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# A Birdseye View of Wellbeing: A Multidimensional Wellbeing Index for the United Kingdom and the Role of Consumption

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# Consumption vs Multidimensional measures

*(Alkire and Santos 2014 World Development )*

Unidimensional income/consumption measures show a partial picture of well-being. But they do not reflect all aspects of human well-being or poverty

Many conditions are not directly related to consumption

Meeting the monetary threshold does not guarantee meeting required personal needs

As Sen has argued, conversion of income/consumption can differ by personal or community characteristics (e.g. gender, age, ethnicity, disability)

This paper, presented at BLS 2021:

- Provides **complementary** information on quality of life and wellbeing
- Permits analysis of differences within households and across subgroups

# Monetary and Multidimensional measures: complements

Conceptual and measurement differences (*Suppa 2016; Evans, Nogales and Robson 2019*)

- minimum needs vs capabilities
- welfare advantage vs disadvantage from multiple deprivations

Multidimensional Poverty Measures are now standard complements to monetary poverty statistics:

- SDG Goal 1: End poverty **in all its forms**.
- Target 1.1: Monetary; **Target 1.2: Multidimensional**
- **SDG** Indicator 1.1.1 \$1.90/day; 1.2.1 Monetary **1.2.2 Multidimensional**

Similarly, monetary well-being are complemented by multidimensional metrics

- Stiglitz-Sen-Fitoussi Commission and Stiglitz-Durand-Fitoussi 2019 (OECD)
- International Panel on Social Progress (Princeton)
- Human Development Index, Global Peace Index, Legatum Prosperity Index, Social Progress Index, etc. + National applications.

# Consumption vs Multidimensional poverty measures

→ **Mismatches in identification** of the poor

*(Wang et al 2016; Evans, Nogales and Robson 2019)*

→ **Different dynamics** over time

- Monetary poverty reductions are more volatile *(Tran, Alkire and Klasen 2015)*
- Short-term disruption (e.g. drought) have a larger impact on consumption measures, while multiple shocks impact more on multidimensional measures *(Brück & Kebede 2013)*

# Incorporating non-monetary indicators of wellbeing

Different avenues to create a multidimensional measure

1. Creating a **separate multidimensional measure** to complement the existing consumption measure (this paper), with disaggregation & detailed composition info

Note: this requires all data for the same unit (often from the same survey)

2. Tracking a (often large) **dashboard of non-monetary indicators** in addition to existing consumption measure

→ Note that only option 1 provides a summary headline statistics (like GDP, CPI)

→ Dashboards can pose challenges for policymaking and communication because they rarely make trade-offs explicit, yet selectivity is almost unavoidable.

*Do such data exist?*

# Existing multidimensional measure for the US

**Multidimensional Deprivation Index (MDI)** report published by the US Census Bureau in 2017 (*Glassman 2019*)

Intended to **complement** the existing **official poverty measures** (OPM, SPM)

Six dimensions

- Standard of living
- Education
- Health
- Economic security
- Housing quality
- Neighbourhood quality

→ Data from American Community Survey (ACS) 2017

# US Consumer Expenditure Survey: existing questions

Some **non-monetary indicators of wellbeing** are already in the data

- Highest level of **education** completed
- Number of bedrooms (**overcrowding**)
- **Housing** tenure (owning, renting, social housing)
- **Health** insurance

Other topics are present but only covered in relation to consumption

- Assets, households goods
- Transport
- Presence of internet, telephone
- Type of fuel used for heating/cooking
- Leisure and entertainment

→ Note: It might be possible to retain some of this information to use in a multidimensional measure depending on exact questions



# US Consumer Expenditure Survey: suggestions

Some topics could be easily incorporated if survey had direct questions (similar to questions under demographics and general household characteristics)

## Living standards

- Lack of **facilities** (e.g. bathroom, kitchen)
- Lack of **services** (e.g. electricity, phone, internet)
- Adequate **heating** (note the variation in climate)

## Financial difficulty

- **Indebtedness**
- **Housing** costs and bills
- **Day to day** expenses (e.g. food, personal care, transport, clothing)
- Not being able to afford treatment/care when needed (**health**)



# What methodology? Illustration from the UK

## Methodology

- **Alkire-Foster method** (*Alkire & Foster 2011*)
- **Adapted to wellbeing** based on Bhutan's Gross National Happiness Index
- Individual as unit of identification and analysis

