

# Life in the UK Index

**Technical Report  
October 2023**

Karl Ashworth, Dr Alice Diaz, Dr Emily Gray, Ipsos



# Contents

<b>1 Research overview .....</b>	<b>4</b>
<b>2 Survey design .....</b>	<b>5</b>
<b>3 Index content .....</b>	<b>7</b>
<b>4 Data processing.....</b>	<b>8</b>
<b>4.1 Data preparation and cleaning.....</b>	<b>8</b>
<b>5 Analysis.....</b>	<b>10</b>
<b>5.1 Goals and protocol .....</b>	<b>10</b>
<b>5.2 Exploratory Factor Analysis .....</b>	<b>11</b>
5.2.1 Social wellbeing.....	11
5.2.2 Economic wellbeing .....	11
5.2.3 Environmental wellbeing .....	12
5.2.4 Democratic wellbeing.....	12
<b>5.3 Bootstrapped Factor Analysis .....</b>	<b>16</b>
<b>5.4 Computing domain scores and collective wellbeing scores .....</b>	<b>16</b>
<b>6 Regression .....</b>	<b>19</b>
<b>6.1 Overview.....</b>	<b>19</b>
<b>6.2 Collective wellbeing.....</b>	<b>19</b>
<b>6.3 Social wellbeing.....</b>	<b>21</b>
<b>6.4 Economic wellbeing .....</b>	<b>22</b>
<b>6.5 Environmental wellbeing.....</b>	<b>24</b>
<b>6.6 Democratic wellbeing .....</b>	<b>25</b>
<b>Appendix A.....</b>	<b>27</b>
<b>Appendix B.....</b>	<b>31</b>

## List of tables

Table 4.1: Mean, standard deviation and percentage of missing cases per variable .....	9
Table 5.1: Questions included in each domain and Factor Analysis solutions .....	13
Table 5.2: Bootstrapped mean factor loadings and their standard errors (SE) .....	16
Table 5.3: Variable means computed with complete cases vs. listwise deletion.....	17
Table 5.4: Descriptive statistics of domain scores.....	18
Table 6.1: Regression results: demographic variables predicting collective wellbeing scores .....	20
Table 6.2: Regression results: demographic variables predicting social wellbeing scores.....	22
Table 6.3: Regression results: demographic variables predicting economic wellbeing scores.....	23
Table 6.4: Regression results: demographic variables predicting environmental wellbeing scores.....	24
Table 6.5: Regression results: demographic variables predicting democratic wellbeing scores .....	26

# 1 Research overview

Carnegie UK and Ipsos worked together to construct a Life in the UK index which addressed people's experiences in relation to key elements of social, economic, environmental and democratic domains of life. The aim was to create an overall measure of collective wellbeing, the Life in the UK index score, comprising these four separate domains of wellbeing. Each wellbeing domain was to be measured by a relatively small number of survey questions. The intention is to administer these annually to assess change and stability both in collective wellbeing overall and in the four individual wellbeing domains.

To develop the Life in the UK index measures, the research teams at Ipsos and Carnegie UK reviewed a range of pre-existing surveys to identify verified questions that would capture different aspects of the four wellbeing domains outlined in Carnegie UK's SEED framework (Social, Economic, Environmental and Democratic). A final set of 26 questions was selected following comment from an expert Advisory Group and upon reviewing the findings from two focus group discussions. The focus groups were held in Birmingham and Inverness, with quotas set on gender, age, location, social grade and ethnicity. Advisory Group members bridged expertise in statistics, wellbeing and the Northern Irish, Scottish, Welsh and UK contexts.

The survey fieldwork was conducted among 6,941 respondents using Ipsos' KnowledgePanel, a random probability survey panel with selection based on a random sample of UK households.

To ensure the reliability and validity of each wellbeing measure, exploratory factor analyses were conducted separately for each domain. This helped in identifying the subset of questions that represented each wellbeing domain, balancing content validity and internal consistency. Once a subset of questions was chosen for each domain, a bootstrapped factor analysis was performed to estimate each model's stability and the standard errors of the questions' loadings.

Finally, the scores for each wellbeing domain were computed by averaging the raw scores of the questions included in that particular domain. The overall wellbeing score was obtained by averaging the scores of the four domain wellbeing scores. This process ensured that the wellbeing measures captured a comprehensive understanding of wellbeing across the four domains.

## 2 Survey design

The survey was conducted through Ipsos' KnowledgePanel, which is a random probability survey panel with selection based on a random sample of UK households. Fieldwork was carried out between 18 and 24 May 2023, with a total of 6,941 interviews achieved from UK residents aged 16 and over.

### Recruitment to the panel

Panellists are recruited via a random probability unclustered address-based sampling method. This means that every household in the UK has a known chance of being selected to join the panel. Letters are sent to selected addresses in the UK (using the Postcode Address File) inviting them to become members of the panel. Invited members are able to sign up to the panel by completing a short online questionnaire or by returning a paper form. Up to two members of the household are able to sign up to the panel. Members of the public who are digitally excluded are able to register to the KnowledgePanel either by post or by telephone, and are given a tablet, an email address, and basic internet access, which allows them to complete surveys online.

### Conducting the survey

The survey was designed using a 'mobile-first' approach, which took into consideration the look, feel and usability of a questionnaire on a mobile device. This included: a thorough review of the questionnaire length to ensure it would not overburden respondents focusing on a small screen for a lengthy period, avoiding the use of grid-style questions (instead using question loops which are more mobile-friendly), and making questions 'finger-friendly' and therefore easy to respond to. The questionnaire was also compatible with screen reader software to help those requiring further accessibility.

### Sample

The KnowledgePanel is a random probability survey panel and therefore does not use a quota approach when conducting surveys. Instead, invited samples are stratified when conducting waves to account for profile skews within the panel.

The initial sample was stratified by country and education, with additional stratification by community background (based on religion and religion brought up in) in Northern Ireland. A sample boost was then applied to secure sufficient responses from ethnic minority individuals across the UK.

A total of 12,981 panellists in the United Kingdom (aged 16 and above) were selected and invited to take part in the survey. Of these, 6,941 respondents completed the survey, a response rate of 56%.

## Weighting

To ensure the survey results are as representative of the target population as possible, the below weighting specification was applied to the data in line with the target population profile.

Two members per household are allowed to register on the KnowledgePanel. Therefore, Ipsos employed a design weight to correct for unequal probabilities of selection of household members.

Calibration weights were also applied using the latest population statistics relevant to the surveyed population to correct for imbalances in the achieved sample. England, Wales, Scotland, and Northern Ireland were each weighted separately, while an additional weight was created for the United Kingdom to account for any over or under sampling within each of these countries.

The calibration weights were applied in two stages:

- The first set of variables were (*using ONS 2019 mid-year population estimates as the weighting targets*) interlocked gender by age, and region.
- The second set were (*using ONS 2019 mid-year population estimates and the ONS Annual Population Survey as the weighting targets*): education, ethnicity, Index of Multiple Deprivation (IMD, measured in quintiles), number of adults in the household, and community background (in Northern Ireland).

The weighting profile targets for England, Wales, Scotland and Northern Ireland are provided in Appendix A.

## 3 Index content

To support production of a high-quality survey questionnaire and given time constraints, consideration of questions for the wellbeing domains was limited to pre-existing questions already proven in the social research context. Given the conceptual breadth of the themes, it was considered important to cover different facets of each wellbeing domain to give good 'content validity'. Consequently, Carnegie UK and Ipsos aimed to balance the need for content validity with statistical validity when constructing the scales.

Carnegie UK and Ipsos reviewed many pre-existing surveys with the aim of finding those questions that would capture the various facets of the wellbeing domains as defined by Carnegie UK's SEED framework (Social, Economic, Environmental and Democratic). These surveys included: OECD's Better Life Index, The Gallup World Poll, The European Quality of Life Survey, Living Costs and Food Survey, New Zealand Living Standards Framework, Scotland's People and Nature Survey, Scottish Household Survey and Hansard Society's Audit of Political Engagement. In addition, several existing Carnegie UK surveys were also considered, including the Democratic Wellbeing Survey, the Kindness, Place and Public Engagement Survey and the Enabling State and Job Quality surveys.

