

Updating the Scottish Humankind Index

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Abstract: The Humankind Index was developed in 2011 as a means of measuring wellbeing in Scotland beyond using standard economic measures like GDP. The Index consisted of 18 sub-domains encompassing a wide variety of factors such as health, access to good facilities, employment and job satisfaction etc. This paper constructs an updated index using modern data. Changes in data availability since 2011 have necessitated the selection of many new measures for the sub-domains. Tracking this new index over time shows total wellbeing has remained largely unchanged since 2013. There were large improvements in financial measures but decreases in satisfaction with public services and personal relationships. Separately, more limited indices were created for male and females, as well as the most deprived areas of Scotland. These show a small but persistent gender gap in favour of males and that deprived areas continue to lag behind the rest of Scotland in terms of wellness. Finally, there is still a need for more and improved data sources (and linking) to make the index more accurate and comprehensive.

I Introduction

The Humankind index was originally developed in 2011 by the Fraser of Allander Institute (FAI) in collaboration with Oxfam Scotland as a means to quantify wellbeing in Scotland, beyond simply using traditional economic measures, and to track changes in wellbeing over time.¹ The index comprised a comprehensive set of sub-domains that encompassed several factors that influence the quality of life and prosperity of the Scottish populace. Many of the measures of wellbeing were taken from survey data, and thus it was based largely on subjective opinion and self-assessed wellbeing. However, since 2011 the data collected by the Scottish Government has changed. In particular the Scottish Household Survey (SHS) underwent significant revisions in 2012 that mean that many of the measures from the original index are no longer available and substitutes must be found.

This article aims to create a new Scottish Humankind index for 2017 using measures that best fit from new SHS data. There was also a separate Humankind index created for deprived communities and gender split indices for males and females, in order to identify both geographic and gender inequalities in Scottish wellbeing.

¹ The Oxfam Humankind Index for Scotland (2012) *Oxfam Research Paper*. Available at: <https://policy-practice.oxfam.org.uk/blog/2012/05/~//media/6A6B095DB10E432A88DEBCA5C9F0F365.ashx>

II Humankind Index sub-domains

One of the first steps in the creation of the Humankind Index was a consultation with people from all over Scotland carried out by FAI and New Economics Foundation (NEF) that sought to identify what factors people consider most important to living a good life.² Figure One shows the eighteen most important factors affecting wellbeing in Scotland as identified by the consultation. The consultation also determined the weighting given to each, reflecting their relative importance. The weightings are percentage figures that are used in the calculation of the score for that factor, so factors with higher weightings will contribute a greater amount to the total index score. For example, health and housing were the most commonly cited factors affecting wellbeing in the consultation, and so are ranked number 1 in Figure One with the highest weighting of 11%. Performance in health has roughly double the importance of access to arts, hobbies and leisure facilities, which has a weighting of only 5%. The weightings total to ~100, although this is not exact due to rounding.

These factors comprise the 18 sub-domains of the index, and a suitable measure used to measure Scottish performance in each was selected and calculated to construct the Humankind Index as a weighted sum. To date these weightings have remain unchanged, yet many of the measures now used are different, either because the old measure is no longer available or a new and better one is available.

Figure One: The 18 sub-domains of the Scottish Humankind Index, in rank order and weighting (2011)

² Dunlop, S. and Swales, K. (2012) Measuring Wellbeing in Scotland: the Oxfam Humankind Index. *Fraser of Allander Economic Commentary*. Vol. 36, no. 1, pp. 81-88. ISSN 2046-5378. Available at: <https://strathprints.strath.ac.uk/46805/>

Order	Index sub-domain	Weighting
=1	Affordable, decent and safe home	11
=1	Physical and mental health	11
2	Living in a neighbourhood where you can enjoy going outside and having a clean and healthy environment	9
=3	Having satisfying work to do (paid or unpaid)	7
=3	Having good relationships with family and friends	7
=4	Feeling that you and those you care about are safe	6
=4	Access to green and wild spaces; community spaces and play areas	6
=4	Secure and suitable work	6
=4	Having enough money to pay the bills and buy what you need	6
=5	Having a secure source of money	5
=5	Access to arts, hobbies and leisure activities	5
=6	Having the facilities you need locally	4
=6	Getting enough skills and education to live a good life	4
=6	Being part of a community	4
=6	Having good transport to get to where you need to go	4
=7	Being able to access high quality services	3
=7	Human rights, freedom from discrimination; acceptance and respect	3
8	Feeling good	2

In general, the weightings show higher preferences for good home, physical and mental health relationships, safe and green neighborhoods rather than access to local facilities and services, education and skills and good transport – or having a lot of money. Having a satisfying job carries a higher weighting than having a well-paid and secure employment.

