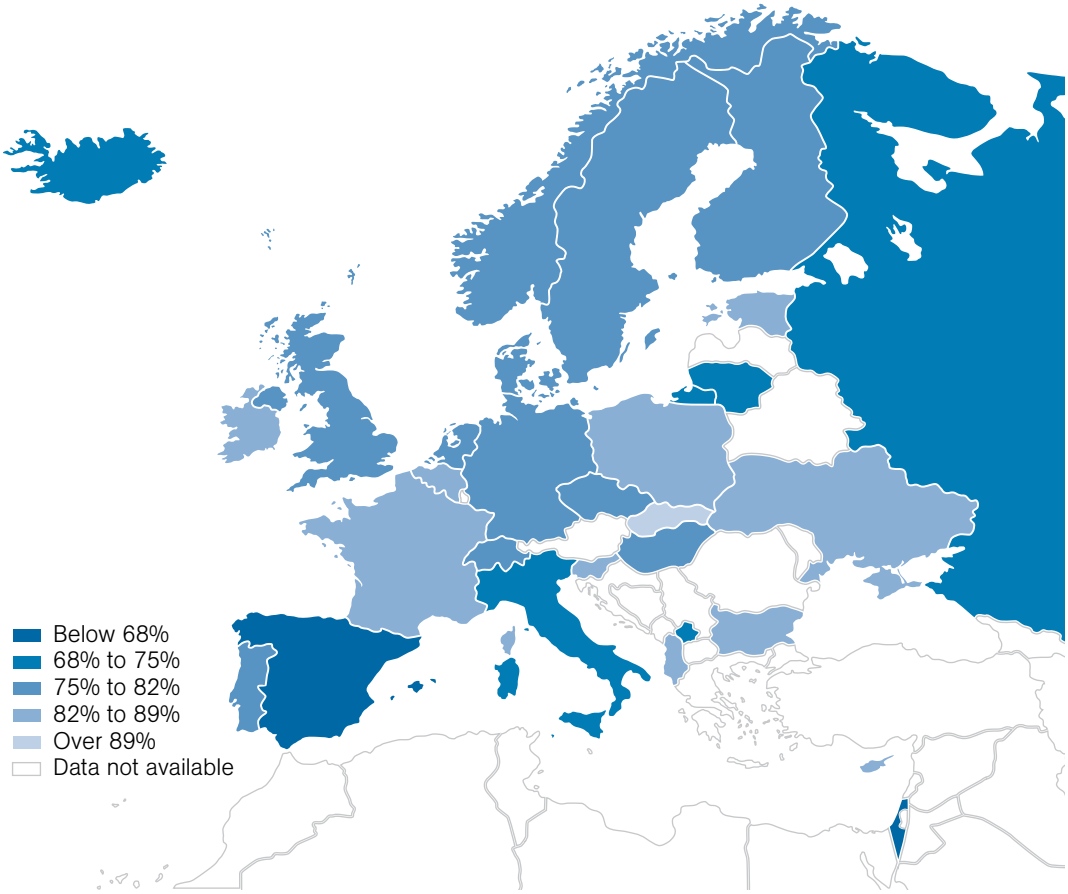


Figure 16: Percentage of population who meet the threshold for Give

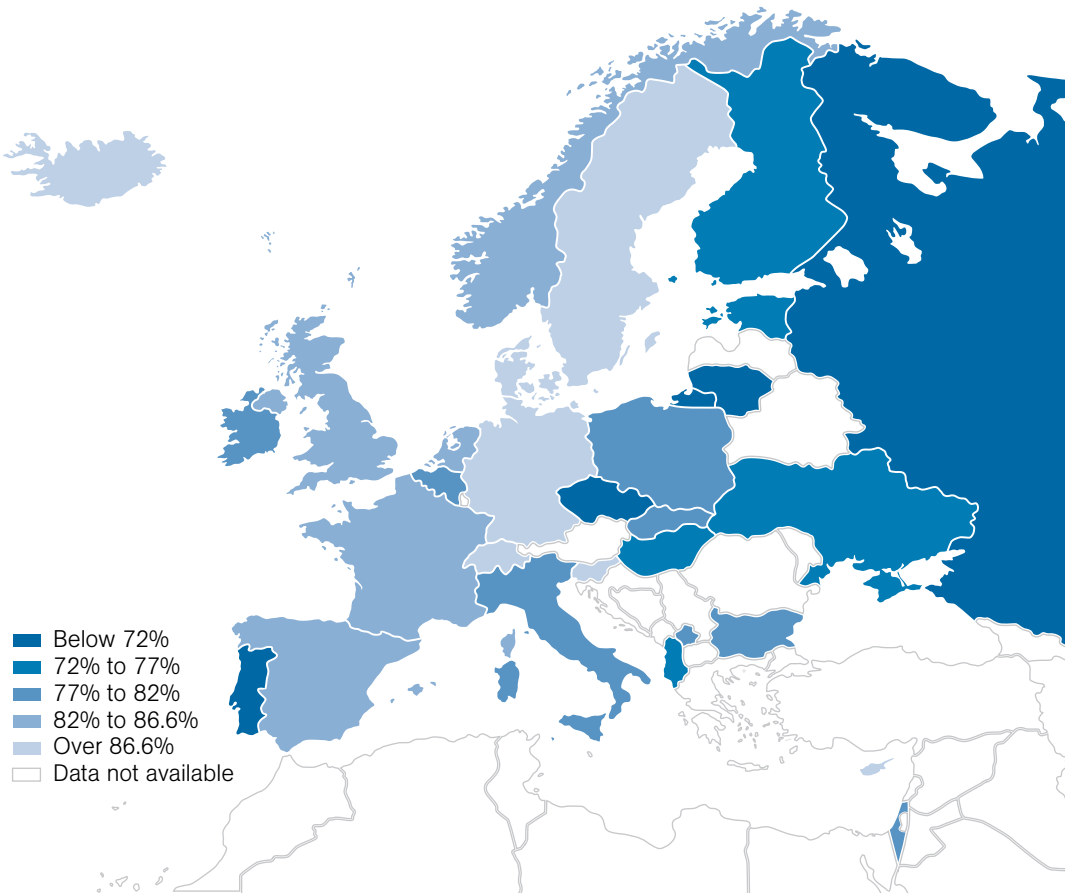


Figure 17: Percentage of people who participate in at least four of the five ways