From this search, an initial pool of around 200 candidate questions was chosen with the intention of pruning those considered less relevant whilst, where possible, retaining a spread of topics. This long list was shortened through an iterative process where the research team reviewed a selected subset of questions. In each iteration, questions were selected on the basis that they: (1) reflected a different aspect of each SEED domain, (2) had been extensively validated, (3) were readable and unambiguous, and (4) did not have dichotomous answer options. A total of 36 questions were included in the final survey and 26 were used to compute the final SEED domain scores and the overall wellbeing score.

## 4 Data processing

### 4.1 Data preparation and cleaning

Once the data was collected the research team at Ipsos cleaned and prepared the data by:

- Ensuring that all questions had been recorded appropriately, with the minimum and maximum values they were supposed to have.
- Recoding “Don’t know” and “Prefer not to say” answers as missing values.
- Ensuring all response scales were consistently scored in the same direction, with smaller scores representing lower wellbeing, enabling easy summation of the questions to form a scale constructed from an average score across questions.
- Feature scaling of all raw variables. Not all response options to the questions had the same range of response categories. To ensure categories varying between 1-4, 1-5 and 1-10 could be appropriately summed, it was necessary to adjust the raw responses such that a maximum score of 4 on one item was not treated as a score of 4 on a 1-10 scale but became equivalent to a score of 10. Feature scaling was preferred to other standardisation and normalisation methods because: (1) it would produce easy-to-interpret scales, (2) the range of all variables would be bounded from 0 to 1, and (3) it would simplify comparing and aggregating variables into domain scores. Since all variables were bounded and there were no outliers, feature scaling was less likely to distort the variables’ spread. Feature-scaled values were multiplied by 100 so that the wellbeing scores’ range would extend from 0 to 100.

The percentage of missing values<sup>1</sup> was closely monitored throughout the analysis process (see Table 4.1). Missing data raises various challenges. Any item with high levels of missing values suggests that it may not be well suited for inclusion into a scale because it cannot be answered appropriately by all, though this is not a rule applied stringently. Whilst low levels of missingness may be of little concern for individual questions, the number of cases with missing values can accumulate across questions included in a scale. Missing data may also give rise to systematic differences in characteristics between people who have provided a response and those who have not, and our approach to explore this is discussed further below.

---

<sup>1</sup> Here missing values refers to cases where we expect a response to be given, and excludes any logically missing responses through filtering.



The level of missing data was generally low across individual questions (an average of 2.5%, Table 4.1) except for the question on satisfaction with the availability of job opportunities, where a response was missing in 11.2% of cases, arising from the large proportion of respondents answering “Don’t know”. Although the percentage of missing cases in this variable was large, it was not particularly associated with a broader pattern of missingness and its impact on the final economic wellbeing domain was limited.

Table 4.1: Mean, standard deviation and percentage of missing cases per variable

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Missing Percent</b>
General health	3558	69.93	21.35	0.3
Mental health	3553	66.66	23.75	0.4
Rely on neighbours	3522	65.86	27.64	1.3
Access to supermarket	3540	86.01	20.56	0.8
Neighbourhood safety	3523	62.26	27.23	1.2
Discrimination	3483	80.21	26.03	2.4
Job opportunities	3169	52.40	24.45	11.2
Afford warm house	3534	71.99	28.35	0.9
Afford holidays	3511	67.66	32.64	1.6
Afford unexpected expense	3497	59.96	36.55	2.0
Afford enough food	3538	83.89	22.40	0.8
Afford socialising	3520	77.37	26.42	1.3
Satisfied with skills	3531	75.79	21.65	1.0
Noise pollution	3531	69.25	28.61	1.0
Air pollution	3432	71.11	29.65	3.8
Litter	3531	57.74	28.83	1.0
Satisfaction with open spaces	3499	68.91	24.95	1.9
UK's environmental efforts	3476	42.64	26.04	2.6
Trust in UK government	3516	29.36	25.77	1.4
Trust in local council	3450	43.13	23.41	3.3
Trust in the legal system	3443	52.70	24.66	3.5
Trust in the media	3524	36.40	23.87	1.2
Trust in the police	3533	51.74	26.04	1.0
Trust in banks	3518	53.95	25.23	1.4
Influence in the UK	3483	23.61	23.50	2.4
Influence in local area	3466	33.57	25.03	2.8

## 5 Analysis

### 5.1 Goals and protocol

A key requirement in creating a summary wellbeing domain index is to check that the individual questions contributing to each part of the index were being treated by respondents as indicative of the same underlying domain. From a statistical perspective, this requires similar responses by everyone to all the questions used to construct each part of the index, resulting in a strong correlation between those responses.

Factor analysis<sup>2</sup> is a statistical technique that builds on the correlation matrix and shows whether the questions load onto a single theme (factor) for the domain or on multiple themes. In general, single themes are preferred when building indices. However, given the aim of this study was to ensure a breadth of content, as described above, multiple different themes were also permitted within a domain. Additionally, the factor loadings of each question onto the theme provide an indication of the ‘importance’ of the questions to the theme.

These factor loadings were also used to aid the exclusion of certain questions from the scale. On the one hand, to reduce respondent burden in future surveys, the questions which load highly can be removed because they can ‘substitute’ for other questions. Thus, two questions, similar in content, can be reduced to one question. However, where similar loading questions are measuring different aspects of the domain, both would be retained, keeping content validity high. On the other hand, questions with low loadings do not fit well because they do not appear to be measuring a consistent aspect of the theme, and these questions were strong candidates for removal.

Ideally, all questions would have equal importance to the factor, justifying a simple summation of the questions to create a total score<sup>3</sup>. Simple summation was preferred for this project both to aid transparency of the approach and to provide a straightforward practical application, which is less prone to potential error arising in future applications of the coding process.

Finally, Cronbach’s alpha was calculated for the questions chosen for each domain within the overall index. This provides a measure of the ‘internal consistency’ of the questions, i.e., how consistently everyone responds across all questions within each domain of the index.

---

<sup>2</sup> Strictly speaking, a principal components extraction was used rather than an extraction based on common variance.

<sup>3</sup> An alternative to simple (unit weighted) summation is to use a function of the factor loadings to give more importance to some questions than others. However, correlation matrices can be unstable between different samples and the resultant factor loadings can also change. Whilst the bootstrapping approach described below in the technical report provides some protection against this, the simple summation approach was preferred for reasons given in the main body of the technical report.

Once each variable was feature-scaled, exploratory factor analyses were run separately for each domain (social, economic, environmental, and democratic wellbeing). Exploratory factor analysis was used to identify an appropriate subset of variables to use in creating the scales. After a set of variables was chosen for each domain, bootstrapped factor analyses were run for each to estimate the models' generalizability and the loadings' standard errors.

## 5.2 Exploratory factor analysis

The main goal of the exploratory factor analysis was to choose the subset of questions that consistently represented each of the wellbeing domains (social, economic, environmental, and democratic wellbeing). This trade-off between content validity (whether all questions represent the breadth of the construct we want to measure) and internal consistency (whether all questions are strongly related and reflect a single construct as measured by Cronbach's alpha) was the main guideline when deciding which questions to subset for each domain. Advice from Carnegie UK and their advisory group was particularly helpful when choosing between alternative questions to achieve this balance.

To help ensure that the analysis provided easy-to-interpret domain scores, one-factor solutions were preferred. Two or more factor solutions were considered as long as factors were not negatively correlated, and questions loaded onto them in the same direction. These requisites guaranteed that domain scores could be easily interpreted and combined into an overall wellbeing score.

Decisions over which questions to include and exclude consisted of judgements made based on the statistical outputs, especially when multiple options were possible for the exclusion of questions.

All questions, loadings and Cronbach's alpha coefficients are given in Tables 5.1 and 5.2.

### 5.2.1 Social wellbeing

The final social wellbeing domain included questions on mental and physical health, as well as on discrimination, feeling safe in the neighbourhood, being able to rely on someone from the neighbourhood, and ease of access to grocery shops. These questions led to a single-factor solution with moderate to high loadings (ranging between 0.51 and 0.76) and a moderate Cronbach's alpha of 0.67.