III A review and update of data for each Index sub-domain

We now take each of the sub-domains of the Humankind index in turn, and select the best-fitting measure available. In some cases, this is the same as in the original index but for most sub-domains changes in available data necessitate the use of a new measure. The reasoning behind the selection of all new measures is provided. The primary sources of measures are the Scottish Household Survey (SHS)³ and Scottish Health Survey (SHeS)⁴. These provide a wealth of data on self-assessed health and wellbeing in Scotland. The use of these measures assumes accurate self-reporting from respondents. Reference is also made to the Scottish Index of Multiple Deprivation (SIMD)⁵, which subdivides populated areas in Scotland into thousands of data zones of roughly equal population and ranks them according to a number of sub-domains such as health, education and income with rank 1 being the “most deprived”.

Sub-domain 1 - Affordable, decent home and safe home to live in

The measure for this sub-domain in the original index was taken from the Scottish House Condition Survey (SHCS). The measure used was the percentage of people who reported they were “very satisfied” with their home. This measure has not changed but the question is no longer asked in the SHCS. Now it is included in Section 3 - Housing - of the (SHS). Table 3.6 of the 2017 survey reports 56% of respondents were very satisfied with their house.

This measure does not distinguish between the three aspects of the sub-domain; housing affordability, quality, and safety. Rather it captures overall satisfaction with housing, which is probably the best that can be done with a single figure.

Sub-domain 2 - Physical and mental health

It is difficult to create a single measure that incorporates both physical and mental health. The original index used the measure of self-assessed health from the SHS. The percentage of respondents who reported “good/very good” health was used as the measure. Questions on health are no longer included within the SHS, so a near identical question from the SHeS is used. Table 1.1 of the SHeS 2017 asks respondents to assess their “general health”. The percentage reporting “good/very good” was used to keep the measure consistent. In 2017, 73% reported “good/very good health”, a figure that has been relatively stable over the past few years.

Whether respondents took both physical and mental health into account when answering a

³ Household survey publications and information at: <https://www2.gov.scot/Topics/Statistics/16002>

⁴ Health survey publications and information at: <https://www2.gov.scot/scottishhealthsurvey>

⁵ Information and data of the SIMD at: <https://www2.gov.scot/Topics/Statistics/SIMD>

question about “general health” is impossible to determine. Better wording that clarifies whether the question is asking about both could help provide a more reliable measure.

The original index proposes healthy life expectancy (HLE) as an alternate measure of health. HLE tracks the number of years a newborn child can expect to live in good health. HLE is one of the Scottish Government’s national indicators and data are available. However, the decision was made to retain the use of self-assessed health to remain consistent with the original index, the general prevalence of self-assessed survey data and the focus on public perceptions of wellbeing, and the use of percentages as measures for all sub-domains.

Sub-domain 3 - Living in a neighbourhood where you can enjoy going outside and having a clean and healthy environment

This is the first sub-domain where the original measure is no longer available and a new measure must be found. The measure in the original index was from a question in the SHS that asks if respondents agree or disagree with various statements about their neighbourhood. One of those statements was that they lived in a “pleasant neighbourhood” and the percentage who agreed was used as the measure.

This question is no longer in the SHS. The new measure is the percentage who rate their neighbourhood as a “very good place to live”. In 2017 this figure was 57%. This measure is as close as possible to the old one, and it can be reasonably assumed that a “very good” neighbourhood would be clean, healthy and suitable for outdoor activities.

Sub-domain 4 - Having satisfying work to do (paid or unpaid)

This is the first sub-domain where the new measure is arguably less accurate than the old one. In the old index having satisfied work was interpreted as job satisfaction. The Scottish Social Attitudes Survey (SAS)⁶ 2010 reported mean job satisfaction for Scotland and the percentage satisfied with their job was used as the measure. This question is no longer included in the SAS and a current measure for Scottish specific job satisfaction could not be found.

The replacement measure is taken from the SHeS. Table 2.9 of the SHeS 2017 asks respondents how stressful they find their work, with answers ranging from “not at all stressful” to “extremely stressful”. The percentages responding either “extremely stressful” or “very stressful” were added together and that total was subtracted from 100 to provide a percentage measure of those in work who do not find their work overly stressful. In 2017 this figure was 84%. However, while the old

⁶ Social attitudes survey publications and information at: <https://www2.gov.scot/Topics/Research/by-topic/public-services-and-gvt/SocialAttitudesinScotland/SocialAttitudesReports>

measure did not specify whether the work was paid or unpaid, the SHeS question only applies to paid work and those on government training programmes.

This measure also focuses only on one aspect of a job, and excludes such properties as satisfaction with income, working hours, location, or the type of work done. A person in a low stress job may not be satisfied with it and vice-versa. Modern data on job satisfaction in Scotland is needed for a better analysis. The ONS does collect UK-wide data on job satisfaction but this is incompatible with constructing SIMD data the deprived index.