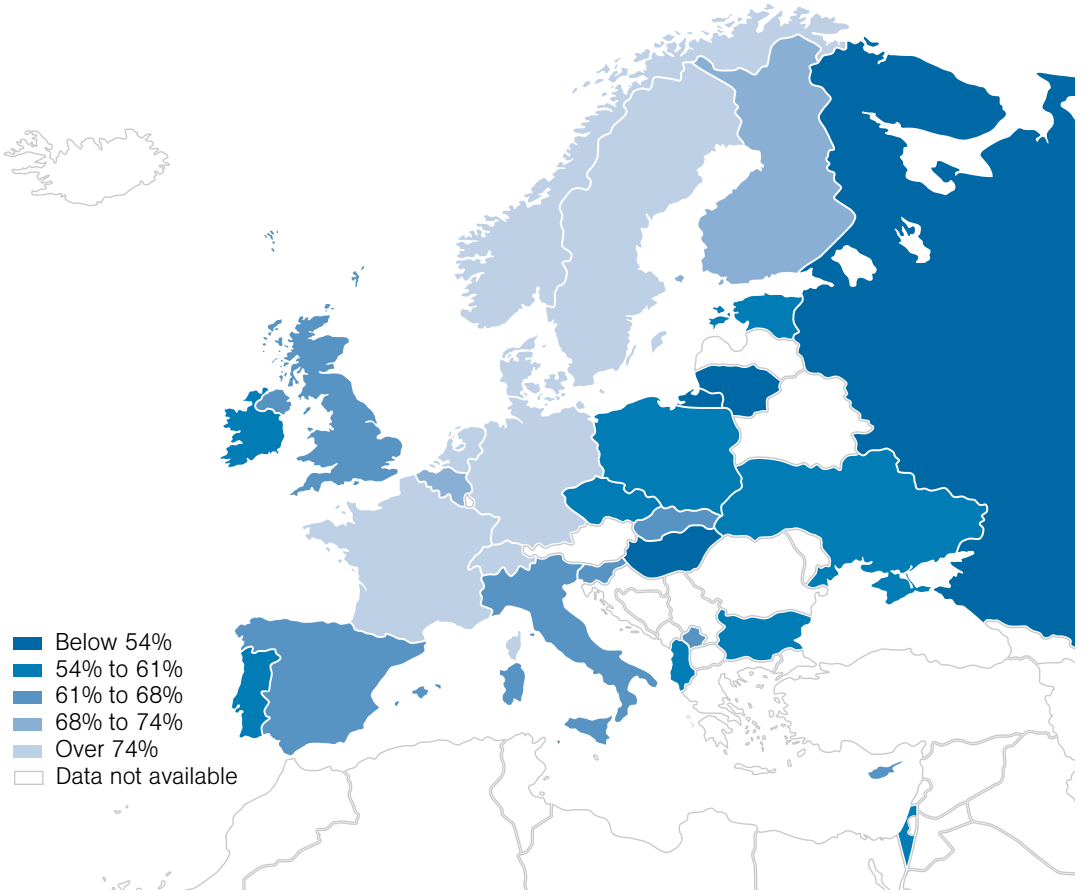


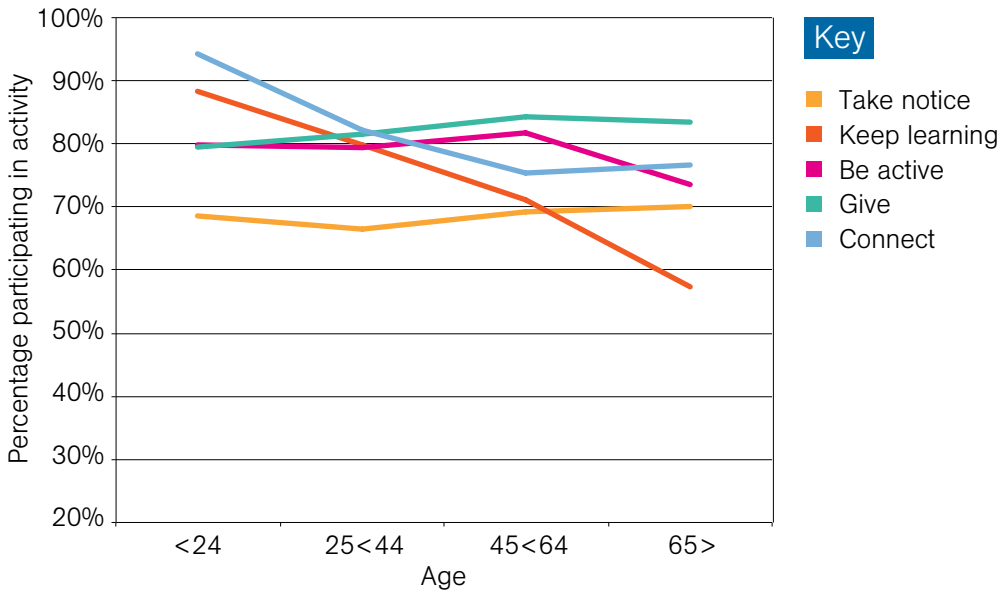
Table 11 shows the question used for each of the five ways, and the response threshold used to define whether someone was categorised as carrying out that way to wellbeing or not. Figures 12 to 16 show how participation in each of these varied across Europe. Figure 17 is based on all five ways combined, showing the percentage of people who participated in at least four of the five ways. The general pattern is a familiar one for those used to looking at wellbeing data. The countries with the highest levels of wellbeing, such as those in Scandinavia, also had the highest rates of five ways participation; whilst the ones with the lowest levels, such as in Central and Eastern Europe, had the lowest rates. But patterns also varied for different activities.

Scandinavian countries had the highest levels of Keep Learning, but the Netherlands had the highest levels of Connect, Germany the highest levels of Give, Israel and Cyprus the highest levels of Take Notice, and Slovakia the highest levels of Be Active. Indeed, the pattern for Be Active seems quite distinct from the others, with lower income countries having the highest levels.

Meanwhile, Hungary had the lowest levels of Connect and Keep Learning, Russia the lowest levels of Take Notice and Give, and Israel had by far the lowest levels of Be Active (36%).

Age comparisons

Figure 18: Participation in five ways by age category, all countries pooled



Looking at all countries combined (Figure 18), age had different relationships with each of the five ways. Keep Learning declined across the life course, while Be Active declined sharply amongst the oldest respondents (65+). Connect was highest for the youngest respondents (under 25), and then declined, levelling out towards middle age. Meanwhile, Give increased with age, and Take Notice increased slightly with age.

Patterns with age varied dramatically between countries, however. Figures 19 and 20 show the age patterns for two countries – the UK and Poland. Whereas in Poland, the pattern of decreasing five ways participation amongst the over 65 was particularly pronounced, in the UK, it was actually reversed for most of the activities. Indeed, the highest rates of Give and Take Notice were amongst this age group in the UK.

Figure 19: Participation in five ways by age category for the UK

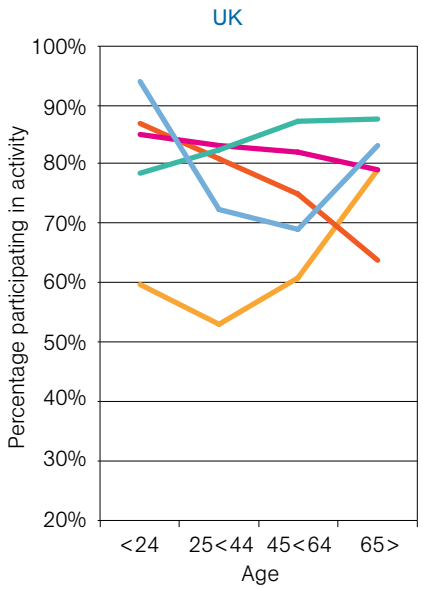
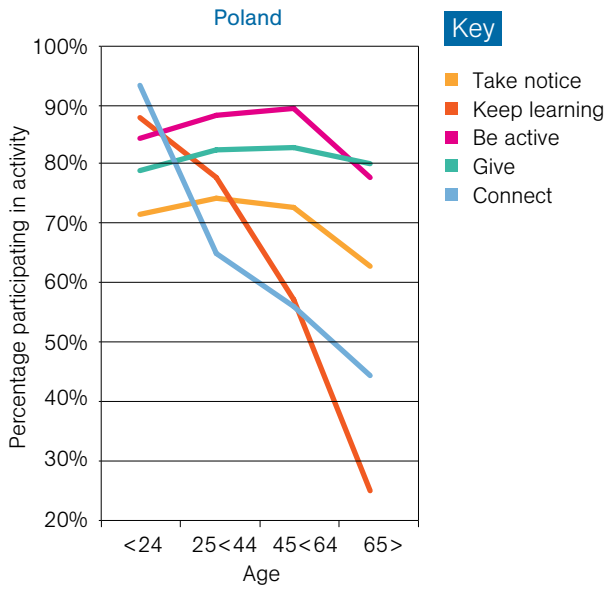


Figure 20: Participation in five ways ways by age category for Poland



Gender comparisons

Gender differences were not substantial when looking at all countries combined. Women were more likely to Give and slightly more likely to Take Notice, whilst men were more likely to Keep Learning, and slightly more likely to Be Active. There was no difference in Connect. Again, gender differences varied across countries. For example, whilst women had higher levels of Connect than men in Scandinavian countries, in several countries in the Balkans the pattern was reversed with higher rates of Connect for men than women. For example, in Albania 77% of men reached our threshold for Connect, compared to only 57% of women.

Education comparisons

We looked at the participation gap for each five way between people who had not completed secondary education vs. those with a degree or higher qualification.

Unsurprisingly, the biggest gaps for most countries in Europe were for Keep Learning. For example, in Bulgaria only 41% of people who had not completed secondary education achieved our threshold for Keep Learning, compared to 79% of people who had some higher education. Even in France, where the difference was the smallest, there was still a 10 percentage point advantage for those with higher education.

Conversely, there was no overall pattern for Be Active. In some countries, rates of participation in Be Active were higher for people with higher education – the biggest difference being in Portugal. In others, however, people with no secondary education had higher levels of participation – the biggest difference being in Italy.

The patterns for the other five ways fell in between these two extremes. For Give and Take Notice most countries had higher levels of participation amongst those with higher education, although there were a couple of exceptions.