As described above, questions were selected on the basis of their contribution to the model in terms of content validity and internal consistency, to ensure social wellbeing was measured comprehensively and cohesively as understood by the SEED framework. Hence, a moderate Cronbach's alpha was traded off in lieu of a more comprehensive domain.

### 5.2.2 Economic wellbeing

The final economic wellbeing domain included questions on respondents' satisfaction with their own education and with job opportunities in their local area, as well as their ability to afford to keep the house adequately warm, go for a week's annual holiday, pay an unexpected expense of more than £850, buy enough food for all members of the household, and socialise outside of the home once a month. These questions led to a single-factor

solution with low to high loadings (ranging between 0.37 and 0.86) and a high Cronbach's alpha of 0.84.

Shorter alternatives to this domain with a higher Cronbach's alpha were considered but the preference was to retain all these questions to maintain a wide breadth within the domain.

### 5.2.3 Environmental wellbeing

The questions retained in the environmental wellbeing domain included environmental cleanliness (noise pollution, air quality and littering), satisfaction with local green and blue spaces, and with UK efforts to preserve the environment. These questions led to a single-factor solution with low to high loadings (ranging between 0.32 and 0.78) and a moderate Cronbach's alpha of 0.65.

As with social wellbeing, a moderate Cronbach's alpha was traded off for a more comprehensive measure of environmental wellbeing that would better align with the SEEDs framework.

### 5.2.4 Democratic wellbeing

The democratic wellbeing domain included questions on the degree to which respondents trusted the UK Government, their local council, the legal system, the news media, the police and the banks, and the amount of influence they thought themselves to have on decisions affecting the UK and their local area. A one-factor solution could not be found for this domain. A key challenge arose from the use of the battery of questions making up the trust variables, which dominated any solution through most of these questions loading together onto a single factor. Rather than the scale being comprised solely of questions from this single trust battery, the decision was made to accept a two-factor solution to extend the conceptual validity of democratic wellbeing to include influence as well as trust. Both factors were positively correlated ( $r = 0.31$ ), indicating that the general tendency was for trust and influence to increase in line with each other, though this tendency allowed for some deviation from them rising absolutely in step together. Combining the questions from these two factors into a single scale had a high Cronbach's alpha of 0.83.

Table 5.1: Questions included in each domain and factor analysis solutions

Domain	Questions, scales and sources	Factor analysis solution	Cronbach's alpha
<b>Social wellbeing</b>	<ul style="list-style-type: none"> <li><i>General health:</i> How is your health in general? (5-point Likert scale; commonly asked on UK-wide surveys such as OECD's Better Life Index)</li> <li><i>Mental health:</i> And how would you describe your mental health in general? (5-point Likert scale; Ipsos Levelling Up Index)</li> <li><i>Neighbourhood safety:</i> How safe do you feel walking alone in your local neighbourhood after dark? (5-point Likert scale; Crime Survey for England and Wales)</li> <li><i>Rely on neighbours:</i> How much do you agree or disagree with the following statement? If I was alone and needed help, I could rely on someone in this neighbourhood to help me (5-point Likert scale; The Impact of COVID-19 on Wellbeing in Scotland survey)</li> <li><i>Access to supermarket:</i> Thinking of physical access, distance, opening hours and the like, how easy or difficult is it for you to access a grocery shop or supermarket in person? (5-point Likert scale; European Quality of Life survey)</li> <li><i>Discrimination:</i> Sometimes people are treated unfairly because of their characteristics or because they belong to a particular group. How much, if at all, have you personally been unfairly treated or discriminated against in the last 12 months? (4-point Likert scale; OECD's Better Life Index)</li> </ul>	1 factor Loadings ranged between 0.51 and 0.76	0.67
<b>Economic wellbeing</b>	<ul style="list-style-type: none"> <li><i>Job opportunities:</i> Leaving aside whether you personally are looking for a job, how satisfied or dissatisfied are you with job opportunities for people in your local area? (5-point Likert scale; Ipsos Levelling Up Index)</li> <li><i>Afford warm house:</i> My household can afford to keep our home adequately warm (5-point Likert scale; European Quality of Life survey)</li> <li><i>Afford holiday:</i> My household can afford to pay for a week's annual holiday away from home (not staying with relatives) (5-point Likert scale; European Quality of Life survey)</li> </ul>	1 factor Loadings ranged between 0.37 and 0.86	0.84

	<ul style="list-style-type: none"> <li>• <i>Afford unexpected expense</i>: My household can afford to pay an unexpected, but necessary, expense of £850 (5-point Likert scale; European Quality of Life survey)</li> <li>• <i>Afford enough food</i>: My household can afford to buy enough food for everyone in the household (5-point Likert scale; European Quality of Life survey)</li> <li>• <i>Afford socialising</i>: My household can afford to socialise with friends or family outside of the home once a month if we want to (5-point Likert scale; European Quality of Life survey)</li> <li>• <i>Satisfaction with skills</i>: How satisfied are you with your education and skills? (5-point Likert scale)</li> </ul>		
<b>Environmental wellbeing</b>	<ul style="list-style-type: none"> <li>• <i>Noise pollution</i>: Please think about your local neighbourhood. Do you have major, moderate, minor or no problems with the following? Noise (4-point Likert scale; European Quality of Life survey)</li> <li>• <i>Air pollution</i>: Please think about your local neighbourhood. Do you have major, moderate, minor or no problems with the following? Air quality (4-point Likert scale; European Quality of Life survey)</li> <li>• <i>Litter</i>: Please think about your local neighbourhood. Do you have major, moderate, minor or no problems with the following? Litter or rubbish (4-point Likert scale; European Quality of Life survey)</li> <li>• <i>Satisfaction with open spaces</i>: Please think about the public, green or open space in your local area that is nearest to your home, for example a park, countryside, wood, play area, canal path, riverside or beach. How satisfied or dissatisfied are you with the quality of the space? This might include how well it meets your needs, whether it is safe, attractive, free of litter or other mess, and the quality of the facilities if there are any (5-point Likert scale; Scottish Household Survey)</li> <li>• <i>UK's environmental efforts</i>: How satisfied or dissatisfied are you with efforts to preserve the environment in the UK? (5-point Likert scale; Gallup)</li> </ul>	1 factor Loadings ranged between 0.32 and 0.78	0.70
<b>Democratic wellbeing</b>	<p>Trust factor:</p> <ul style="list-style-type: none"> <li>• <i>Trust in UK government</i>: On a scale of 1 to 10, where 1 is not at all and 10 is completely, how much do you trust each of the following? UK Government (10-point Likert scale; European Quality of Life survey)</li> </ul>	2 factors: trust and influence. More complex pattern of loadings given the existence of two factors	0.82

	<ul style="list-style-type: none"> <li>• <i>Trust in UK local council:</i> On a scale of 1 to 10, where 1 is not at all and 10 is completely, how much do you trust each of the following? Local council (10-point Likert scale; European Quality of Life survey)</li> <li>• <i>Trust in the legal system:</i> On a scale of 1 to 10, where 1 is not at all and 10 is completely, how much do you trust each of the following? Legal system and courts (10-point Likert scale; European Quality of Life survey)</li> <li>• <i>Trust in the media:</i> On a scale of 1 to 10, where 1 is not at all and 10 is completely, how much do you trust each of the following? News media (10-point Likert scale; European Quality of Life survey)</li> <li>• <i>Trust in the police:</i> On a scale of 1 to 10, where 1 is not at all and 10 is completely, how much do you trust each of the following? Police (10-point Likert scale; European Quality of Life survey)</li> <li>• <i>Trust in banks:</i> On a scale of 1 to 10, where 1 is not at all and 10 is completely, how much do you trust each of the following? Banks (10-point Likert scale; European Quality of Life survey)</li> </ul> <p>Influence factor:</p> <ul style="list-style-type: none"> <li>• <i>Influence in UK decision-making:</i> How much do you agree or disagree with the following statements? I can influence decisions affecting the UK as a whole (5-point Likert scale; Scottish Government Wellbeing surveys)</li> <li>• <i>Influence in local area decision-making:</i> How much do you agree or disagree with the following statements? I can influence decisions affecting my local area (5-point Likert scale; Scottish Government Wellbeing surveys)</li> </ul>		
--	--	--	--

### 5.3 Bootstrapped factor analysis

After selecting the subset of variables for each wellbeing domain following the exploratory factor analysis results, a bootstrapped factor analysis was run to estimate the model's stability and the loadings' standard errors. Table 5.2 shows the bootstrapped mean factor loadings and their standard errors (SE).