Sub-domain 5 - Having good relationships with family and friends

This is one sub-domain for which the new measure is likely an improvement. A complete lack of data on relationships meant that the original index used a derived figure based on the amount of actual hours worked by the population of a 40 hour work week. The logic was that fewer hours spent in work translated to more leisure time, and thus more time for people to build and sustain relationships. By admission this was a weak measure and one of the key areas identified for improvement in future versions.

There is still no data for Scotland that gives a direct answer on the quality or quantity of relationships in Scotland. Inevitably such a thing is and must be very subjective. However there are usable proxies. The neighbourhood section of the SHS asks a number of questions about community engagement. From Table 4.18 of the SHS 2017, 59% of respondents strongly agreed they “could turn to friends/relatives in [my] neighbourhood for advice/support”. This is not a perfect measure as it says nothing about the number of close relationships, or relationships outside the respondent’s neighbourhood e.g. work colleagues or long-distance relationships. However, it provides a useful approximation of the percentage of people who have at least one relationship good enough that they feel comfortable going to that person for help, which is relevant to the sub-domain.

Some alternate measures do exist. The SHeS includes a section on social capital and asks respondents about the number of people they could go to for help in a crisis, whether they trust the people around them, and how often they contact their friends/relatives. In addition, from 2019 the social capital section will include a question on loneliness, asking if respondents have felt lonely in the past week. One of these may make for a preferable measure.

Sub-domain 6 - Feeling that you and those you care about are safe

The old measure for this was a question in the SHS that asked if respondents felt they “lived in a safe area”, which was a reasonable measure of the sub-domain (although it assumes “those you care about” all live in the same area). This question is longer asked in the SHS so the new

measure is the similar but more specific question of “do you feel safe walking alone in your local area after dark?” from the biennial Scottish Crime and Justice Survey (SCJS)⁷. The measure is the percentage who said they felt “very/fairly safe”. In the 2016/7 survey, this figure was 77% for all adults, but was notably lower for women than for men.

A problem with this new measure is that it only asks about personal feelings of safety and not of “those you care about”, although it could be assumed that concern about becoming a victim of crime is an indicator of crime in the area as a whole. A more general question asking about feelings of crime and safety in the local area, like the old measure, may be a better measure for the sub-domain.

Sub-domain 7 - Access to green and wild spaces; community spaces and play areas

The old measure for green spaces was a derived figure from multiple SHS questions on the proximity of natural environments and availability of play areas in the neighbourhood. A new, simpler measure from the SHS has been identified. Table 10.6 from the 2017 SHS asks respondents about their satisfaction with their local green spaces (which includes all open and public areas including play parks and natural environments). This is arguably a better measure as it factors in the quality of those green spaces and if respondents consider them fit for use. Just because a green space is available does not mean people use it and are happy with it. In 2017, 74% of respondents were satisfied or fairly satisfied with their nearest green space.

Sub-domain 8 - Secure and suitable work

This sub-domain contains three separate factors - secure work, suitable work, and finding work in itself. The old measure could not find data on the first two so focused on employment, using the calculated probability that an individual chosen at random would be employed. The need for a better measure was highlighted as employment rates say nothing about the quality of that work. Given problems in Scotland of underemployment and in-work poverty, this is an important issue.

The Scottish Government has since made the percentage of the populace earning under the living wage one of its national indicators⁸. The living wage is the wage needed keep workers above the poverty line. As such, suitable work has been interpreted here as work that pays enough to maintain a decent standard of living. The measure used is (100 - % earning under living wage). In 2017, 18.4% of the workforce was earning less than the living wage, giving a measure of 81.6.

⁷ Crime and Justice Survey publications and information at:

<https://www2.gov.scot/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>

⁸ National Indicators dashboard at: <https://nationalperformance.gov.scot/measuring-progress/national-indicator-performance>

This is still not an ideal measure as it does not address the issue of work security. Another national indicator is “contractually secure work”, although the measure for this has yet to be developed. Once it has, future indexes could possibly combine it in some way with the current measure to better answer the questions posed by the sub-domain.

Sub-domain 9 - Having enough money to pay the bills and buy what you need

This sub-domain focuses less on income from work and simply on whether people have enough money to live on regardless of the source. The measure for this remains unchanged from the original index. The SHS asks respondents if they have enough money. Specifically, Table 6.1 from the 2017 SHS asks respondents how well their household had coped financially over the past year. This figure was 56% for 2017.

Sub-domain 10 - Having a secure source of money

The old measure for this interpreted financial security as employment security and used a figure derived from employment rates due to limitations on available data. The need for a measure that more closely matches the sub-domain was made clear. The new measure is taken from the finance section of the SHS which asks households if they have at least £1000 of savings. From Table 6.7 of the 2017 SHS, 55% of households have savings of £1,000 or more.