## Conceptual framework

- **Based on UK's national dashboard of wellbeing**
- Selected indicators and dimensions retained based on data availability

## Data

- Understanding Society Wave 9 (2017-19)
- Household and adult questionnaires (aged 16 and over)

# Key advantages of the counting-based adjusted headcount ratio methodology *(Alkire and Foster 2011)*

## Identification

- Considers the **joint distribution** = who is deprived in multiple indicators at the same time
- Constructs Individual deprivation score for each person
- Identifies each person as poor or non-poor

## Aggregation

- The adjusted headcount ratio respects key properties, e.g.
- **Disaggregation** by subgroups (age group, region, area, gender, ethnicity, etc.)
- **Breakdown** to show Indicator contributions

## Empirical Example:

## A Multidimensional Well-being Index (MWI)

## Using adaptation of Adjusted Headcount ratio

## Applied with UK data

## And compared to consumption.

		Measure
Dimension	Indicator	Weight
Personal wellbeing	Life satisfaction	1/40
	Job satisfaction	1/40
	Satisfaction with leisure time	1/40
	Satisfaction with income	1/40
	Self-reported health	1/40
Our relationships	Unhappy relationships	1/32
	Loneliness	1/32
	Social networks	1/32
	Neighbourhood belonging	1/32
Health	Disability	1/40
	Limited activity	1/40
	Evidence of depression (General Health Questionnaire)	1/40
	Fruit and vegetable consumption	1/40
	Exercise	1/40
What we do	Unemployment	1/8
Education	No A level of equivalent	1/8
Personal Finance	Low income	7/64
	Difficulty with finances	1/64
Living Standards	Adequate heating	1/16
	Housing tenure	1/16
Governance	Voting	1/16
	Political efficacy	1/16

# Income/consumption related indicators

## 1. Low household income

Individuals in household with less than 60% of median household income (relative poverty) → objective evaluation

## 2. Difficulty with finances

Measures if individual reports finding it 'quite' or 'very' difficult to get by financially

→ subjective evaluation

Lives in low income household (below 60% median)	Finding it difficult to get by financially		Total
	0	1	
0	64.38	21.15	85.53
1	7.63	6.84	14.47
Total	72.01	27.99	100.00

# Income/consumption related indicators

## 3. Satisfaction with income

Subjective evaluation of purchasing power and consumption

*28.5% of income poor are satisfied with their household income.*

*81.8% of those not satisfied with their income are not income poor.*

Lives in low income household (below 60% median)	Not mostly or completely satisfied with household income		Total
	0	1	
0	39.13	46.40	85.53
1	4.12	10.35	14.47
Total	43.25	56.75	100.00

# Consumption related non-monetary indicators

## 1. Fruit and vegetable intake

Measures whether individual consumes fruit and vegetables as per the National Health Guideline (5 portions per day) *84.8% of those lacking 5 portions of fruit/veg are not poor*

## 2. Inadequate heating *90% of income poor CAN heat their homes adequately. But 72% of those who cannot, are not income poor.*

Measures if individual can afford to heat their home to the level deemed as sufficient by them → large yet imperfect overlap with low income

Lives in low income household (below 60% median)	Does not have at least 5 portions of fruit/veg a day		Total
	0	1	
0	17.51	68.03	85.53
1	2.31	12.15	14.47
Total	19.82	80.18	100.00

Lives in low income household (below 60% median)	Cannot heat home adequately		Total
	0	1	
0	82.01	3.52	85.53
1	13.14	1.33	14.47
Total	95.15	4.85	100.00

# Consumption related non-monetary indicators

## 3. Housing tenure *half of the income poor own their homes;*

Core issue, with decreasing home ownership and many renters facing high prices

## 4. Neighborhood belonging *60% of the income poor do belong to their neighborhood. But 85% of those who lack belonging are not poor.*

Might reflect own purchasing power and consumption relative to others, but also impacted by other factors (e.g. social characteristics, networks)

Lives in low income household (below 60% median)	Does not own home (renting, social)		Total
	0	1	
0	61.36	24.17	85.53
1	7.28	7.19	14.47
Total	68.63	31.37	100.00

Lives in low income household (below 60% median)	Does not agree that belong to neighbourhood		Total
	0	1	
0	53.12	32.41	85.53
1	8.76	5.71	14.47
Total	61.88	38.12	100.00