Table 5.2: Bootstrapped mean factor loadings and their standard errors (SE)

	Mean factor loading	SE
<b>Social wellbeing</b>		
General health	0.62	0.01
Mental health	0.72	0.01
Rely on neighbours	0.44	0.01
Access to supermarket	0.42	0.02
Neighbourhood safety	0.49	0.02
Discrimination	0.41	0.02
<b>Economic wellbeing</b>		
Satisfied with skills	0.30	0.01
Job opportunities	0.31	0.01
Afford warm house	0.79	0.01
Afford holidays	0.85	0.01
Afford unexpected expense	0.82	0.01
Afford enough food	0.75	0.01
Afford socialising	0.83	0.01
<b>Environmental wellbeing</b>		
Noise pollution	0.71	0.01
Air pollution	0.69	0.01
Litter	0.65	0.01
Satisfaction with open spaces	0.44	0.01
UK's environmental efforts	0.23	0.02
<b>Democratic wellbeing</b>		
Trust in UK government	0.66	0.01
Trust in local council	0.65	0.01
Trust in the legal system	0.78	0.01
Trust in the media	0.62	0.01
Trust in the police	0.73	0.01
Trust in banks	0.66	0.01
Influence in the UK	0.73	0.02
Influence in local area	0.76	0.02

Note: for simplicity, loadings on the Democratic wellbeing model only include the loadings and SE of the trust questions on the Trust factor and of the influence questions on the Influence factor.

### 5.4 Computing domain scores and collective wellbeing scores

Participants' domain scores and overall wellbeing scores were computed once the bootstrapped factor analyses showed that each of the domain models was adequate.

Wellbeing domains and collective wellbeing were measured as average scores. A key challenge when averaging across multiple questions is the existence of missing values which can cumulate across questions for any one respondent. Hence, excluding or including respondents who have missing values can have a profound impact on the final results. Consequently, we explored two ways to average across the questions in each scale: (1) using all responding cases (any non-missing response to any question in the domain), or (2) using the fully complete cases (listwise deletion, where only those respondents who answered all questions in a domain would be included). Given the low percentage of missing cases across variables these two methods produced similar results; see Table 5.3.



Table 5.3: Variable means computed with complete cases vs. listwise deletion

	Mean		Standard deviation	
	Listwise	All cases	Listwise	All cases
<b>Social wellbeing</b>				
General health	3.81	3.80	0.85	0.85
Mental health	3.67	3.67	0.94	0.95
Rely on neighbours	2.87	2.87	0.82	0.82
Access to supermarket	3.64	3.63	1.10	1.11
Neighbourhood safety	3.40	3.41	0.78	0.78
Discrimination	4.45	4.44	0.81	0.82
<b>Economic wellbeing</b>				
Satisfied with skills	3.09	3.10	0.82	0.82
Job opportunities	3.10	3.10	0.97	0.98
Afford warm house	3.84	3.88	1.15	1.13
Afford holidays	3.66	3.71	1.31	1.31
Afford unexpected expense	3.35	3.40	1.47	1.46
Afford enough food	4.33	4.36	0.90	0.90
Afford socialising	4.06	4.09	1.07	1.06
<b>Environmental wellbeing</b>				
Noise pollution	3.08	3.08	0.86	0.86
Air pollution	3.13	3.13	0.89	0.89
Litter	2.73	2.73	0.86	0.86
Satisfaction with open spaces	3.76	3.76	1.00	1.00
UK's environmental efforts	2.71	2.71	1.05	1.04
<b>Democratic wellbeing</b>				
Trust in UK government	3.61	3.64	2.32	2.32
Trust in local council	4.86	4.88	2.10	2.11
Trust in the legal system	5.73	5.74	2.22	2.22
Trust in the media	4.23	4.28	2.12	2.15
Trust in the police	5.61	5.66	2.35	2.34
Trust in banks	5.79	5.86	2.26	2.27
Influence in the UK	1.94	1.94	0.94	0.94
Influence in local area	2.34	2.34	1.00	1.00

On average, domain scores computed through both methods differed by 0.31 points with a 0.14 point average difference across their standard deviations. The largest difference when comparing both methods (1.08 difference for the averages and 0.24 for the standard deviations) was found in the Economic wellbeing domain due to the large proportion of missing cases in the satisfaction with job opportunities question (Table 5.4). Given these results, complete cases were chosen as a method to compute domain and overall wellbeing scores.

An overall wellbeing score per respondent was computed by unity-weighting and averaging the four domain scores.

Table 5.4: Descriptive statistics of domain scores

	N	Minimum	Maximum	Mean	Standard Deviation
<b>Social wellbeing scores (all cases)</b>	<b>6935</b>	<b>.00</b>	<b>100.00</b>	<b>72.47</b>	<b>15.14</b>
Social wellbeing scores (listwise deletion)	6668	8.33	100.00	72.71	15.03
<b>Economic wellbeing scores (all cases)</b>	<b>6916</b>	<b>.00</b>	<b>100.00</b>	<b>70.54</b>	<b>20.81</b>
Economic wellbeing scores (listwise deletion)	5986	.00	100.00	69.32	20.61
<b>Democratic wellbeing scores (all cases)</b>	<b>6916</b>	<b>.00</b>	<b>100.00</b>	<b>40.53</b>	<b>16.60</b>
Democratic wellbeing scores (listwise deletion)	6463	.00	100.00	40.22	16.48
<b>Environmental wellbeing scores (all cases)</b>	<b>6916</b>	<b>.00</b>	<b>100.00</b>	<b>63.17</b>	<b>18.28</b>
Environmental wellbeing scores (listwise deletion)	6540	.00	100.00	63.24	18.20
<b>Collective wellbeing scores (all cases)</b>	<b>6935</b>	<b>2.08</b>	<b>100.00</b>	<b>61.69</b>	<b>12.82</b>
<b>Collective wellbeing scores (listwise deletion)</b>	<b>5490</b>	<b>2.08</b>	<b>95.24</b>	<b>61.25</b>	<b>12.84</b>

## 6 Regression

### 6.1 Overview

Regression is a statistical tool used to understand the relationship between one or more explanatory variables and an outcome variable. For the Life in the UK research, regression models were used to identify those demographic characteristics which were associated with collective wellbeing and the four wellbeing domains that comprise it (social, economic, environmental and democratic).

A key advantage of regression is that it explains the relationship between each demographic characteristic and collective wellbeing over and above the relationship between other demographic characteristics and wellbeing. We can, for example, say that age has the effect of increasing or decreasing collective wellbeing by a value of  $x$  irrespective of any other demographic characteristic describing a person. It is important to note that regression models cannot establish causation. Rather, they provide valuable insights into the associations between variables.

Through interpretation of the regression estimates and the significance of the explanatory variables, we can develop a deeper understanding of how different socio-demographic factors contribute to collective wellbeing.

The estimates represent the expected change in the collective wellbeing score for each unit of change in an explanatory variable (for example demographic characteristics such as gender and ethnicity). These estimates reveal the direction and size of the relationship between the characteristics and the collective wellbeing scores.

Statistical measures such as  $p$ -values help determine whether the relationship observed between the demographic characteristics and the outcome variable is statistically significant. A  $p$ -value below a specific threshold ( $p < 0.05$ ) indicates that the relationship is statistically significant, suggesting that the characteristic has a meaningful impact on the wellbeing score.

Regression analysis results for collective wellbeing and for each of the four wellbeing domains – social, economic, environmental and democratic – are provided below.