Using this as a measure of financial security avoids redundancy with the other financial sub-domains by focusing on savings rather than earnings. It pays no attention to the source of those savings, meaning it captures a wider sample than the old measure that only looked at employment as a source of financial security. It could be considered as a percentage of households that have enough money saved to keep themselves secure in case of a crisis or loss of income. However, having money saved does not always mean the source of that money is secure, and as such is not a perfect measure. For example £1,000 savings could have come from a lump sum inheritance and thus not a secure source. Additionally, £1,000 is arguably a rather small amount and would not provide secure income for a long period, so it is difficult to say that £1,000 is enough to provide financial security. Finally £1,000 is defined in nominal terms so an increase in this measure may simply reflect inflationary effects rather than a real rise in savings. Hence, there is still a need to identify a better measure for this sub-domain.

Sub-domain 11 - Access to arts, hobbies and leisure activities

Both the old and new measures for this are derived from data taken from the SHS and closely match the sub-domain, although they address different aspects. The old measure was based on participation in sporting and cultural events. The new measure focuses more on people’s satisfaction with the cultural and sporting facilities provided in their area, with the reasoning that

this is the more important question from a wellbeing point of view, and that the new measure addresses the quality of cultural and sporting experiences.

The new measure is calculated as the equal-weighted average of four figures, all taken from the 2017 SHS. Table 12.8 asks for satisfaction ratings with three types of cultural services: libraries, museums and galleries, and theatres and concert halls. Table 8.4 asks for satisfaction ratings with sports and leisure facilities. The percentages reporting “very/fairly satisfied” for these four were added together and then divided by four to produce the measure, which was 48.25 for 2017. The weakness of this measure is that it only accounts for a limited selection of cultural services.

An alternate measure could be the tables in the SHS that only include the responses of those who have used the respective service in the previous twelve months. Naturally, this gives higher ratings as those who are not happy with the current services are not likely to use them.

Sub-domain 12 - Having the facilities you need locally

The old measure for this was a simple question from the SHS that asks respondents if they felt their neighborhood had “good amenities”. This question is no longer included and no similar substitute could be found, necessitating the creation of a new measure. A measure was created from data from the Scottish Index of Multiple Deprivation (SIMD). One of the sub-domains used to rank data zones in the index is geographic access, a value derived from average drive times to the following facilities: post office, petrol station, primary school, secondary school, retail centre and GP. In order to be consistent in the use of percentages for all measures, the measure was calculated as the percentage of data zones with a travel time of under 5 minutes to all six facilities, which can be interpreted as the percentage of areas containing - or close to - a good range of facilities. The most recent revision of the SIMD was in 2016, for which the measure was 38.54.

The weaknesses of this new measure are that “the facilities you need” are subjective to each person’s needs and the six listed in the SIMD may not accurately reflect them. Some people may consider the sporting or cultural services listed above as necessary facilities, for example. Using drive times by area does not account for personal or household differences like most of the other sub-domains, and ignores those who are unable to drive or have access to a private vehicle. There is still room for a better measure for this sub-domain.

Sub-domain 13 - Getting enough skills and education to live a good life

As discussed in the original index, while educational attainment does correlate with income, that does not guarantee that a good education will lead to high income, or that a high level of

attainment is needed to earn a high income, or that high income is what creates a good life.. Nevertheless, the measure used is the percentage of the population who have a degree or professional qualification, taken from the SHS. In 2017, this figure was 31% and appears to show a small increase over time.

It could be that a question in future surveys that asks about perceptions of education, such as “are you satisfied with your level of educational attainment?” or “do you feel that your education prepared you for life?” would provide a better measure for this sub-domain.

Sub-domain 14 - Being part of a community

The old measure was an SHS question that asked respondents if they felt their local area had a “sense of community/friendly people”. Although this question is longer included, the SHS now has a similar question on community engagement that is a good substitute. From Table 4.17 of the 2017 SHS, 78% felt a “very strong” or “fairly strong” sense of belonging to their community. This measure seems to directly answer the sub-domain question and is satisfactory.

Sub-domain 15 - Having good transport to get to where you need to go *and*

Sub-domain 16 - Being able to access high quality services

The measures for both of these sub-domains have remained unchanged from previous years. They are grouped together as the measures are related and both found in the same place. Table 9.1 of the SHS 2017 asks respondents to rate their satisfaction with three different local services: public transport, local health and local schools. The percentage who were “very satisfied” or “fairly satisfied” with public transport was used for sub-domain 15, while the percentage who reported “very satisfied” or “fairly satisfied” with all three services was used for sub-domain 16. In 2017, the measure for sub-domain 15 was 69% and the measure for sub-domain 16 was 51.9%. As noted above with respect to the local facilities measure, the potential weakness of these measures is that they only cover three forms of service and households might find others services equally as important. However, notwithstanding this, these are considered valid measures that closely match the sub-domain.