# Consumption related non-monetary indicators

## 5. Self-reported health and Health satisfaction

*69.5% of the income poor have strong self-reported health; 40.6% are satisfied with their health.*

Both can be indirectly impacted by consumption (diet, exercise, medication)

Lives in low income household (below 60% median)	Fair or poor self-reported health		Total
	0	1	
0	67.96	17.57	85.53
1	10.05	4.42	14.47
Total	78.01	21.99	100.00

Lives in low income household (below 60% median)	Not completely or mostly satisfied with health		Total
	0	1	
0	41.08	44.45	85.53
1	5.88	8.59	14.47
Total	46.95	53.05	100.00

# Consumption related non-monetary indicators

## 6. Life satisfaction

Overall subjective evaluation, can reflect a combination of factors incl. consumption  
*47.5% of poor people are satisfied with their life. | 82.9% of those who are not satisfied, are not income poor*

## 7. Political efficacy

Can be indirectly impacted by perceived purchasing power

Lives in low income household (below 60% median)	Not mostly or completely satisfied with life overall		Total
	0	1	
0	48.52	37.01	85.53
1	6.88	7.59	14.47
Total	55.40	44.60	100.00

Lives in low income household (below 60% median)	Low self efficacy - trust or belief in politics		Total
	0	1	
0	45.14	40.39	85.53
1	6.99	7.48	14.47
Total	52.13	47.87	100.00

# Wellbeing thresholds for MWI

Well-being gradient	Sufficient in..	Insufficient in..
<b>Favourable</b>	<b>75% – 100%</b>	
High	87.5% – 100%	1/8 or less
Decent	75% – 87.49%	More than 1/8
<b>Less favourable</b>	<b>0% – 74.99%</b>	
Moderate	67.50% – 74.99%	More than 1/4
Narrow	50% – 67.49%	More than 3/8
Low	0 %– 49.99%	More than 1/2

# Example from trial Multidimensional Wellbeing Index (UK)

Wellbeing status	Monetary poverty status		Total
	Non-poor	Poor	
Favourable	49.2%	2.3%	51.5%
Less favourable	36.3%	12.2%	48.5%
Total	85.5%	14.5%	100%

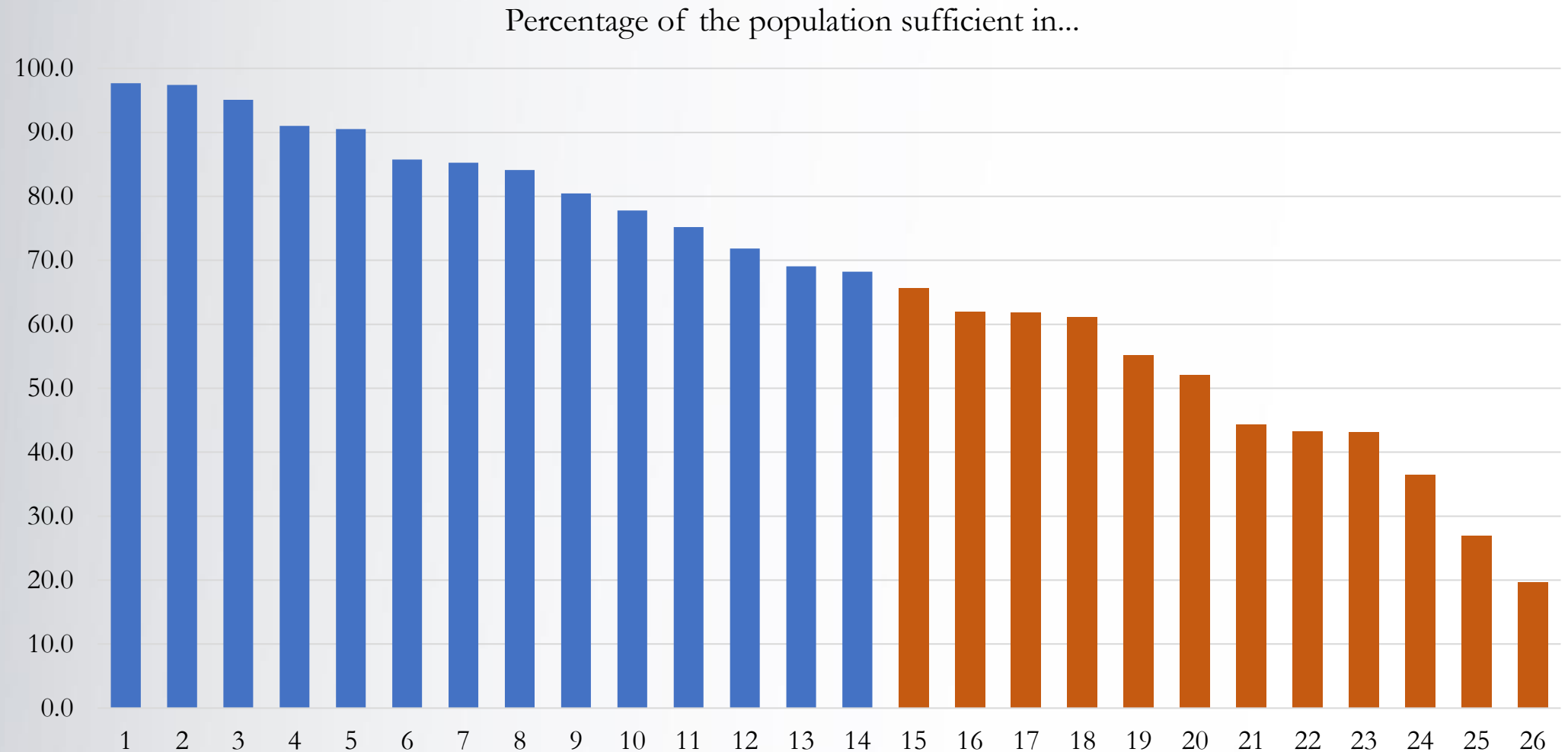
2.3% of people are poor yet enjoy favourable wellbeing