Figure 21: Rates of overall five ways participation for those with different education levels, by country

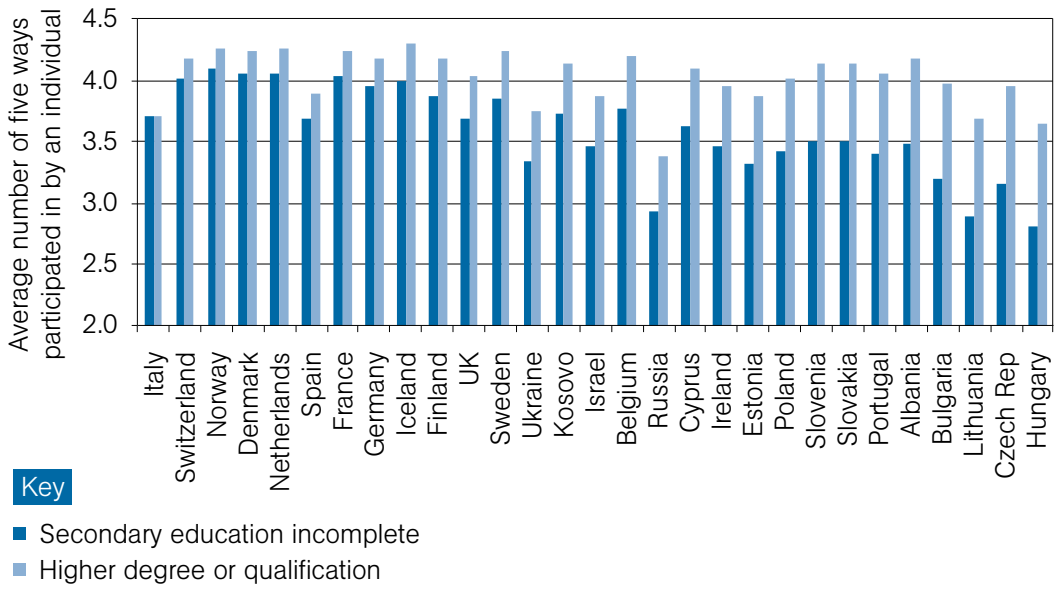


Figure 21 combines all five ways. It shows the average number of five way activities carried out by people with higher education versus those who had not completed secondary education. Countries are ordered such that those on the right (e.g. Hungary, Czech Republic, and Lithuania) have larger differences in five ways participation due to education level, and those on the left have smaller differences. In general, differences were smaller in wealthier countries such as Switzerland and Norway, although the only country where there was no significant difference was Italy.

Exploring policy implications, the UK as an example

Appendix 3 shows breakdowns for all countries for all the five ways by age group, gender, and educational level, allowing policymakers to compare their country's performance against others. For example, although Figure 20 shows a steep decline in five ways participation with age in Poland, comparison with other countries highlights that this decline need not be so sharp, suggesting that targeted policies may reduce this difference in that country. Conversely, UK policymakers should recognise that levels of Keep Learning amongst those over 65 are higher in the UK than in most other countries, and so it may not be straightforward to increase them any higher.

We analysed the results for the UK to identify areas for improvement. With the exception of those aged 65 and over, the UK generally had low levels of participation, when compared to peer countries such as Germany or France. Although the UK appeared to be average for Europe in some comparisons, this average includes countries with much lower levels of income such as

the Ukraine and Bulgaria, suggesting that the UK could aim higher. We found two main, potentially related areas for improvement in the UK.

Take Notice

The question on Take Notice asked people whether they take notice and appreciate their surroundings. The UK had low levels overall – 63% participated in Take Notice in the UK, compared to, for example, 75% in Germany or 68% in Ukraine. This deficit was apparent for all age groups in the UK except for those aged 65 and over, but was particularly strong amongst women.

There was also an intersection between gender and age, with the youngest women (15–24) in the UK showing the lowest levels compared to their European peers – only 53% reporting Take Notice, compared to 68% Europe-wide.

Furthermore, the education gap for Take Notice was very large for the UK, with people who had not completed secondary education taking notice a lot less than those with a higher qualification (60% versus 71%).

These results prompted us to explore further why it is that certain demographic groups had low levels of Take Notice in the UK. We identified the following related findings:

- Those who have (and live with) children in the UK participate in Take Notice much less than those who do not – 53% compared to 68%. This difference was not seen across Europe as a whole. Indeed the UK is the only country where parents score statistically significantly lower than non-parents (in Estonia, Israel, and Ukraine the reverse is true).

- Those in the UK who mention housework or childcare as one of the main activities they had been doing over the past week (as opposed to, for example, paid work or being unemployed), had lower levels of participation in Take Notice – 55% versus 64%. This difference is only seen in a couple of other countries – looking at Europe overall there was no significant difference in participation rates for Take Notice for those who are doing housework or childcare as a main activity and those who are not.

Combined, these results suggest there is a particular challenge facing people, particularly women, in the UK with children or housework duties that limit their opportunities to Take Notice. Furthermore, these differences are not inevitable – living with children and doing housework does not seem to have the same effect in most of the rest of Europe.

One further finding is of interest. The ESS includes a question on whether respondents are able to make time to do the things they enjoy in life. Whilst men in the UK were about average on this question, women scored the lowest of any country with the exception of women in Russia and the Ukraine.

Connect

The question on Connect asked people how often they met friends, relatives, or work colleagues socially. People of working age in the UK had significantly lower levels of Connect than their peers in the rest of Europe. For example only 72% of those aged 25–44 met people socially several times a month or more, compared to 95% for the same age group in the Netherlands. This deficit was not only seen for those in employment, but also for those who were in education, were unemployed or whose main activity was housework. It applied to people who live with their partners as well as those who do not live with a partner. Unlike with Take Notice, having children did not seem to explain the deficit either. And whilst the difference was a bit stronger for women, it applied to men as well.

In other words, the low levels of Connect among the working age population in the UK seem to be pervasive, and further exploration is required to identify the causes. This finding is particularly relevant to policymakers, as interventions most often focus on the young or the old, ignoring those in middle age who may in fact be struggling most.

The relationship between the five ways and wellbeing

Lastly, the ESS provided an opportunity to corroborate claims that people who participate in the five ways are likely to have higher wellbeing.[74] On average, participation in each five way activity was associated with a level of life satisfaction of around 0.5 points higher (on the 0 to 10 scale), with a potential total impact of 2.7 points (see Appendix 1 for the regression results).[75] This effect was significant, even controlling for other demographic and socioeconomic variables including age, gender, household income, education level, and unemployment. This means that if two people who were identical on all these characteristics but one participated in all five ways, and the other participated in none of them, then a 2.7 point difference could be expected in their life satisfaction. This is a very large difference, almost three times bigger than the effect of being unemployed.

Each five way activity contributed a significant individual effect to life satisfaction.

Furthermore, five ways participation may explain some of the differences in life satisfaction between countries. For example, average life satisfaction in Germany in 2012 was marginally, but significantly higher than that in the UK – 7.6 compared to 7.4. This difference remained significant after controlling for demographic and socioeconomic factors – i.e., it is not because there are more people in Germany with higher education, or more people in the older age groups that Germany has higher average life satisfaction.

However, it did not remain significant after controlling for five ways participation. In other words, the higher overall levels of five ways participation in Germany than in the UK – in particular in relation to Take Notice, Give, and Connect – explains the difference in wellbeing between the two countries.

CHAPTER 4

Perceived quality of society

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Introduction and rationale

This chapter starts from the belief that the wellbeing of a society is more than the sum of its parts, or in other words, more than the aggregate of the individual wellbeing of its members. Consequently, the perception of the quality of a society – or societal wellbeing – might well be influenced by factors other than those that affect personal wellbeing. This strand of the project aims to provide a better understanding of how satisfied citizens are with the processual aspects of their society and the outcomes these aspects produce. Following the terminology of the European Quality of Life Survey (EQLS) we call this 'perceived quality of society' (PQOS). Armed with a better understanding of this concept, its drivers, and its implications, policymakers can identify those subgroups of the population among which society is perceived negatively, and consider how to change these for the better.

There are two reasons for wanting to focus on citizen perceptions of society. First it provides a useful corrective to the extensive focus on individual wellbeing in the last decade. While this has been useful in raising the profile of wellbeing research, it is primarily psychological in nature. The focus on the broader society is more in tune with the welfare tradition in political science, so there is much to be gained from bringing a wider range of perspectives to bear on the problem. Besides, the policies required to create and maintain 'good lives' (reflected in increased individual life satisfaction) may be quite different from those leading to the 'good society'. Secondly there is already a great deal of information about the wellbeing of countries at the aggregate level. Data on GDP, educational attainment, income inequality, and myriad other topics are publicly available and used by analysts to model the drivers of social differences between countries. The objective circumstances of countries may be at odds with the way they are perceived by their populations, so citizen perceptions can be regarded as the missing link in the wellbeing data jigsaw.

Influenced by the work of Hooghe,[76] our aim was to investigate whether PQOS is a distinct construct or (as has been argued by others) simply a component of the evaluative judgements that are part of individual wellbeing. Hooghe's work using Belgian data has shown that happiness and life satisfaction form a single factor that is distinct from what he calls 'view on society'. Our analysis looks to examine whether this holds for other countries and at multiple points in time. If PQOS does exist independently, we can look at how it may be related to personal and social wellbeing, both overall and for different countries and/or subgroups of the population. By doing so, we aim to get a broader understanding of wellbeing and its implications which should be of equal interest for researchers and policymakers alike.