Sub-domain 17 - Human rights, freedom from discrimination; acceptance and respect

Issues of human rights, tolerance and discrimination are vast and complex, and hard to quantify. The previous measure used a question from a special report of the Scottish Social Attitudes Survey (SAS) that asked respondents if they agreed with the statement that Scotland “should get rid of all prejudice”. However this data is not annual and has since only been updated once, in 2015. In addition, while this question may capture an overall attitude towards tolerance it does not look at the realities of tolerance and discrimination in Scotland. Therefore a new measure was chosen that attempts to better reflect people’s personal experiences of discrimination. The SHS now asks respondents if they have been subject to either harassment or discrimination in Scotland in the previous three years. The percentage of those who reported being a victim of discrimination and the percentage of those who reported facing harassment were added together and subtracted from 100 to create the measure. From Table 4.13 of the 2017 SHS, this figure was 87%

The SHS also goes into more detail on the nature of the discrimination such as race, gender etc. but that level of analysis is beyond this sub-domain. It is possible that this figure contains double counting as one person may have experienced both discrimination and harassment, so adding them together may overestimate the number of people who had problems.

Sub-domain 18 - Feeling good

The original measure for this was a question in the SHS that asked for a ranking on a scale of 1-10 of how generally happy respondents were with their life. The percentage of those rating 7 or more was used for the measure. As this is no longer included in the SHS an alternate measure was used from ONS data on wellbeing. An ONS 2017 report⁹ on personal wellbeing in the UK had a similar question with 1-10 ratings on “life satisfaction” in Scotland. From this the average life satisfaction in Scotland in 2017 was 7.72, which was simply multiplied by 10 to give a percentage measure of 77.2% for happiness in Scotland. However ONS data cannot be disaggregated to SIMD data zones so it is a poor substitute for creating the deprived index.

IV The 2017 Humankind Index

To calculate the new 2017 Humankind Index the score for each sub-domain was found by multiplying the calculated measures – new and updated as discussed above - by the weighting

⁹ ONS. Personal well-being in the UK: April 2016 to March 2017. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/measuringnationalwellbeing/april2016tomarch2017#average-life-satisfaction-and-happiness-ratings-reach-highest-levels-since-2011>

ascribed to each sub-domain via the original 2011 consultation. The scores were added together to produce the total value of the index for 2017.

Figure Two: The Humankind Index, sub-domain weights, values and scores, 2017

Variable	Weight	Measure	Score
Housing	11	56	597
Health	11	73	780
Neighbourhood/Environment	9	57	498
Work Satisfaction	7	84	588
Good Relationships	7	59	404
Safety	6	77	449
Green Spaces	6	74	431
Secure/Suitable Work	6	81.6	476
Having Enough Money	6	56	326
Financial Security	5	55	269
Culture/Hobbies	5	48.3	234
Local Facilities	4	38.5	150
Skills and Education	4	31	121
Community Spirit	4	78	303
Good Transport	4	69	268
Good Services	3	51.9	151
Tolerance	3	87	253
Feeling Good	2	77.2	150
		Total	6446

Note that the presented values are rounded.

As an absolute value the size of the index has little meaning. Its value lies in comparisons over time and the relative sizes of the portions of the index. The table below shows the percentage contribution of each sub-domain to the index, calculated by dividing the sub-domain score by the total score for the index and multiplying by 100. Thus the % incorporates both the weighting and the measure, and gives a rough idea of which sub-domains are contributing the most to wellbeing in Scotland.

Figure Three: The percentage contribution of each sub-domain to the Humankind Index (2017)

Sub-domain	% Contribution
Health	12.1
Housing	9.3
Work satisfaction	9.1
Neighbourhood/Environment	7.7
Secure/Suitable work	7.4
Safety	7.0
Green spaces	6.7
Good relationships	6.3
Having enough money	5.1
Community spirit	4.7
Financial security	4.2
Good transport	4.2
Tolerance	3.9
Culture/Hobbies	3.6
Local facilities	2.3
Good services	2.3
Feeling good	2.3
Skills and education	1.9

V Changes in the Humankind Index over time

The availability of data and use of recently adopted measures means that 2013 is as far back as the index can track.

Figure Four: Value of the Humankind Index and percentage change from previous year, 2013 - 2017

Year	2017	2016	2015	2014	2013
Index value	6446	6506	6512	6454	6440
% change from previous year	-0.90	-0.10	0.91	0.21	-

The index value has remained fairly stable over the period. A small rise from 2013 to a peak in 2015 was followed by an almost equal drop in the following two years, and the 2017 index is only 6 points higher than it was in 2013. Thus, it appears wellbeing in Scotland has not grown in any significant sense in the past four years. However, while the total index value has remained roughly steady, some of the individual sub-domains have displayed notable trends. Some have improved, some have worsened and others have fluctuated without any discernible pattern.