### 6.2 Collective wellbeing

Collective wellbeing varied substantially between a range of various socio-demographic characteristics, which accounted for around a third of the variation in collective wellbeing between respondents ( $R^2 = 0.31$ ). The most relevant characteristic affecting collective wellbeing was disability, followed by deprivation level (IMD), tenure, and income (see full results in Table 6.1). Other relevant characteristics were age (although only for the oldest group) and living in an urban or rural area. Having one child, or three or more children, was also a significant factor. Ethnicity and gender were the least relevant factors. Finally, country of residence was not a relevant characteristic except for Northern Ireland.

Health, in the form of a self-reported disability, was the most important factor influencing collective wellbeing in terms of the size of the change in wellbeing score. Having a disability lowered collective wellbeing by a score of 6.7 (which equates to a 12% difference).

Other characteristics having a large positive impact on collective wellbeing were level of local area deprivation, income, and tenure:

- Local area deprivation had a consistent impact on collective wellbeing: as the level of local deprivation decreased, wellbeing increased. Living in the least deprived quintile of areas added nearly six points (5.88, or 10%) to a person's wellbeing score compared to living in the most deprived areas.
- Income also affected collective wellbeing in that increases in income corresponded with an increase in wellbeing, though the rate of change tapered off with the top income group.
- Living in social or private rented housing also lowered an individual's collective wellbeing score substantially. It is important to note that this impact occurs over and above a person's income and local area deprivation status.

Age impacted collective wellbeing for the oldest group. People aged 55 and over had a collective wellbeing score almost five points higher (4.78, or 8%) than their younger counterparts. Compared to living in a rural area, living in an urban area reduced collective wellbeing by a score of 2.55, or 4%.

The relationship between children and collective wellbeing was not straightforward. Having two children was not associated with a decrease in collective wellbeing, whereas having either one child, or three children or more, meant a lower collective wellbeing score. However, having three or more children (2.51, or 4%) had a greater impact than having one child (1.63, or 2%).

Table 6.1: Regression results: demographic variables predicting collective wellbeing scores

Characteristics	Estimate	S.E.	<i>p value</i>
Reference group	57.92	0.79	0.00
Men	0.87*	0.30	0.00
Aged 35-54	-0.10	0.40	0.80
Aged 55+	4.78*	0.44	0.00
Income of £26,000 – £51,999	3.16*	0.39	0.00
Income of £52,000 – £99,999	5.05*	0.46	0.00
Income of £100,000+	5.80*	0.58	0.00
White British ethnicity	1.44*	0.42	0.00
Having a disability	-6.71*	0.36	0.00
Private tenant	-3.86*	0.47	0.00
Social housing tenant	-5.49*	0.54	0.00
Having 1 child	-1.63*	0.48	0.00
Having 2 children	-0.86	0.52	0.10
Having 3 or more children	-2.51*	0.82	0.00
IMD2	2.13*	0.48	0.00
IMD3	3.16*	0.50	0.00
IMD4	4.42*	0.50	0.00
IMD5	5.88*	0.51	0.00
Urban area	-2.55*	0.38	0.00
Scotland	-0.13	0.53	0.80
Wales	-0.36	0.69	0.60
Northern Ireland	-2.22*	0.92	0.02

Reference groups: Female, aged 16-34, with an income of less than £26,000, ethnic minority (including White minority), no disability, homeowner, with no children, in the most deprived area (IMD1), in a rural area, living in England.

\*: significant at  $p < 0.05$

Ethnicity was another factor associated with collective wellbeing. Those identifying as White British showed an improved overall level of collective wellbeing compared with ethnic minorities (including White minorities). Men had a slightly higher level of collective wellbeing than women (0.87, or 1%).

Among the countries of the UK, collective wellbeing in Northern Ireland was lower than in England by a score of 2.22, or 4%, with Scotland and Wales showing no significant difference from England.

### 6.3 Social wellbeing

The demographic variables explained just under a third of the variation (adjusted  $R^2 = 0.31$ ) between people's social wellbeing. This means that their influence is important but around two-thirds of the variation is explained by other factors than those we have included in the model. By far the most influential characteristic affecting social wellbeing was disability, followed by area deprivation level and age (see full results in Table 6.2). Other relevant factors were tenure, income, ethnicity, living in an urban or rural area, and gender. Having more than two children or the country of residence were not significant.

Having a disability had the most substantial impact on social wellbeing, with individuals who reported having a disability scoring significantly lower (a decrease of -11.63 points, or 17%) compared to those without disabilities.

Level of local area deprivation (IMD) and age were also strongly associated with social wellbeing. Living in the least deprived areas contributed to a social wellbeing score 5.48 points, or 8%, higher compared to those residing in the most deprived areas. Individuals aged 55 and over had social wellbeing scores 5.20 points higher than those aged 16 to 34.

Income also influenced social wellbeing, with higher income levels associated with increases in social wellbeing. However, the rate of change tapered off for the highest income brackets. Tenure was another influential factor, as individuals living in social housing experienced lower social wellbeing compared to homeowners (a difference of 4.97 points, or 7%).

Ethnicity, urban or rural location, and gender also had an impact on social wellbeing, with individuals from ethnic minority groups (including white minorities), those living in urban areas, and women having lower social wellbeing (by around 3 points each) compared to their respective reference groups.

Having one child yielded lower social wellbeing scores (around a 1-point difference) compared to not having children. However, having two or more children did not have an impact on social wellbeing. Similarly, country of residence had no significant impact.

Table 6.2: Regression results: demographic variables predicting social wellbeing scores

Characteristics	Estimate	S.E.	p value
Reference group	68.36	0.92	0.00
Men	2.65*	0.35	0.00
Aged 35-54	1.75*	0.46	0.00
Aged 55+	5.20*	0.51	0.00
Income of £26,000 – £51,999	2.09*	0.45	0.00
Income of £52,000 – £99,999	2.74*	0.53	0.00
Income of £100,000+	3.22*	0.67	0.00
White British ethnicity	3.19*	0.49	0.00
Having a disability	-11.63*	0.42	0.00
Private tenant	-3.31*	0.54	0.00
Social housing tenant	-4.97*	0.63	0.00
Having 1 child	-1.15	0.55	0.04
Having 2 children	0.32*	0.60	0.60
Having 3 or more children	-0.15	0.95	0.87
IMD2	1.47*	0.55	0.01
IMD3	3.33*	0.58	0.00
IMD4	4.23*	0.58	0.00
IMD5	5.48*	0.59	0.00
Urban area	-3.10*	0.44	0.00
Scotland	0.69	0.61	0.26
Wales	1.02	0.80	0.20
Northern Ireland	-1.74	1.07	0.10

Reference group: Female, aged 16-34, with an income of less than £26,000, ethnic minority (including White minority), no disability, homeowner, with no children, in the most deprived area (IMD1), in a rural area, living in England.

\*: significant at  $p < 0.05$

## 6.4 Economic wellbeing

The demographic variables explained around a third of the variation between people's responses for the economic wellbeing scores (adjusted  $R^2 = 0.34$ ). The most relevant characteristics were income and tenure, followed by having children, disability, age, and living in Northern Ireland (see full results in Table 6.3). Gender was significant but had less impact. Ethnicity and whether the area was urban or rural were not significant.

Income was the most influential factor, with higher income brackets associated with better economic wellbeing. Individuals in the highest income bracket experienced substantially higher economic wellbeing, with a difference of 17.31 points, or 27%, compared to the lowest income group. Housing tenure was another important characteristic, as individuals living in social housing reported economic wellbeing scores 13.49 points lower compared to homeowners, a difference of 21%.

Disability status also had a substantial impact on economic wellbeing, with individuals who reported having a disability scoring significantly lower (a difference of 6.98 points, or 11%) compared to those without disabilities.

Having more children was associated with lower economic wellbeing, with each additional child corresponding to lower scores. Having three or more children was associated with an economic wellbeing score 9.8 points lower than not having children, around double the difference seen with having one child (4.6) and nearly double that with having two (5.2).

The level of local area deprivation played a role: as the level of local area deprivation decreased, economic wellbeing increased. People living in the least deprived areas had an economic wellbeing score 5.3 points higher.