Research questions

The specific questions we wanted to explore in this project were:

1. Is there a difference in PQOS over time and between countries?

2. How does PQOS differ for different sub-groups of the populations?

3. What drives PQOS?

4. How are measures of personal, subjective wellbeing related to PQOS?

5. How does the UK fare in terms of the rest of Europe with regard to PQOS?

Data used

The entire ESS dataset amounts to more than 300,000 cases with some representation from 36 countries at six points in time between 2002 and 2012. Unfortunately, not all countries have taken part in all rounds of the survey. In particular, countries such as Iceland or Croatia, which have only participated in two rounds, prove to be problematic when analysing changes over time. Thus, for comparative purposes and in order to ensure consistency of our analyses, we decided to concentrate on a subset of 19 countries[77] for which we have data of at least five of the six rounds. Not only does this constitute a solid time series but we feel more confident in pooling the data to examine their internal structure. Using the pooled data to examine the internal structure of the data but more importantly to explicitly explore changes over time, also restricted our analyses to the subset of items included in the so-called core module. The core module is the set of questions that have been repeated in every round of the ESS, thus can be compared over time.

Despite the smaller number of cases and the more restricted geographical coverage, this left us with a consistent, high-quality dataset with over 210,000 observations. For some of the analyses with a focus on the UK only, we used the UK data from all six rounds (n>14,500). However, unless noted otherwise, the analyses use the full 19-country sample.

Dependent variable: Perceived Quality of Society (PQOS)

Perceptions of the quality of society can potentially include numerous dimensions at a number of spatial levels. Thus respondents can be asked to evaluate many aspects of social life at the national, municipal, or neighbourhood level. However, our approach was restricted by two considerations. First, we wanted to focus exclusively on the national level and avoid mixing geographic units of evaluation. Secondly, we were restricted by the availability of items in the dataset. Ideally a measure of PQOS should be comprehensive and cover both values and functioning of a society.[78] However, we managed to identify a specific subset of relevant variables that measure three different aspects of the perceived quality of society: (1) societal satisfaction, (2) political trust, and (3) views on public service provision (see Appendix 4 for full questions):

1. Societal satisfaction includes satisfaction with the economy, satisfaction with the national government, and satisfaction with the way democracy works.

2. Political trust consists of trust in parliament, trust in politicians, trust in the police, and trust in the legal system.

3. Views on public service provision include evaluations of the state of the health system and the state of the education system.

While all three aspects are theoretically distinct, they all tap into the same diffuse concept of evaluations of society. Indeed, empirical evidence from our own analyses as well as other related studies have confirmed a correlation between measures of institutional and societal trust and satisfaction. Sanders *et al.* point out that the measure of satisfaction with democracy, for example, 'correlates with specific and diffuse support[79, 80] with political trust[81] and with perceptions of economic satisfaction (Castillo 2006)'.[82] Hooghe and Zmerli attribute this to, in part, cognitive processes in the survey process: 'If respondents have a favourable view of political parties, they most likely have a positive attitude to their parliament, the police, the courts and other political institutions as well'[83] but also to the fact that the performance of these institutions are interrelated as well as usually on par within each country in line with its own political and institutional culture.

Given the perennial debates in the wellbeing literature about the merits of composite indicators (resulting in a single number) versus the virtues of reporting disaggregated items, we were interested in seeing whether it would be possible to combine these nine items into a single measure. We decided to use exploratory factor analyses (Table 12) to assess whether the nine perceived quality of society indicators were inter-related and measuring one, or a number of different underlying concepts, or 'factors'.[84] Although we found evaluations of health services and the education system to have a slightly weaker relationship with the remaining variables, we found sufficient evidence to establish that there is an underlying relationship between all questions that persists over time and across space.

Table 12: Exploratory factor analysis of societal wellbeing variables

Variable	Loading
Trust in the legal system	0.520
Trust in the police	0.392
Trust in country's parliament	0.586
Trust in politicians	0.573
State of education in country nowadays	0.283
State of health services in country nowadays	0.280
How satisfied with the way democracy works in country	0.475
How satisfied with the national government	0.544
How satisfied with present state of economy in country	0.416

Unrotated Factor Solution, Extraction Method: Maximum Likelihood.
Weighted data; Pooled across Country and Time.

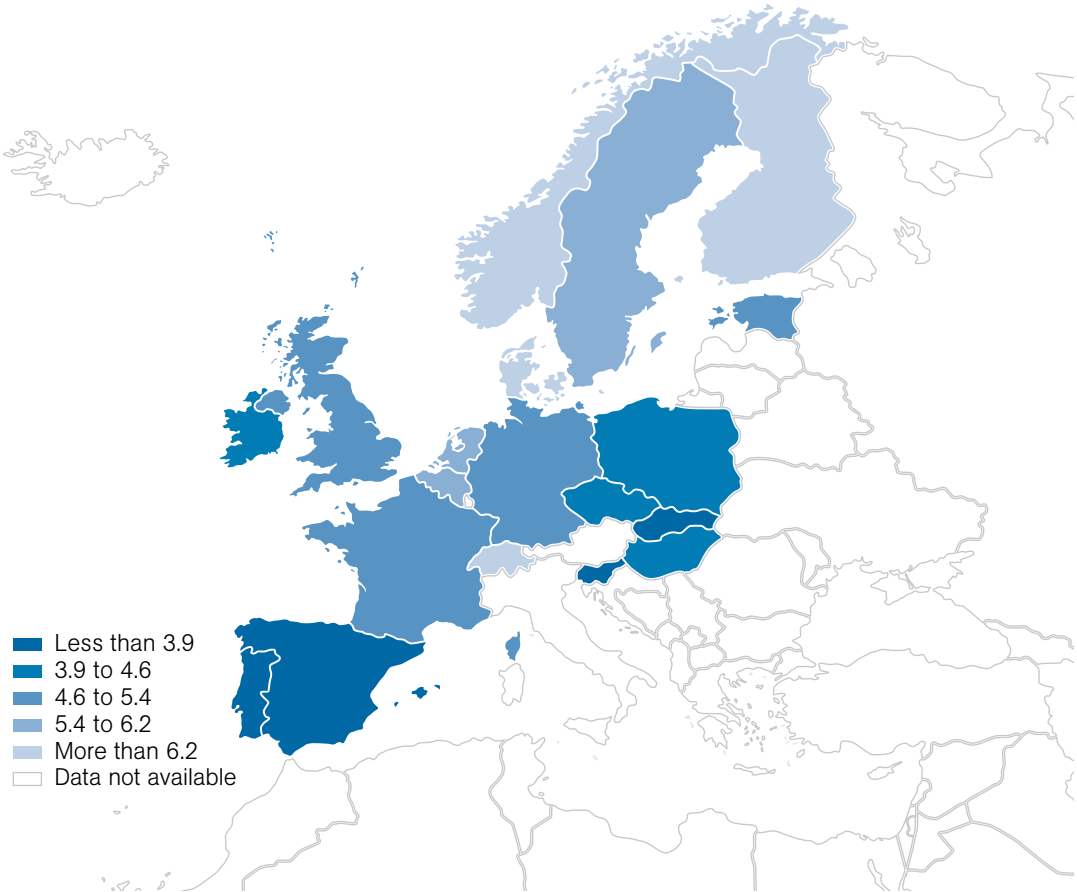
Given the strong support for a one-factor solution, we decided to analyse the reliability (Cronbach's alpha) of the whole set of items as well the three dimensions in order to ascertain the internal consistency between different sets of the satisfaction and trust variables. As Table 13 shows, the trust and satisfaction questions – both as separate dimensions and when merged – had a value of over 0.8, confirming the strong relation between these variables. The public services variables had a lower (but still acceptable) value of 0.65.

Table 13: Reliability analyses of the societal wellbeing measures

	N	Cronbach's Alpha
Trust variables	4	0.854
Satisfaction variables	3	0.822
Trust and satisfaction variables	7	0.890
Evaluation of public services variables	2	0.652
All variables	9	0.889

We thus decided to create an averaged additive scale called PQOS or Perceived Quality of Society as a composite indicator, which includes all nine items on satisfaction with economy/democracy/government, state of health/education, and trust in police/politicians/legal system/parliament. This PQOS scale ranges from 0 to 10, with 0 indicating the lowest and 10 the highest perceived quality and is used as the dependent variable in our analyses.