Figure Five: Component sub-domain scores, 2013 – 2017

Sub-domain	2017	2016	2015	2014	2013
Housing	56	58	58	54	56
Health	73	73	74	73	74
Neighbourhood/Environment	57	56.7	56.3	55.8	55.2
Work Satisfaction	84	85	85	86	86
Good Relationships	59	63	63	63	67
Safety	77	77	74	74	72
Green Spaces	74	75	76	76	76
Secure/Suitable Work	81.6	79.9	80.4	80.7	81.7
Having Enough Money	56	56	55	52	48
Financial Security	55	55	55	53	51
Culture/Hobbies	48.3	47.5	48.5	48.5	48.5
Local Facilities	38.5	38.5	38.6	38.6	38.6
Skills and Education	31	30	29	28	27

Community Spirit	78	77	77	77	78
Good Transport	69	72	74	75	71
Good Services	51.9	56.1	57.5	61.9	59.9
Tolerance	87	87	87	89	87
Feeling Good	77.2	76.5	76.9	76.4	75.7

It can be seen that in general changes are quite small over the period. Some measures such as education and having enough money display a consistent change in one direction, while other measures like housing, secure work, and transport increase and decrease over the period. Additionally, some measures like relationships hold steady for several years before showing a significant change in one year.

Figure Six: Percentage change in Index sub-domain scores, 2013 - 2017

Figure Six ranks the percentage change in sub-domain scores (measure x weighting) from 2013 to 2017, by largest increase to largest decrease.

Sub-domain	% Change
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Having Enough Money	16.7
Skills and Education	14.8
Financial Security	7.8
Safety	6.9
Neighbourhood/Environment	3.3
Feeling Good	2.0
Total	0.1
Housing	0
Community Spirit	0
Tolerance	0
Local Facilities	-0.01
Secure/Suitable Work	-0.01
Culture/Hobbies	-0.5
Health	-1.4
Work Satisfaction	-2.3
Green Spaces	-2.6
Good Transport	-2.8
Good Relationships	-11.9
Good Services	-13.4

When one looks at performance over time at the sub-domain level, it is evident that it has improved for six, remained unchanged for three, and – interestingly – worsened for nine (although the decrease in two – access to local facilities and suitable work – is so small as to be negligible). These results appear to contrast somewhat with the original index from 2011. In earlier years, the largest losses came from falls in the economic sub-domains and were countered by improvements in non-economic sub-domains such as community spirit, green spaces and health. These results however show clear improvements in economic sub-domains and decreases elsewhere, perhaps reflecting the ongoing recovery since the great recession.

The largest decreases appear to come from declining satisfaction with public services, possibly

the effects of prolonged austerity on public services. It is interesting to see a large drop in the quality of relationships but no change in community spirit. Health has decreased slightly and stress at work is rising, yet overall life satisfaction has improved. Satisfaction with green spaces has decreased while people’s satisfaction with neighbourhoods and the local environment is improving. The proportion of people earning degrees has continued to increase steadily.

VI The Humankind Index and deprived communities

A key aim of the index is to examine how Scotland’s most deprived areas are performing relative to Scotland as a whole. The most deprived areas are found through the Scottish Index of Multiple Deprivation (SIMD). A separate index has been constructed using data collected solely from households from the most deprived data zones of the SIMD. Due to limitations of data, not all the Humankind Index sub-domain measures could be decomposed to the level of SIMD data zones so the following five sub-domains are, for now, excluded from when using SMID data sets: Secure/suitable work, financial security, culture/hobbies, local facilities, and feeling good. Due to a lack of data for 2017, the most recent SMID data are for 2016.

Figure Seven: The Humankind Index sub-domain scores for deprived communities, 2016

Variable	Weight	Measure	Score
Housing	11	49	523
Health	11	63	673
Neighbourhood/Environment	9	33	288
Work Satisfaction	7	80	560
Good Relationships	7	58.5	400
Safety	6	63	367
Green Spaces	6	65	378
Having Enough Money	6	40	233
Skills and Education	4	15	58
Community Spirit	4	73	283
Good Transport	4	75	291

Good Services	3	56.2	163
Tolerance	3	84	244
		Total	4464

As previously discussed, the index value means little on its own. However, by comparing the deprived index to the Scottish index (excluding the unavailable sub-domains) we can see how deprived communities are performing relative to Scotland as a whole.