Age was found to influence economic wellbeing, but its effect was not straightforward. Compared to the youngest group (those aged between 16 and 34), those in the middle age group (35 to 54) had lower economic wellbeing (by around 4 points), and the opposite was true for those aged 55 or older, whose economic wellbeing scores were almost 4 points higher. Consequently, people in the age group 35 to 54 had lower levels of economic wellbeing, and this was regardless of their salary, deprivation level or whether or not they had children.

Country of residence was not significant except for Northern Ireland, where individuals had lower economic wellbeing regardless of other demographic variables included in the model, by a score of 3.3.

Table 6.3: Regression results: demographic variables predicting economic wellbeing scores

Characteristics	Estimate	S.E.	p value
Reference group	64.97	1.27	0.00
Men	1.23*	0.48	0.01
Aged 35-54	-4.13*	0.64	0.00
Aged 55+	3.66*	0.70	0.00
Income of £26,000 – £51,999	8.84*	0.62	0.00
Income of £52,000 – £99,999	15.04*	0.73	0.00
Income of £100,000+	17.31*	0.92	0.00
White British ethnicity	-0.07	0.68	0.92
Having a disability	-6.98*	0.58	0.00
Private tenant	-8.48*	0.75	0.00
Social housing tenant	-13.49*	0.86	0.00
Having 1 child	-4.58*	0.76	0.00
Having 2 children	-5.21*	0.83	0.00
Having 3 or more children	-9.82*	1.31	0.00
IMD2	2.68*	0.76	0.00
IMD3	2.44*	0.80	0.00
IMD4	4.59*	0.80	0.00
IMD5	5.33*	0.81	0.00
Urban area	0.46	0.61	0.45
Scotland	-0.67	0.84	0.43
Wales	-1.78	1.10	0.11
Northern Ireland	-3.28*	1.47	0.03

Reference group: Female, aged 16-34, with an income of less than £26,000, ethnic minority (including White minority), no disability, homeowner, with no children, in the most deprived area (IMD1), in a rural area, living in England.

\*: significant at  $p < 0.05$

## 6.5 Environmental wellbeing

Demographic variables explained 17% of the variation between people's environmental wellbeing scores (adjusted  $R^2 = 0.17$ ). The most relevant characteristic was IMD, followed by urban/rural location, tenure and age (see full results in Table 6.4). Disability and ethnicity were also relevant. However, gender, having children, income, and country of residence were not significant.

Local area deprivation was one of the influential characteristics associated with environmental wellbeing. As the deprivation level decreased, environmental wellbeing increased. Individuals living in the least deprived areas had scores 9.25 points, or 16%, higher than those in the most deprived areas.

Environmental wellbeing scores increased with age, with individuals in the oldest age group (55 or above) scoring 6.63 points, or 11%, higher compared to the youngest age group.

Those living in an urban area had environmental wellbeing scores 6.38 points lower than their counterparts living in a rural location.

Table 6.4: Regression results: demographic variables predicting environmental wellbeing scores

Characteristics	Estimate	S.E.	p value
Reference group	58.77	1.25	0.00
Men	0.33	0.47	0.48
Aged 35-54	2.92*	0.63	0.00
Aged 55+	6.63*	0.69	0.00
Income of £26,000 – £51,999	0.20	0.61	0.74
Income of £52,000 – £99,999	-0.55	0.72	0.45
Income of £100,000+	-0.58	0.90	0.52
White British ethnicity	3.11*	0.66	0.00
Having a disability	-3.52*	0.57	0.00
Private tenant	-2.45*	0.73	0.00
Social housing tenant	-3.40*	0.85	0.00
Having 1 child	-0.03	0.75	0.97
Having 2 children	0.63	0.81	0.44
Having 3 or more children	1.81	1.28	0.16
IMD2	2.48*	0.75	0.00
IMD3	5.25*	0.78	0.00
IMD4	6.53*	0.79	0.00
IMD5	9.25*	0.80	0.00
Urban area	-6.38*	0.60	0.00
Scotland	1.52	0.83	0.07
Wales	1.24	1.08	0.25
Northern Ireland	0.54	1.44	0.71

Reference group: Female, aged 16-34, with an income of less than £26,000, ethnic minority (including White minority), no disability, homeowner, with no children, in the most deprived area (IMD1), in a rural area, living in England.

\*: significant at  $p < 0.05$



Disability status had a negative impact on economic wellbeing, with individuals who reported having a disability scoring significantly lower (3.52 points, or 6%) compared to those without disabilities.

Environmental wellbeing scores also varied by tenure, with homeowners scoring 3.40 points, or 6%, higher than those living in social housing.

Lastly, ethnicity was also a relevant characteristic influencing environmental wellbeing, with White British respondents scoring 3.11 points or 5% higher than those from ethnic minorities (including White minorities).

## 6.6 Democratic wellbeing

Demographic characteristics appeared to be less relevant to democratic wellbeing than to other aspects of wellbeing. The demographic variables explained less than 9% of the variation (adjusted  $R^2 = 0.09$ ) between people's responses to the democratic wellbeing scale. Correspondingly, some of the demographic variables that were significant when predicting other wellbeing domains were not significant when predicting democratic wellbeing – such as gender, ethnicity, tenure, living in an urban area and having children (see full results in Table 6.5). This finding reflects the fact that democratic wellbeing is a complex domain and that other factors beyond core demographic characteristics will be more influential (general trust levels, political climate, etc.).

Overall, disability and country of residence had the strongest impacts on democratic wellbeing scores, followed by income, IMD and age.

Having a disability had a substantial negative impact on democratic wellbeing. Individuals reporting a disability scored approximately 4.65 points or 12% lower than those without disabilities.

People living in Northern Ireland scored 4.32 points, or 11% lower, compared to people living in England, who were used as the reference group. While people living in Scotland also had lower democratic wellbeing scores than their English counterparts, the difference was half that of Northern Ireland (around 2 points, or 5%). The score for people living in Wales was lower than for England but this did not reach standard levels of significance.

Age showed a significant association with democratic wellbeing but only for the over 55s, who scored 3.74 points (10%) higher than the youngest group.

Income and deprivation both independently showed some influence on democratic wellbeing. Increasing levels of affluence were associated with higher democratic wellbeing: those in the top quintile of least deprived areas had democratic wellbeing scores 3.3 points higher than their counterparts in the most deprived areas. Similarly, democratic wellbeing scores for those with incomes in the highest band (£100,000+) were 3.3 points above those of their counterparts on the lowest incomes (less than £26,000).

Table 6.5: Regression results: demographic variables predicting democratic wellbeing scores

Characteristics	Estimate	S.E.	<i>p value</i>
Reference group	39.02	1.18	0.00
Men	-0.60	0.45	0.18
Aged 35-54	-0.72	0.59	0.23
Aged 55+	3.74*	0.65	0.00
Income of £26,000 – £51,999	1.55*	0.58	0.01
Income of £52,000 – £99,999	2.95*	0.68	0.00
Income of £100,000+	3.33*	0.85	0.00
White British ethnicity	-0.30	0.63	0.64
Having a disability	-4.65*	0.54	0.00
Private tenant	-1.17	0.69	0.09
Social housing tenant	-0.52	0.80	0.52
Having 1 child	-1.17	0.71	0.10
Having 2 children	0.85	0.77	0.27
Having 3 or more children	-2.06	1.22	0.09
IMD2	1.94*	0.71	0.01
IMD3	1.69*	0.74	0.02
IMD4	2.42*	0.74	0.00
IMD5	3.38*	0.76	0.00
Urban area	-0.96	0.57	0.09
Scotland	-1.99*	0.78	0.01
Wales	-1.85	1.02	0.07
Northern Ireland	-4.32*	1.37	0.00

Reference group: Female, aged 16-34, with an income of less than £26,000, ethnic minority (including White minority), no disability, homeowner, with no children, in the most deprived area (IMD1), in a rural area, living in England.