Figure 22: Perceived Quality of Society, 2012[85]



Independent variables

As well as the subjective wellbeing questions, which, according to Veenhoven (2002) are 'indispensable in social policy, both for assessing policy success and for selecting policy goals',[86] the independent variables we chose for initial consideration included:

1. Core demographics (age, gender, ethnicity, citizenship, marital status, etc.)
2. Income
3. Employment status and conditions (including working hours, and contract type)
4. Religiosity
5. Political and social engagement
6. Social trust and feelings of safety

These latter subjective measures are not directly related to wellbeing but although 'indicators of subjective wellbeing, such as feelings of happiness and satisfaction, are most prominent examples of subjective indicators, there exist many other kinds of subjective measures as well…. measuring expectations, perceptions and assessments of risks and opportunities, identification with social classes, nations or communities, value orientations and preferences, importance ratings, concerns as well as trust in persons and institutions…. [which] may provide most relevant information elements for a comprehensive quality of life measurement and may also contribute useful information inputs for policy making'.[87]

As all of these items appear in the core sections of the questionnaire in every round of the ESS, we were able to explore the performance on these questions across time as well as between countries.

Timeline of work

Our work was broadly divided into three stages, starting with data cleaning and preparation, followed by descriptive statistics and analyses (including cross-country comparisons and the analyses of subgroups for the UK sample), and succeeded by regression and multilevel analyses to identify drivers of the perceived quality of society.

Data cleaning and preparation

We began the analytical phase of our work by preparing the data for the analyses to follow. This included data cleaning and manipulation in order to:

1. Ensure all missing values were deleted listwise.
2. Calculate a combined weight to account for the survey design as well as different population sizes in pooled analyses.
3. Recode age into categories for easier analyses, as well as computing an age squared variable to test for non-linear effects.

4. Compute dichotomous variables, for example for marital and employment status.

5. Recode any ordinal variables to a more intuitive order (always ranging from less to more).

Descriptive analyses

We then produced frequency tables and descriptive statistics – values of mean, median, standard deviation, and skewness – for all the countries in the sample for each round. We repeated this for our three subsets of societal wellbeing related variables as well as the composite indicator of PQOS. The objective here was to explore and describe any patterns over time and across countries, and in particular to see whether countries with similar means had polarised distributions.

Regression analyses and multilevel model

Following this, we began blockwise linear regression models, first using the three societal satisfaction variables as outcome variables to ascertain each of their potential sets of drivers, adding each sets of the following indicators at each step:

1. Standard demographic variables (age, gender, years of education, subjective perception of household income, marital status, citizenship, born in the country).

2. Subjective perceptions of self (religion, member of a discriminated group, debilitating disability/illness, subjective health assessment).

3. Subjective perceptions of society (political interest, voting behaviour, political orientation, social trust – this also included the four institutional trust variables).

4. Measures of social capital and safety (meeting with others, social activities, burglary feeling, feeling of safety).

5. Life satisfaction and happiness.

across the majority of countries (Table 14):

Table 14: Explained variance blockwise regression model

	Explained Variance (R^2)		
	Satisfaction with government	Satisfaction with economy	Satisfaction with democracy
Block 1	0.080	0.170	0.112
Block 2	0.098	0.186	0.136
Block 3*	0.402	0.372	0.405
Block 4	0.396	0.370	0.400
Block 5	0.406	0.403	0.414

* Largest proportional increase in R^2 comes in Model 3 for all three dependent variables.

This jump in explained variance through the inclusion of the institutional trust items led us to consider them for (and finally include them in) the composite measure of PQOS. We also decided to include various measures of employment, thus prepared a number of indicators regarding employment type, contract type, and occupation for our multivariate analyses for the final regression model.

Lastly, we decided to explore the effect of objective differences between the societies; in other words, we wanted to explore how country characteristics might influence PQOS. Thus, we also performed a multilevel analysis with the same indicator used in the regression model and a number of additional context-level variables from different data sources.

Final results

Descriptive statistics

We began our descriptive analyses by exploring how societal satisfaction (satisfaction with economy, government, and democracy only) varies across time and across separate subgroups of the society: age groups, gender, and education. Unsurprisingly, we found significant differences for most of these subgroups. Looking at Figures 23–25, we can see that, on average, young people, men, and those at degree level are marginally more satisfied with the functioning of society and its institutions than the older age groups, women, and those with lower levels of education. All of these differences are statistically significant for both the UK and the ESS sample for all rounds (with the exception of the gender differences in the UK in the last two rounds).

There are significant within-gender differences for societal satisfaction that differ by age and education, however. Men aged 65 and over are, in some rounds, more satisfied than men in the youngest age group, for example. Men with higher education, i.e., university degrees, held the most stable and positive PQOS across all combinations of gender and education, closely followed by women with higher education.

Figure 23: Societal satisfaction scores over time for men in different age categories (UK only)

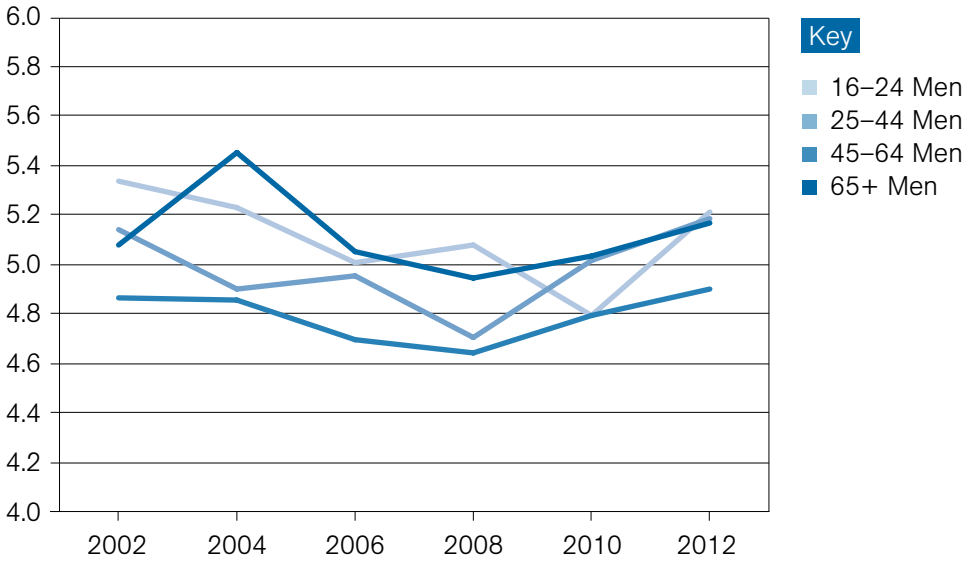


Figure 24: Societal satisfaction scores over time for women in different age categories (UK only)

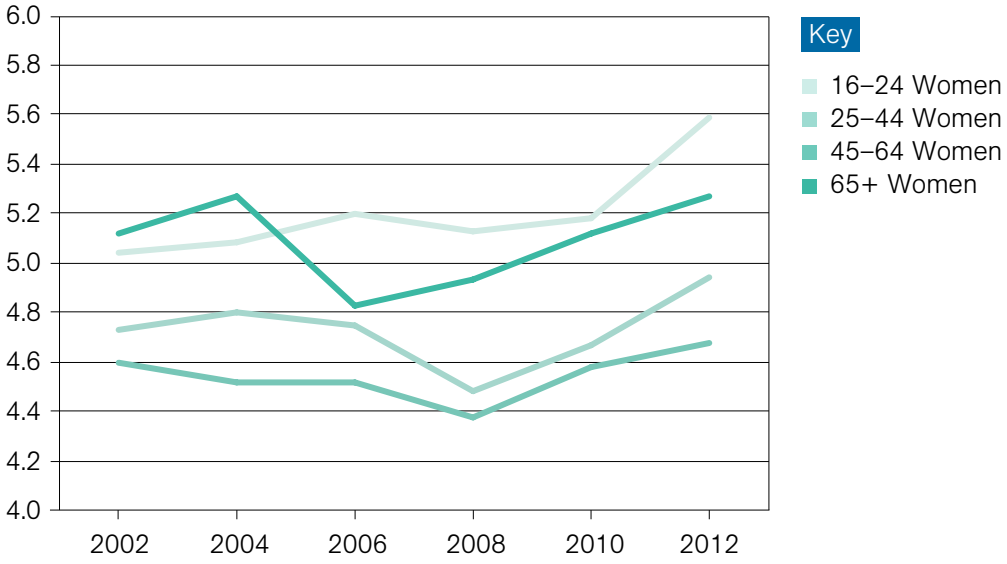


Figure 25: Societal satisfaction scores over time for men and women at different education levels (UK only)

Numerous studies have identified a link between education and institutional trust and satisfaction. Tiemeijer's 2010 study of education and conceptions of democracy in the Netherlands found a consistent pattern in higher satisfaction with democracy over time for higher educated than lower educated people. This pattern also held for trust in politicians, which arguably indicates that the lower educated feel more acutely that their interests and opinions are not being taken into account.[88]

We also ran descriptive statistics[89] for the three societal satisfaction variables separately for all 19 countries in the sample for each round. The objective here was primarily to ascertain if there was a gross change of the country means of these three variables over time, and whether countries with similar means had polarised distributions.