Figure Eight: Humankind Index sub-domain performance: Scotland versus Deprived Communities, 2016

Sub-domain	Score (Overall)	Score (Deprived)	% Diff. of Deprived
Housing	619	523	-15.5
Health	780	673	-13.7
Neighbourhood/Environment	495	288	-41.8
Work Satisfaction	596	560	-6
Good Relationships	431	400	-7.2
Safety	449	367	-18.3
Green Spaces	436	378	-13.3
Having Enough Money	327	233	-28.8
Skills and Education	117	58	-50.4
Community Spirit	299	283	-5.3
Good Transport	280	291	+3.9
Good Services	163	164	+0.6
Tolerance	253	244	-3.7
Total	5245	4464	-14.9

These results clearly show wellbeing is much lower in Scotland's deprived areas. Deprived communities performed worse for 11 of the 13 sub-domains, with only public service satisfaction

levels higher than the overall index. Areas of particular concern are: educational outcomes, financial insecurity and the quality of local environments and neighbourhoods. The percentage of people earning degrees (or equivalents) is roughly half of that for Scotland as a whole.

Another useful analysis is to compare the percentage differences between the scores from the 2013 deprived index and the 2016 index to see how the sub-domains have changed over time. By comparing these differences to the differences for the overall index, it can be seen whether deprived areas are catching up or falling behind Scotland as a whole. Figure Nine lists the sub-domains in order of largest relative gain for deprived communities to largest relative loss.

Figure Nine: Percentage changes in sub-domain scores between overall Humankind Index and Deprived Index

Sub-Domain	% Change (Overall)	% Change (Deprived)	Difference for Deprived Index
Skills and Education	11.1	33.9	22.8
Having Enough Money	16.7	33.3	16.6
Housing	3.6	11.4	7.8
Health	-1.4	5	6.4
Community Spirit	-1.3	4.3	5.6
Neighbourhood/Environment	2.7	6.5	3.8
Tolerance	0	0	0
Total	1.2	0.1	-1.1
Work Satisfaction	-1.2	-2.4	-1.2
Good Relationships	-6	-7.4	-1.4
Green Spaces	-1.3	-3	-1.7
Safety	6.9	5	-1.9
Good Transport	1.4	-2.6	-4
Good Services	-6.3	-12.2	-5.9

From Figure Nine it can be seen that deprived communities gained by only 0.1% between 2013

and 2016, compared to a gain of 1.2% for Scotland over the same period. This suggests wellbeing is lagging behind in deprived communities; however, some individual sub-domains did see a relative improvement. Much like the overall index, education and economic sub-domains saw the largest increases. While performance in these sub-domains still lags far behind the rest of Scotland, it does appear that deprived areas are catching up. Relative gains in health, housing and neighbourhoods are also welcome signs of a convergence in living standards. Conversely, however, public service satisfaction is dropping faster in deprived communities – communities that rely more than the average on public services for their wellbeing and security.

There are some issues when using SIMD data zones over time. The revision of SIMD in 2016 changed the quantity, distribution and ranking of data zones and could affect the validity of comparisons between years. In addition, the definition of “most deprived” varies between the bottom 15% and bottom 20% of data zones depending on the sub-domain.

This comparison suffers from a lack of usable SIMD data. The SHS used to include a question on life satisfaction that could be traced across data zones but this was dropped and the substitute measure cannot be used with SIMD. In future versions of the Humankind index, either better measures should be used or a greater wealth of SIMD disaggregated data needs to be sourced so that all sub-domains can be included for a more comprehensive analysis.

VII Gender differences

In order to examine changing gender equality in Scotland, separate indexes for males and females were constructed. As with the deprivation index, data limitations mean the most recent index that is available is for 2016, and some sub-domains had to be excluded: financial security, culture/hobbies, local facilities, good transport, good services, and feeling good.

Figure Ten: The Male Humankind Index, 2016

Variable	Weight	Measure	Score
Housing	11	59	630
Health	11	73	780
Neighbourhood/Environment	9	55.6	486
Work Satisfaction	7	85	596
Good Relationships	7	60	411

Safety	6	89	519
Green Spaces	6	75	436
Secure/Suitable Work	6	84.6	493
Having Enough Money	6	57	332
Skills and Education	4	30	117
Community Spirit	4	76	295
Tolerance	3	87	253
		Total	5346

Figure Eleven: The Female Humankind Index, 2016

Variable	Weight	Measure	Score
Housing	11	58	619
Health	11	73	780
Neighbourhood/Environment	9	57.7	504
Work Satisfaction	7	86	603
Good Relationships	7	66	452
Safety	6	67	390
Green Spaces	6	76	442
Secure/Suitable Work	6	75.7	441
Having Enough Money	6	55	321
Skills and Education	4	30	117
Community Spirit	4	79	307
Tolerance	3	86	250
		Total	5224

By comparing the two indexes it can be seen that is slightly higher overall for males, although some sub-domains are higher for females. Figure Twelve ranks those sub-domains with highest percentage gain for males to the highest percentage gain for females.