\*: significant at  $p < 0.05$

# Appendix A

The below table presents the weighting profile targets for England:

Age & Gender	Male	Female	In another way	Prefer not to say
16-24	6.7%	6.3%	0.1%	0.0%
25-34	8.4%	8.2%	0.0%	0.1%
35-44	7.7%	7.8%	0.1%	0.0%
45-54	8.2%	8.4%	0.0%	0.1%
55-64	7.3%	7.5%	0.0%	0.2%
65-74	5.9%	6.3%	0.0%	0.1%
75+	4.5%	5.9%	0.0%	0.0%

Region (NUTs2)	
England	
North East	4.8%
North West	13.1%
Yorkshire and The Humber	9.8%
East Midlands	8.7%
West Midlands	10.5%
East of England	11.0%
London	15.7%
South East	16.3%
South West	10.2%

Ethnicity	
White	85.4%
Mixed	1.3%
Asian	5.5%
Black/ African/ Caribbean	3.3%
Arab / Other	3.5%
Prefer not to say/ Not stated	1.0%

IMD quintiles	
1	20.0%
2	20.0%
3	20.0%
4	20.0%
5	20.0%

Education	
Degree level or above	30.2%
Below degree level	68.7%
Prefer not to say/Not stated	1.1%

Number of adults in the household	
One adult	18.2%
Two or more adults	81.9%

The below table presents the weighting profile targets for Wales:

Age & Gender	Male	Female	In another way	Prefer not to say
16-34	14.6%	13.9%	0.1%	0.0%
35-44	6.7%	6.9%	0.0%	0.0%
45-54	7.8%	8.3%	0.0%	0.1%
55-64	7.7%	8.1%	0.0%	0.1%
65-74	6.7%	7.2%	0.0%	0.3%
75+	5.0%	6.6%	0.0%	0.0%

Education	
Degree level or above	26.0%
Below degree level	73.2%
Prefer not to say/Not stated	0.8%

Ethnicity	
White	95.0%
Ethnic minority (excluding White minority)	4.2%
Prefer not to say/ Not stated	0.8%

IMD quintiles	
1	20.0%
2	20.0%
3	20.0%
4	20.0%
5	20.0%

Number of adults in the household	
One adult	18.8%
Two or more adults	81.2%

The below table presents the weighting profile targets for Scotland:

Age & Gender	Male	Female	In another way	Prefer not to say
16-24	6.4%	6.2%	0.0%	0.1%
25-34	8.2%	8.2%	0.3%	0.2%
35-44	7.2%	7.5%	0.1%	0.1%
45-54	8.0%	8.6%	0.0%	0.1%
55-64	7.8%	8.3%	0.1%	0.1%
65-74	6.0%	6.6%	0.1%	0.0%
75+	4.2%	6.0%	0.0%	0.0%

Region (NUTs2)	
<b>Scotland</b>	
Central Scotland	12.1%
Glasgow	13.1%
Highlands and Islands	8.3%
Lothian	14.6%
Mid Scotland and Fife	12.3%
North East Scotland	14.1%
South Scotland	12.6%
West Scotland	12.9%

Ethnicity	
White	94.9%
Ethnic minority (excluding White minority)	4.8%
Prefer not to say/ Not stated	0.3%

IMD <sup>4</sup> quintiles	
1	20.0%
2	20.0%
3	20.0%
4	20.0%
5	20.0%
Number of adults in the household	
One adult	21.7%
Two or more adults	78.3%

Education	
Degree level or above	27.9%
Below degree level	71.5%
Prefer not to say/Not stated	0.6%

<sup>4</sup> Within Scotland, IMD uses 'Scottish IMD' - SIMD

The below table presents the weighting profile targets for Northern Ireland:

Age & Gender	Male	Female	In another way	Prefer not to say
16-34	15.3%	14.8%	0.5%	0.3%
35-44	7.8%	8.2%	0.0%	0.0%
45-54	8.3%	8.7%	0.0%	0.0%
55-64	7.5%	7.8%	0.0%	0.0%
65-74	5.5%	5.9%	0.0%	0.0%
75+	4.0%	5.5%	0.0%	0.0%

Region (NUTs2)	
Belfast	15.5%
East	24.5%
North	15.7%
Outer Belfast	21.8%
West and South	22.5%

IMD quintiles	
1	20.0%
2	20.0%
3	19.9%
4	20.0%
5	20.1%

Number of adults in the household	
One adult	18.2%
Two or more adults	81.9%

Education	
Degree level or above	23.3%
Below degree level	75.8%
Prefer not to say/Not stated	1.0%

Community Background	
Protestant	44.3%
Catholic	41.4%
Neither	10.6%
Don't know/ PNTS	3.7%

Ethnicity	
White	97.7%
Ethnic minority (excluding White minority)	1.8%
Prefer not to say/ Not stated	0.5%

# Appendix B

## MODULE INTRO TEXT

Now for some questions about your life nowadays.

ASK ALL  
SINGLE CODE

### GENHEALTH

How is your health in general?

Please select one option only

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

- 1. Very good
- 2. Good
- 3. Fair
- 4. Bad
- 5. Very bad
- 998. Don't know [FIX]
- 999. Prefer not to say [FIX]

ASK ALL  
SINGLE CODE

### MHEALTH

And how would you describe your mental health in general?

Please select one option only

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

- 1. Very good
- 2. Good
- 3. Fair
- 4. Bad
- 5. Very bad
- 998. Don't know [FIX]
- 999. Prefer not to say [FIX]

ASK ALL  
SINGLE CODE

### SAFETY

How safe do you feel walking alone in your local neighbourhood after dark?

Please select one option only

REVERSE SCALE 1-4 FOR HALF OF RESPONDENTS

- 1. Very safe
- 2. Fairly safe
- 3. A bit unsafe
- 4. Very unsafe
- 998. Don't know [FIX]
- 999. Prefer not to say [FIX]

ASK ALL  
SINGLE CODE

### BELONG

How strongly do you feel you belong to your immediate neighbourhood?

Please select one option only

REVERSE SCALE FOR HALF OF RESPONDENTS

- 1. Very strongly
- 2. Fairly strongly
- 3. Not very strongly
- 4. Not at all strongly
- 998. Don't know [FIX]
- 999. Prefer not to say [FIX]

ASK ALL  
SINGLE CODE  
RELY

To what extent, if at all, do you agree or disagree with the following statement?

If I was alone and needed help, I could rely on someone in this neighbourhood to help me.

Please select one option only

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

1. Strongly agree
2. Tend to agree
3. Neither agree nor disagree
4. Tend to disagree
5. Strongly disagree
998. Don't know [FIX]
999. Prefer not to say [FIX]

ASK ALL  
SINGLE CODE  
SKILLS

How satisfied are you with your education and skills?

Please select one option only

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

1. Very satisfied
2. Fairly satisfied
3. Neither satisfied nor dissatisfied
4. Fairly dissatisfied
5. Very dissatisfied
998. Don't know [FIX]
999. Prefer not to say [FIX] [

ASK ALL  
SINGLE CODE  
HOUSE

How would you describe the condition of your house or flat?

Please select one option only

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

1. Very poor condition
2. Fairly poor condition
3. Neither poor nor good condition
4. Fairly good condition
5. Very good condition
998. Don't know [FIX]
999. Prefer not to say [FIX]

ASK ALL  
SINGLE CODE  
JOB/AVAIL

Leaving aside whether you personally are looking for a job, how satisfied or dissatisfied are you with the availability of job opportunities for people in your local area?

Please select one option only

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

1. Very satisfied
2. Fairly satisfied
3. Neither satisfied nor dissatisfied



- 4. Fairly dissatisfied
- 5. Very dissatisfied
- 998. Don't know [FIX]
- 999. Prefer not to say [FIX]

ASK ALL

SINGLE CODE PER STATEMENT S1-S5

#### AFFORD

There are some things that many people cannot afford, even if they would like them.

To what extent do you agree or disagree with each of the following statements?