There was a lot of similarity between countries when it came to people's satisfaction with the economy, government and democracy. In a number of cases – Croatia, Poland, and Lithuania being notable – people tended to be more dissatisfied with the government and the economy, although there was a more balanced set of responses for satisfaction with democracy. Finland, Sweden, the Netherlands, and Luxembourg were some of the few countries that scored highly on democracy, government, and the economy. For certain cases such as Spain, Greece, and Portugal there seemed to be a decrease in the average response to all these questions over time. Nearly all the countries exhibited a considerable dip in economic satisfaction in 2008, at the height of the recession. The UK fares averagely compared to the other countries included although the decline in economic satisfaction from 2006 to 2008 is visibly more pronounced (Figure 26).

Figure 26: Societal satisfaction scores over time for the UK and for the European sample as a whole

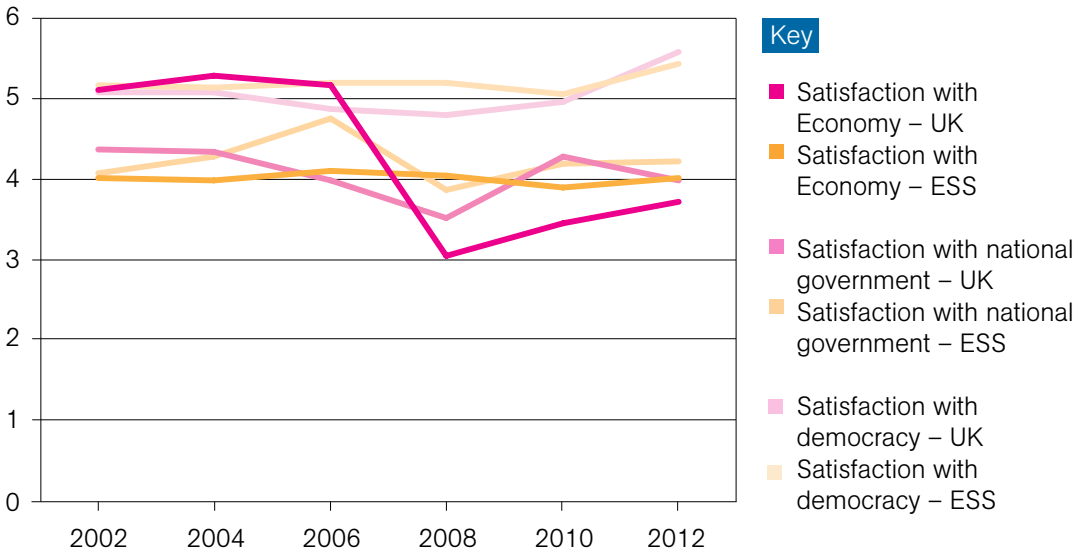
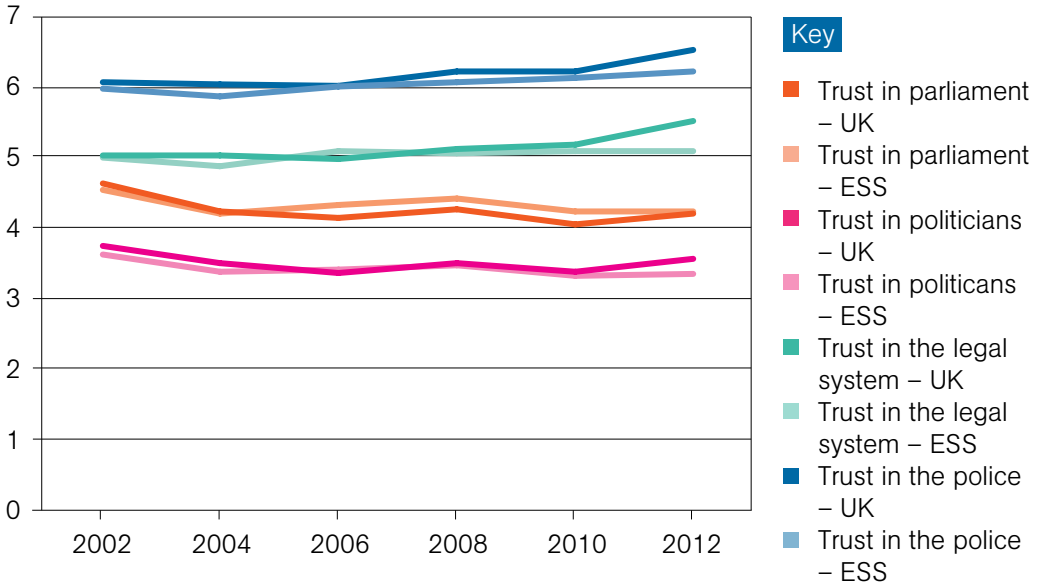


Figure 27: Political trust scores over time for the UK and for the European sample as a whole

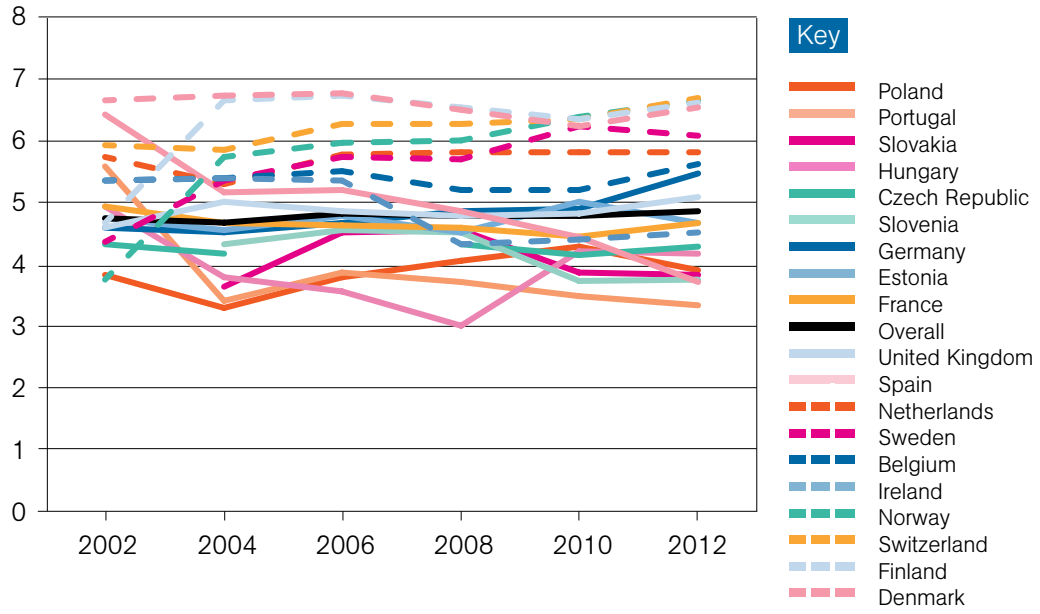


A number of findings were also identified relating to political and institutional trust (see Figure 27). Trust in politicians was low in all countries, whereas trust in the police has been generally high and unwavering. People's trust in institutions was somewhat steadier over time compared to the questions on satisfaction with democracy, government and the economy. For example, in the UK, there was little change, including over the 2008 recession. There has been a considerable decline in trust over time for some of the Mediterranean and Eastern European countries, including Italy, Portugal, Slovenia, Slovakia, and Ukraine.

At the UK level, we also observed a number of differences across different regions of the UK (Appendix 6). London and the South East have high levels of economic and governmental satisfaction compared to the other regions, particularly the Midlands. However, they fare more similarly to the other regions on trust in politicians and trust in the legal system. Trust in the police in particular is consistently high, particularly in the South of England, but also in some Northern regions, Scotland and Northern Ireland.

We finally looked at our composite nine-measure societal wellbeing or PQOS score across country (Figure 28) and ESS round.

Figure 28: Composite PQOS scores over time for the UK and for the European sample as a whole



As can be seen from Figure 28, the UK's overall PQOS score largely followed the Europe average between 2002 and 2012. There is no discernible pattern here in terms of time, but for some countries there is a clear decline and recovery from ESS Rounds 3 (2006) to 4 (2008) and 5/6 (2010/2012). Like Germany, France, Belgium, and Denmark, it is also relatively stable over time. This compares to others such as Hungary and Ireland which experienced much more volatility, particularly after 2008.