Figure Twelve: Gender differences in wellbeing - Male vs Female 2016 Index

Sub-Domain	Score (Male)	Score (Female)	% Diff. for Males
Safety	519	390	33.1
Secure/Suitable Work	493	441	11.8
Having Enough Money	332	321	3.4
Total	5346	5224	2.3
Housing	630	619	1.8
Tolerance	253	250	1.2
Health	780	780	0
Skills and Education	117	117	0
Work Satisfaction	596	603	-1.2
Green Spaces	436	442	-1.4
Neighbourhood/Environment	486	504	-3.6
Community Spirit	295	307	-3.9
Good Relationships	411	452	-9.1

There are five sub-domains that are higher for males, five higher for females and two where there are no differences. However, the sizes of the differences are not equal.

From Table Twelve it is clear that the higher total wellbeing for males is largely a result of greater feeling of safety and higher wages. Conversely for females it appears they have better relationships and a higher sense of community spirit. With regards to differences in satisfaction with housing, neighbourhoods, and green spaces, from this data alone it cannot be determined if men and women display different patterns in living standards or if men and women tend to have

different standards for, for example, what constitutes a “good neighbourhood”.

Finally, a comparison of changes to both indices over time can reveal if the wellbeing gender inequality gap is closing or widening. Figure Thirteen lists the sub-domains ranked from those with greatest relative increase over time for males to greatest relative increase over time for females.

Figure Thirteen: Changes to sub-domain scores, 2013-2016: Male Index vs Female Index

Sub-Domain	% Change (Male)	% Change (Female)	Difference for Male Index
Skills and Education	11.1	7.1	4
Neighbourhood/Environment	4.5	1.2	3.3
Tolerance	0	-2.3	2.3
Having Enough Money	17.8	15.8	2
Housing	5.4	3.6	1.8
Secure/Suitable Work	-0.7	-1.4	0.7
Total	1.3	1.6	-0.3
Good Relationships	-6.3	-5.7	-0.6
Health	-2.7	-1.4	-1.3
Green Spaces	-1.3	0	-1.3
Community Spirit	0	1.3	-1.3
Work Satisfaction	-2.3	1.2	-3.5
Safety	4.7	11.7	-7

These results suggest the wellbeing gap has closed slightly as the female index rose by 0.3% higher than the male index over the period. The largest relative increase for females was in safety. Although safety was by far the worst performing measure for females compared to males, it does appear to be improving. There is however evidence of divergence among several sub-domains. Other than safety, neighbourhood/environment was the only other sub-domain that appears to show that the gap is closing, while all of the rest display divergence. For example, work satisfaction had a greater relative rise for females from 2013 to 2016, and was higher for females in 2016,

suggesting that the work satisfaction gap between males and female has increased rather than decreased in favour of females. Thus while the overall gap has decreased slightly, this was driven mostly by improved safety for women while in the majority of sub-domains the equality gap widened.

VIII Conclusions

The Humankind Index was originally developed in 2011 to try and assess the wellbeing of Scotland, using a wider dataset than simply standard economic data (GDP etc.). It sought to do this by using wider social data. An initial consultation determined which factors the people of Scotland considered most important for a good life and each was attached a weighting displaying their relative importance. Based on this, measures were selected and calculated for each factor in order to construct the first Humankind Index for Scotland. In addition, separate indexes were developed for deprived communities and for gender. Since then, as noted, the available data used for the various Index sub-domains has changed. Where measures have changed over time, we have indicated “best fit” measures as well as proposing areas that need more thought or where related data series (e.g. SIMD) need to be better linked to other data surveys.

For our analysis, total wellbeing in Scotland has seen little change over the past few years. A small rise from 2013 to 2015 was followed by an almost equal decrease from 2015 to 2017, leaving wellbeing barely higher than it was in 2013, and slightly lower than it was in 2016. However, individual aspects of wellbeing saw significant changes. The largest improvements were in education, financial health and safety with the largest decreases in satisfaction with public services and declining personal relationships.

Deprived communities continue to lag behind the rest of Scotland in almost all areas, and worryingly the gap appears to be widening. There are some sub-domains that show evidence of catching up, mostly in education and financial health, but wellbeing as a whole has barely increased.

There is evidence of a continued sex/gender imbalance in favour of males. The most significant gaps are in feelings of safety and higher wages for males, whereas females have better personal relationships. This gap does appear to be decreasing over time for the entire index, but many subdomains display diverging trends, suggesting gender inequality is still an ongoing issue in Scotland.

Notwithstanding the analysis outlined in this paper, it is far from perfect. As we note, several of the chosen measures of wellbeing are unsatisfactory, and suffer notably from a lack of

compatibility with SIMD data and gender splits. More detailed data is required for future indices to provide a more comprehensive and accurate view of changing wellbeing in Scotland. Despite these issues, this paper offers a useful insight into wellbeing in Scotland and how the Scottish Humankind Index has changed over time, and in what particular respects. The paper highlights the data that can be used – and in the future should be used to make it a more accurate index of wellbeing in Scotland.

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