A **third** of the population lack sufficiency in wellbeing but are not considered poor by the income measure

Note: Monetary poverty in the United Kingdom is defined using the 'Household Below Average Income' measure (HBAI), with the **poverty line set at 60% of median household income** after housing costs.

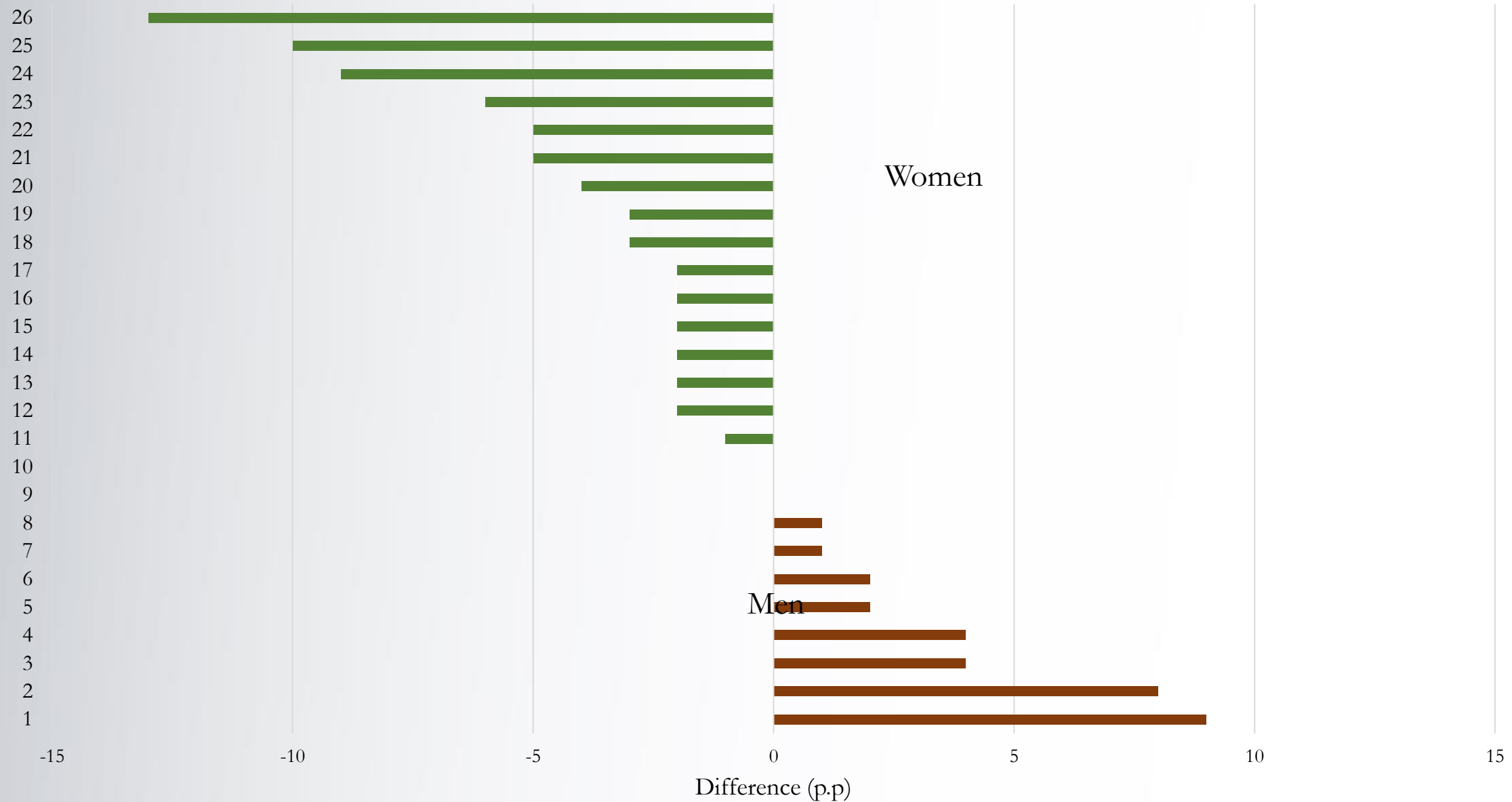
# How to increase well-being?