Table 15: OLS regressions final models for PQOS composite score for UK and all Europe, and for life satisfaction for UK

	PQOS composite score – UK only (model 1)			Life satisfaction – UK only (model 2)			PQOS composite score – all Europe (model 3)		
	Unstandardized Coefficients		Standardized	Unstandardized Coefficients		Standardized	Unstandardized Coefficients		Standardized
	B	Std. Error	Beta	B	Std. Error	Beta	B	Std. Error	Beta
(Constant)	2.675	.301		1.207	.403		2.923	.127	
ESS round 6	.475	.103	.154**						
ESS round 5				-.328	.134	-.082*			
Age: 25 to 44 years	-.198	.084	-.060*	.043	.110	.010	-.395	.039	-.105**
Age: 45 to 64 years	-.394	.089	-.123**	.032	.116	.008	-.377	.041	-.105**
Age: 65 to 74 years	-.457	.109	-.095**	.315	.143	.051*	-.384	.045	-.078**
Age: 75 and over	-.351	.120	-.060**	.357	.157	.047*	-.243	.049	-.041**
Female	-.092	.048	-.030	.086	.063	.022	-.084	.019	-.024**
ES-ISCED: Upper secondary and vocational	.037	.054	.011	-.060	.071	-.014	.031	.023	.008
ES-ISCED: Tertiary education (BA/MA)	.202	.067	.055**	-.050	.088	-.010	.111	.029	.027**
Feeling about HH income: Difficult	.022	.120	.005	.865	.156	.145**	.050	.050	.011
Feeling about HH income: Coping	.142	.114	.046	1.414	.146	.352**	.319	.048	.092**
Feeling about HH income: Living comfortably	.201	.118	.064	1.835	.150	.447**	.571	.051	.154**
Married or in civil union	-.011	.051	-.004	.361	.066	.090**	-.123	.020	-.035**
Citizen of country	-.473	.128	-.067**	.458	.166	.050**	-.508	.058	-.056**
Born in country	-.243	.082	-.053**	.038	.108	.006	-.571	.036	-.098**
Member of a group discriminated against in this country	-.454	.071	-.094**	-.254	.093	-.041**	-.478	.036	-.070**

	PQOS composite score – UK only (model 1)			Life satisfaction – UK only (model 2)			PQOS composite score – all Europe (model 3)		
	Unstandardized Coefficients		Standardized	Unstandardized Coefficients		Standardized	Unstandardized Coefficients		Standardized
	B	Std. Error	Beta	B	Std. Error	Beta	B	Std. Error	Beta
Frequent attendance at religious services	-.014	.070	-.003	.024	.091	.005	-.223	.025	-.054**
Subjective general health: Bad	-.071	.227	-.011	1.673	.293	.196**	.076	.091	.011
Subjective general health: Fair	.074	.220	.019	1.691	.285	.339**	.250	.089	.064**
Subjective general health: Good	.273	.225	.088	2.066	.291	.510**	.361	.091	.104**
Subjective general health: Very good	.177	.229	.053	2.395	.295	.557**	.435	.094	.101**
Hampered in daily activities by illness/disability/infirmity/ mental problem	.000	.050	.000	-.086	.065	-.026	.187	.019	.064**
Interested in Politics	.138	.049	.044**	-.014	.064	-.004	.333	.019	.096**
Voted in last election	.005	.055	.001	-.020	.072	-.005	.038	.024	.009
Placement on left right scale	.113	.012	.137**	.003	.016	.003	.064	.004	.083**
In Paid Work	-.029	.126	-.009	.210	.165	.052	.002	.007	.002
Managers and Professionals	-.506	.116	-.116**	-.176	.152	-.031	-.044	.026	-.011
Technicians, clerical, service and sales	-.323	.111	-.083**	-.297	.145	-.059*			
Skilled and non-skilled manual	-.385	.118	-.081**	-.260	.154	-.042	-.051	.023	-.014*
Contract type: Permanent	-.136	.168	-.043	-.116	.220	-.028	-.006	.064	-.002
Contract type: Temporary	-.193	.193	-.027	-.353	.252	-.038	-.114	.072	-.016
Contract type: No contract	-.203	.183	-.026	-.165	.238	-.016	-.041	.088	-.003

	PQOS composite score – UK only (model 1)			Life satisfaction – UK only (model 2)			PQOS composite score – all Europe (model 3)		
	Unstandardized Coefficients		Standardized	Unstandardized Coefficients		Standardized	Unstandardized Coefficients		Standardized
	B	Std. Error	Beta	B	Std. Error	Beta	B	Std. Error	Beta
Employment relation: Unemployed	-.082	.122	-.011	-.726	.158	-.073**	-.072	.046	-.009
Most people can be trusted	.491	.051	.160**	.071	.067	.018	.447	.021	.127**
Most people try to be fair	.254	.051	.083**	.187	.067	.047**	.456	.021	.131**
People mostly try to be helpful	.279	.049	.090**	.168	.064	.042**	.478	.020	.135**
Meet people socially at least once a week	-.032	.048	-.010	.301	.063	.072**	.005	.019	.001
Take part in social activities more than most	-.014	.057	-.004	.247	.075	.050**	-.056	.024	-.012*
Respondent victim of burglary/assault last 5 years	-.141	.056	-.037*	.105	.073	.021	-.216	.024	-.048**
Feel safe walking in my local area after dark	.151	.056	.041**	.112	.073	.024	.174	.023	.041**
PQOS Composite				.321	.022	.247**			
How satisfied with life as a whole	.163	.017	.212**				.167	.006	.210**
How happy are you			.042				.000	.007	.000
Adjusted R2 square			0.314			0.307			0.323

** = statistically significant at 5% level*

*** = statistically significant at 1% level*

Regression analyses

We carried out a series of linear regression analyses which allowed us to assess how well a range of variables, including the demographics we delved into above, predicted variations in the overall PQOS measure. The methodology we used allowed multiple factors to be tested at the same time, meaning that each effect is truly independent of other effects.

As mentioned already, we ran reliability and factor analyses in the initial stages of the research to assess the extent of consistency and correlation between our separate societal wellbeing questions and whether we could reliably incorporate them into a composite measure of PQOS. The variables comprising a factor score can be considered to represent an underlying latent construct and on this basis we decided to run a set of linear regression analyses with the saved factor score (forced one-factor solution) as well as the composite PQOS measure as our dependent variable. The analysis based on the composite PQOS are presented in Table 15, whilst those using the single factor score are in Appendix 5.

The factor score is weighted most heavily towards those items with the highest loadings – trust in parliament, trust in politicians, and satisfaction with the national government. A factor score is standardised, so a one-unit change can be considered a change in standard deviation. However, we must bear in mind the issue of measurement error – that the measurement reliability of the score is affected by measurement error in the original variables – and also the uncertainty of interpretation given that factor scores are estimates and not direct observations.

We also concurrently ran the same set of models with individual life satisfaction as the dependent variable to assess the difference or similarity between drivers of societal and individual wellbeing.

Regression analyses, UK only

The majority of our independent variables are correlated with the PQOS indicator as expected. In the control model (demographic variables), the strongest statistically significant predictors were a subjective feeling of household income as 'comfortable', and tertiary i.e., university education. Also, those in the 45–64 age range have a particularly strong negative correlation with the y variable, as do those who claim membership of a discriminated group.

In the second model, this pattern largely holds. We find with the inclusion of variables about religion and subjective general health, that religiosity and good or very good subjective general health are strongly positively correlated with PQOS.

With the inclusion of the political behaviour/attitudes and work variables, we find high, positive beta coefficients for political interest and left-right self-placement and high negative coefficients for those in managerial and professional work, far more so than for the unemployed. In the fourth model, our social trust variables – particularly 'most people can be trusted' – are strongly positively correlated with our factor score, as is a feeling of safety while walking in the local area after dark.

In the final model (Table 15, model 1) which includes life satisfaction and happiness, the previous relationships we found with age, education, political interest, work, social trust, and safety endure. Life satisfaction is, again intuitively, the most strongly positively correlated with our composite PQOS scale (β=0.21).

In the final model, life satisfaction, religiosity, trust in people, and political conservatism are all strongly and positively associated with perceived quality of society. A one-point increase on the religiosity scale is associated with an almost 0.14 point increase (β = 0.138) on the PQOS scale. This effect is similar for those further right on the left-right scale of political orientation (β = 0.137). Being in a managerial position and being in the middle age group – i.e., the latter working age group – of 45–64 years are both strongly and negatively associated with PQOS. Those who fall in this particular age group score about 0.12 points lower on the PQOS scale than those in our reference category of 16–24-year-olds.

In the final model for individual wellbeing (life satisfaction in this model, Table 15, model 2), perceived quality of society, being a citizen, good subjective general health, and a comfortable income are all strongly and positively associated with individual wellbeing, unlike the model above. Age is also positively rather than negatively associated with our dependent variable. Being over 65 is associated with an approximate 0.05 point increase on the PQOS scale compared to the youngest age category in the data. Being in a technical, clerical, service, or sales position, being self-employed or unemployed are all strongly negatively correlated with life satisfaction, with self-employment having the largest negative net effect on life satisfaction out of all the independent variables in the model.