Please select one option only

RANDOMISE STATEMENTS S1-S5

**S1. My household can afford to keep our home adequately warm (including in the winter months)**

**S2. My household can afford to pay for a week's annual holiday away from home (not staying with relatives)**

**S3. My household can afford to pay an unexpected, but necessary, expense of £850**

**S4. My household can afford to buy enough food for everyone in the household**

**S5. My household can afford to socialise with friends or family outside of the home once a month if we want to**

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

- 1. Strongly agree
- 2. Tend to agree
- 3. Neither agree nor disagree
- 4. Tend to disagree
- 5. Strongly disagree
- 998. Don't know [FIX]
- 999. Prefer not to say [FIX]

ASK ALL

SINGLE CODE PER STATEMENT S1-S3

#### SERVICES

Thinking of physical access, distance, opening hours and the like, how easy or difficult is it for you to...

Please select one option only

RANDOMISE STATEMENTS S1-S3

**S1. Access public transport (bus, metro, tram, train etc.) that can get you to where you want to go**

**S2. Access a grocery shop or supermarket in person**

**S3. Get a GP appointment at a time when you need one**

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

- 1. Very easy
- 2. Fairly easy
- 3. Neither easy nor difficult
- 4. Fairly difficult
- 5. Very difficult
- 998. Don't know [FIX]
- 999. Prefer not to say [FIX]

ASK ALL

SINGLE CODE PER STATEMENT S1-S3

#### ENVQUAL

Please think about your local neighbourhood. Do you have major, moderate, minor or no problems with the following?

Please select one option only

RANDOMISE STATEMENTS S1-S3

**S1. Noise**

**S2. Air quality**

**S3. Litter or rubbish on the street**

REVERSE SCALE 1-4 FOR HALF OF RESPONDENTS

- 1. Major problems

- 2. Moderate problems
- 3. Minor problems
- 4. No problems
- 998. Don't know [FIX]
- 999. Prefer not to say [FIX]

ASK ALL  
SINGLE CODE

**ENVSPACE**

**Please think about the public, green or open space in your local area that is nearest to your home, for example a park, countryside, wood, play area, canal path, riverside or beach.**

**How satisfied or dissatisfied are you with the quality of the space? This might include how well it meets your needs, whether it is safe, attractive, free of litter or other mess, and the quality of the facilities if there are any.**

**Please select one option only**

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

- 1. Very satisfied
- 2. Fairly satisfied
- 3. Neither satisfied nor dissatisfied
- 4. Fairly dissatisfied
- 5. Very dissatisfied
- 998. Don't know [FIX]
- 999. Prefer not to say [FIX]

ASK ALL  
SINGLE CODE

**ENVEFFORTS**

**How satisfied or dissatisfied are you with efforts to preserve the environment in the UK?**

**Please select one option only**

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

- 1. Very satisfied
- 2. Fairly satisfied
- 3. Neither satisfied nor dissatisfied
- 4. Fairly dissatisfied
- 5. Very dissatisfied
- 998. Don't know [FIX]
- 999. Prefer not to say [FIX]

ASK ALL DEPENDENT UPON COUNTRY  
SINGLE CODE PER STATEMENT S1- S11

**TRUST**

**On a scale of 1 to 10, where 1 is not at all and 10 is completely, how much do you trust each of the following?**

**Please select one option only**

RANDOMISE STATEMENTS S1-S11

**S1. MPs**

**S2. UK Government**

**S3. [ASK ALL WALES, SCOTLAND, NORTHERN IRELAND] [m\_country\_cat = 3] Scottish Government; [m\_country\_cat = 4] Welsh Government; [m\_country\_cat = 2] Northern Ireland Executive;**

**S4. [ASK ALL WALES, SCOTLAND, NORTHERN IRELAND] [m\_country\_cat = 3] Scottish Parliament members; [m\_country\_cat = 4] Welsh Parliament members; [m\_country\_cat = 2] Northern Ireland Assembly members**

**S5. The local council for your area**

**S6. The legal system and courts**

**S7. The news media (eg, TV, radio, newspapers)**

**S8. Social media (eg, Facebook, Instagram, Twitter, YouTube, TikTok)**

**S9. The police**

**S10. Banks**

**S11. Big tech companies (e.g. Google, Apple)**

REVERSE SCALE FOR HALF OF RESPONDENTS

1. 1- No trust at all
  2. 2
  3. 3
  4. 4
  5. 5
  6. 6
  7. 7
  8. 8
  9. 9
  10. 10- Trust completely
998. Don't know [FIX]
999. Prefer not to say [FIX]

ASK ALL  
SINGLE CODE

**DISCRIM**

**Sometimes people are treated unfairly because of their characteristics or because they belong to a particular group. How much, if at all, have you personally been unfairly treated or discriminated against in the last 12 months?**

**Please select one option only**

REVERSE SCALE 1-4 FOR HALF OF RESPONDENTS

1. A great deal
  2. A fair amount
  3. Not very much
  4. Not at all
998. Don't know [FIX]
999. Prefer not to say [FIX]

ASK ALL DEPENDENT UPON COUNTRY  
SINGLE CODE PER STATEMENT S1-S3

**INFLU**

**To what extent, if at all, do you agree or disagree with the following statements?**

**Please select one option only**

RANDOMISE STATEMENTS S1-S3

**S1. I can influence decisions affecting the UK as a whole**

**S2. I can influence decisions affecting my local area**

**S3. [ASK ALL WALES, SCOTLAND, NORTHERN IRELAND] I can influence decisions affecting [m\_country\_cat = 3] Scotland; [m\_country\_cat = 4] Wales; [m\_country\_cat = 2] Northern Ireland**

REVERSE SCALE 1-5 FOR HALF OF RESPONDENTS

1. Strongly agree
  2. Tend to agree
  3. Neither agree nor disagree
  4. Tend to disagree
  5. Strongly disagree
998. Don't know [FIX]
999. Prefer not to say [FIX]

# Our standards and accreditations

Ipsos' standards and accreditations provide our clients with the peace of mind that they can always depend on us to deliver reliable, sustainable findings. Our focus on quality and continuous improvement means we have embedded a "right first time" approach throughout our organisation.



## ISO 20252

This is the international market research specific standard that supersedes BS 7911/MRQSA and incorporates IQCS (Interviewer Quality Control Scheme). It covers the five stages of a Market Research project. Ipsos was the first company in the world to gain this accreditation.



## Market Research Society (MRS) Company Partnership

By being an MRS Company Partner, Ipsos endorses and supports the core MRS brand values of professionalism, research excellence and business effectiveness, and commits to comply with the MRS Code of Conduct throughout the organisation. We were the first company to sign up to the requirements and self-regulation of the MRS Code. More than 350 companies have followed our lead.



## ISO 9001

This is the international general company standard with a focus on continual improvement through quality management systems. In 1994, we became one of the early adopters of the ISO 9001 business standard.



## ISO 27001

This is the international standard for information security, designed to ensure the selection of adequate and proportionate security controls. Ipsos was the first research company in the UK to be awarded this in August 2008.



## The UK General Data Protection Regulation (GDPR) and the UK Data Protection Act (DPA) 2018

Ipsos is required to comply with the UK GDPR and the UK DPA. It covers the processing of personal data and the protection of privacy.



## HMG Cyber Essentials

This is a government-backed scheme and a key deliverable of the UK's National Cyber Security Programme. Ipsos was assessment-validated for Cyber Essentials certification in 2016. Cyber Essentials defines a set of controls which, when properly implemented, provide organisations with basic protection from the most prevalent forms of threat coming from the internet.



## Fair Data

Ipsos is signed up as a "Fair Data" company, agreeing to adhere to 10 core principles. The principles support and complement other standards such as ISOs, and the requirements of Data Protection legislation.

# For more information

3 Thomas More Square  
London  
E1W 1YW

t: +44 (0)20 3059 5000

[www.ipsos.com/en-uk](http://www.ipsos.com/en-uk)  
<http://twitter.com/IpsosUK>

## About Ipsos Public Affairs

Ipsos Public Affairs works closely with national governments, local public services and the not-for-profit sector. Its c.275 research staff focus on public service and policy issues. Each has expertise in a particular part of the public sector, ensuring we have a detailed understanding of specific sectors and policy challenges. Combined with our methods and communications expertise, this helps ensure that our research makes a difference for decision makers and communities.