MWI also looks at breakdown by indicator to show what well-being looks like



# Gender gap in sufficiency

Men: 0.829    Women: 0.819



# Stark differences in wellbeing by ethnicity

*52.6% of persons who self-identified as White enjoy well-being. But it's only 34.5% among all other ethnic groups.*

Disaggregation	MWI	H <sup>f</sup>	H <sup>lf</sup>	AS <sup>f</sup>	AS <sup>lf</sup>	Pop. Share (weighted)	Sample size (weighted)
National	0.824	51.3	48.7	84.2	63.8	100.0	26,501
White	0.830	52.6	47.4	84.3	64.0	92.7	24,530
Black/African/Caribbean/ Black British	0.713	26.8	73.2	80.7	60.8	1.6	429
Mixed/Multiple ethnic groups	0.752	35.1	64.9	83.4	61.9	1.2	321
Asian/Asian British	0.771	38.4	61.6	82.5	62.9	4.1	1,081
Other ethnic group	0.692	26.0	74.0	82.7	58.4	0.4	113
<b>White</b>	0.830	52.6	47.4	84.3	64.0	92.7	24,530
<b>All other ethnic groups combined</b>	0.751	34.5	65.5	82.4	61.9	7.3	1,944



# Conclusions

Many **non-monetary indicators** are **indirectly related** to individual or household **consumption**

Consumption measures could consider **living conditions, access to services, household assets** among others (depending on data)

MWI for UK provides an example on how to measure wellbeing in a single composite index

- Decomposition by subgroups and indicators
- Applicable to policy

# Thank You!

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# References

- Alkire, S. and Foster, J. (2011) 'Counting and multidimensional poverty', *Journal of Public Economics*, 95(7-8): 476-478
- Alkire, S. and Kovesdi, F. (2020). 'A Birdseye View of Well-being: Exploring a multidimensional measure for the United Kingdom', *OPHI Research in Progress 60a*, University of Oxford.
- Alkire, S. and Santos, M. (2014) 'Measuring Acute Poverty in the Developing World', *World Development*, 59(1): 251-274.
- Brück, T. and Kebede, S. (2013) 'Dynamics and Drivers of Consumption and Multidimensional Poverty: Evidence from Rural Ethiopia', *IZA Discussion Paper No. 7364*. Available from SSRN.
- Evans, M. Nogales, R. and Robson, M. (2020). 'Monetary and multidimensional poverty: Correlations, mismatches, and joint distributions', *OPHI Working Paper 133*, University of Oxford.
- Glassman, B. (2019) 'Multidimensional Deprivation in the United States: 2017', *US Census Bureau Report ACS-40*.
- Wang, X., Feng, H., Xia, Q., and Alkire, S. (2016). 'On the relationship between Income Poverty and Multidimensional Poverty in China'. *OPHI Working Paper 101*, University of Oxford.