Subjective perceptions of people's goodness – i.e., that they are helpful and fair – chime strongly with both societal and individual wellbeing measures. We also included our PQOS measure in the life satisfaction model and vice versa and found, unsurprisingly, that higher life satisfaction and better perceptions of the functioning of society are both highly correlated.

However, it is clear that individual and societal wellbeing are associated with different sets of attitudes, behaviours, and social phenomena as our measures in these analyses do not necessarily share a hugely similar underlying structure.

Regression analyses, ESS sample

The results of the final regression model for our 19-country Europe sample follow largely the pattern of the UK, except a much larger proportion of the independent variables are statistically significant (Table 15, model 3). Very good or good subjective general health is positively associated with PQOS in this model, as are those indicators tapping social trust and trust in people. Being female is negatively associated with PQOS, as is being in a manual occupation. None of these are statistically significant in the UK model. Again, the regression models with the PQOS factor and score and the original PQOS composite model are almost identical (Appendix 5).

For the individual life satisfaction model (Appendix 5), we can see a similar pattern to the UK-only models, as the relationship between some of the

independent variables and the dependent variable are inverse to those in the PQOS and PQOS factor score models. Women are more likely to have higher life satisfaction than men, those with higher education are more likely to have lower life satisfaction than those with secondary education, and those who are married are likely to have higher life satisfaction than those who are not.

Multilevel model

Finally, we were interested in how characteristics of the societies, in other words objective differences between the countries, influence respondents' PQOS. In order to test this, we ran a Multilevel Analysis (MLM), which works in a similar fashion to a regression analysis, but allowed us to include and estimate the effect of context characteristics, such as measures of the quality of democracy or government expenditure.

Running a model without any predictors, we found that 25.7% of the variance in PQOS could be attributed to differences between the countries. As this is a rather large share of the variance, it made sense to further explore the reasons for these differences. Thus, we first ran the analysis with a model using the same predictors as in the regression analyses. In contrast to a simple linear regression model, however, an MLM allows for varying intercepts (mean values) of the predictor variables in the different countries. Overall, the size and the direction of the effects found in the MLM are nearly identical to those in the regression analysis, thus confirming the robustness of the findings. However, the individual level predictors do not notably reduce the share of variance attributed to differences between the countries. This means that the country differences are likely to be caused by country characteristics, rather than by systematic differences of the distribution of individual-level variables, such as the demographic structure of the countries.

Consequently, we decided to include a number of objective measures of the quality of society to mirror the subjective evaluations included in the PQOS score. These are *GDP per capita* as a measure of economic performance, *quality of democracy* as a measure of political performance, and *government spending on education and health services* as a measure of public service provision. For the sake of parsimony (and as a result of a lack of a simple indicator) we did not include measures of the performance of police and the legal system. However, we did include the *overall government spending* (as a percentage of GDP). These measures (together with the individual level variables) explain 31.2% of the overall variance, and 78% of the variance attributed to differences between the countries.

We found that the quality of democracy had a positive (and significant) effect on the PQOS and the highest explanatory power of all variables. In substantive terms, this means that respondents from countries that scored high on the three principles of freedom, control, and equality measured by the indicator[90] tended to evaluate the quality of their societies higher than those from countries with a lower quality of democracy. Also, people in richer countries generally perceived the quality of their societies as better, as GDP per capita has a moderate (significant) positive effect. Surprisingly, a higher overall government expenditure was found to be associated with slightly *lower* levels of PQOS. However, that said, it should be kept in mind that spending is expressed as a percentage of the GDP and not in absolute terms.

Thus, we can hardly make inferences about the effect of government spending in absolute terms. It might well be that countries with a high GDP but a lower relative proportion of government expenditure are in general more efficient, or spend money on other areas not accounted for in this model. Government spending on education or the public health services have, however, no significant effect on the perceived quality of society.

Key trends/patterns and conclusions

The UK follows generally the same pattern for averages of the PQOS measures as the other countries, with democratic satisfaction consistently outstripping satisfaction with the economy and the government. The UK is doing marginally better than France and Ireland, but not as well as Germany or the Nordic/Scandinavian countries (Norway, Sweden, Denmark, Finland) particularly in the latter rounds where dispersion of responses was also much smaller. Across the majority of countries, trust in politicians was low and trust in police high with averages for the UK across all four variables fairly steady over time. There is, in contrast, a clear decline in levels of trust over time for Greece, Hungary, Italy, Portugal, Slovenia, Slovakia, and Ukraine.

There seems to be a number of dispositions and characteristics, as well as demographic patterns, that we can associate with having a positive evaluation of national performance which are not necessarily those associated with having a high level of life satisfaction.

First and foremost, there is a close relationship between personal wellbeing, i.e., life satisfaction and happiness, and all elements of institutional satisfaction and trust. The direction of this relationship is unclear however, as positive subjective evaluations of how well the government/economy/legal system is performing may impact individual evaluations of one's own wellbeing and *vice versa*. The same goes for the positive relationship between PQOS and political engagement. As we might intuitively believe, those who trust the people around them and engage with their community, friends, and family are likely to have higher levels of societal wellbeing.

We can say with some certainty that the more marginalised groups in society – women and those who claim membership of a discriminated group – have a more negative view of the functioning of societal institutions and particularly the efficacy of those actors implicated in the process of governance – politicians, the police, and the parliament. We have also seen that PQOS differs significantly by age, suggesting that a person's position in society – of working age, of parenting age, of retirement age – affects the way they judge societal institutions.

Policy implications

The notion of PQOS is relatively underdeveloped in contrast to individual wellbeing. However there appears to be interest in these initial findings, particular those related to participation. While the relationship between civic participation, good governance, and positive evaluations of society may be intuitive, it is helpful to be able to make the case empirically. The focus on the quality of governance highlights the collective good. This is a useful corrective to the emphasis on individuals which is a critical observation often levelled at the conventional wellbeing agenda.

The finding that being a member of a discriminated group is negatively associated with PQOS was not surprising. This may be because, while national ministries are involving some citizens and NGOs when designing policies, they are not involving groups that may be marginalised. If these groups are not included in consultations, it is difficult to develop policies which reduce their sense of discrimination.

Regarding the link between data and policy, how does one choose which aspects of the quality of society to measure? The PQOS index is based on data available in the ESS, but another interesting approach would be to establish through public consultation what is important for a good society, in a similar way to the ONS's 'What Matters' exercise that preceded the Measuring National Wellbeing programme.

Another interesting policy implication relates to the continuity in ESS data. Given that many indicators of PQOS have been broadly flat over time (in contrast to prevailing media wisdom), it can be argued that policy does not need to be as reactive as is sometimes the case because perceptions of society are generally stable.

Three challenges emerge from the analysis of PQOS. First, based on the analyses of (cross-)national data, it is difficult to say anything about the regional or local level, which is where a lot of policy is actually 'done' and the results 'felt'. The challenge for researchers and research commissioners is to make connections between a representative national survey and the local context where perceptions are influenced and formulated. The second challenge concerns the extent to which the drivers of PQOS are linear. Does ever greater openness in government and public involvement lead to continual improvements in public perceptions, or does there come a point where diminishing returns set in? The third relates to data limitations. All the items in the ESS measure perceptions of societal functioning. Other cross-national work has shown that the UK is sliding down national rankings of sense of connection and social cohesion. This study also found that social cohesion is the single strongest indicator of subjective wellbeing.[91] We need a larger set of measures that comprises perceptions of both a society's functioning and its fairness, in both absolute terms and in relation to other times and other places. This would allow the construction of a more comprehensive concept of perceived societal wellbeing, and put it on an equal footing with approaches to the wellbeing of individuals.

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56. Eurofound (2013), *Third European Quality of Life Survey – Quality of life in Europe: Subjective well-being*, Publications Office of the European Union, Luxembourg

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

59. We controlled for life satisfaction because previous studies had indicated that (1) a number of our independent variables are associated with mean life satisfaction, and (2) 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.

60. Average life satisfaction also falls when unemployment rates increase, but the increase in life satisfaction MPD is over and above what would be associated with that decrease in the average.

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63. Effect of GDP per capita ($1,000) over time on MPD of life satisfaction in MLM where the only other independent variable is average life satisfaction: effect size = -0.015, p = 0.01 Effect of GDP per capita ($1,000) over time on MPD of life satisfaction in MLM where unemployment rate is also included in the model: effect size = -0.010, p = 0.06.

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73. In all maps, the thresholds for the colours in the map are defined based on the same methodology using the standard deviation (SD) and mean of the country averages of the variable in question. When a country's score on the variable is over 1 SD worse than the mean, it is coloured the darkest blue. The next shade is when a country is between 1/3 SD and 1 SD worse than the mean. The middle shade is for when it is between 1/3 SD below and 1/3 SD above mean. The next shade is for when it is between 1/3 SD and 1 SD better than the mean, The lightest shade is for when it is more than 1 SD better than the mean.

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