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Living conditions and well-being: Evidence from African countries

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Living conditions and well-being

Evidence from African countries

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Abstract: We here use five rounds of Afrobarometer data covering more than 100,000 individuals over the 2004-2016 period to explore the link between self-assessed measures of living conditions and objective measures of individual well-being (access to basic needs). These latter are picked up by various indices of deprivation, satisfaction and inequality. We find some evidence of comparisons to those who are better off and to those who are worse off, in terms of access to basic needs, in the evaluation of current living conditions. Overall, however, subjective well-being is mostly absolute in African countries. There is notable heterogeneity by level of development, with the effect of lack of access to basic needs being more pronounced in poorer countries. Equally, comparisons to the better-off are associated with better living conditions in poorer countries, suggesting the existing of a tunnel effect: this latter disappears with economic development.

Keywords: Living conditions, multidimensional poverty, well-being, Afrobarometer
JEL Classification Codes: I31, I32, D60

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All tables and figures are located at the end of the paper. All are authors' own calculations based on the Afrobarometer Waves 2 through 6.

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1 Introduction

Many pages have been written on Africa, the conditions of poverty in which a considerable proportion of its inhabitants live and the low levels of human development in the majority of the continents' countries over the years. However, Africa has also more recently been characterized as a very dynamic continent, making significant progress in many areas since the mid-1990s: from that date it has either been the world's fastest-growing continent or the second-fastest after South Asia, and is expected to be the leader in inclusive growth. Over the same period there has been growth in the middle-class, and the proportion of individuals living in poverty has dropped notably from 56 per cent in 1990 to 43 per cent in 2012 according to World Bank figures (Beegle *et al.*, 2016). In 2012, as compared to 1995, Beegle *et al.* (2016) note that adult literacy rates have risen by four percentage points and the gender gap has shrunk, new-borns can expect to live six years longer, and the prevalence of chronic malnutrition among the under-fives is down six percentage points at 39 per cent. These rapid changes are likely to have influenced the individual's views of their current and expected future living conditions: in Africa the great majority of respondents in a number of Afrobarometer surveys are optimistic with respect to their future prospects (as already documented by Graham and Hoover, 2007, and others).

This paper aims to add a different perspective to this literature. Our interest here lies in the understanding of the role of objectively-measured individual well-being in explaining current subjective self-assessed living conditions. In particular, we aim to disentangle the role played in this relation by group membership and comparisons to others, in a way that we will set out in detail below. For the measurement of objective well-being we take the individual contribution to the societal indices proposed in the income-distribution literature to capture multidimensional poverty, relative deprivation and satisfaction. We use the term 'objective well-being' here as these theoretically-based indices are calculated using individuals' objective characteristics. Individuals' current living conditions are, on the contrary, self-assessed in the Afrobarometer surveys.

There has been an upsurge of interest in subjective measures of well-being, as complements to the traditional income- or resource-based objective measures. For data reasons, this analysis has typically concentrated on OECD countries. However, more recent work has extended these analyses to developing countries. Some examples here are Akay and Martinsson (2011), Bookwater and Dalenberg (2010), Lentz (2007), the contributions in Clark and Senik (2014), and the chapters in the recent World Happiness Reports that describe the analysis of Gallup well-being data covering all of the countries in the world. We will here contribute to this literature using data that cover a majority of the countries in Africa, over a number of different years.

The remainder of the paper is organized as follows. Section 2 proposes a brief review of the indices of well-being to which we appeal. Section 3 then describes the data we use, the measurement of subjective living conditions and the objective indices, and our regression results. Last, Section 4 concludes.

2 Measuring well-being

We consider different measures of well-being in a non-income framework. There are two reasons behind this choice: first, income is not measured in our dataset; second, even if it were, given the characteristics of African economies, income may not be the best approximation of individual well-being. We rely upon the information available in the survey on lived experiences of poverty.

In each round individuals are asked the following questions: '*Over the past year, how often, if ever have you or your family gone without _____?*' The interviewer asks this question for each of the five following basic necessities: '*Enough food to eat*', '*Enough clean water for home use*', '*Medicines or medical treatment*', '*Enough fuel to cook your food*' and '*A cash income*'. The possible answers to this question are: 0 = Never, 1 =Just once or twice, 2 = Several times, 3 = Many times, and 4 = Always. We first construct an indicator of functioning failure for each individual as the sum of the scores in the above five basic domains of a decent life. This indicator thus takes on values between 0, for individuals who are never deprived in any of the domains, and 20, for individuals who are always deprived in all domains. See Shenga (2010) for an alternative approach using the same dataset, recoding the responses so that 0 refers to Never or Just once or twice, and 1 to Several times, Many times or Always.

Let $\boldsymbol{N}$ denote the set of all positive integers and $\mathbf{R}$ ($\mathbf{R}_+$) the set of all (all non-negative) real numbers. The distinct levels of functioning failures are collected in a vector $(q_1,...,q_k)$ where $k \in \boldsymbol{N} \setminus \{1\}$. Let π_j indicate the population share of individuals who have the same q_j level of functioning failures. The distribution is $(\pi,q) \equiv (\pi_1,...,\pi_k;q_1,...,q_k)$, $q_i \neq q_j$ for all $i,j \in \{1,...,k\}$. Let Ω be the space of all distributions. Define $\bar{q}$ as the illfare-ranked permutation of the vector q, so that $\bar{q}_1 \leq \bar{q}_2 \leq ... \leq \bar{q}_k$. In the second step, we calculate well-being indices over these distributions, which we describe below.

The first measure we use in the analysis of individual well-being is the traditional indicator of individual multidimensional poverty given by the number of functioning failures, q_i (Alkire and Foster, 2011, Bossert *et al.*, 2013). Here, the higher the value of q_i, the more deprived is the individual. As noted above, in the Afrobarometer this variable ranges from zero, corresponding to the situation of no deprivation (no functioning failures), to 20, the maximum possible value referring to individuals who are always deprived in all dimensions.

The second group of measures aims to capture the feeling of deprivation and satisfaction that an individual experiences from comparisons to others. Yitzhaki (1979) was the first to introduce the measurement of income deprivation in the Economics literature. Re-written in terms of functioning failures, the index of individual deprivation, a function $D_i: \Omega \to \mathbb{R}_+$, is given by:

$$D_i(\pi,q) = \sum_{j=1}^{i-1}(\bar{q}_i - \bar{q}_j)\pi_j \qquad (1)$$

for all $(\pi,q) \in \Omega$. The deprivation from which individual i suffers here is defined as the sum of all functioning failure differentials with respect to individuals who are less deprived in the society under consideration (i.e. who have fewer functioning failures). Analogously, we can measure the complement to deprivation, satisfaction $S_i: \Omega \to \mathbb{R}_+$, as:

$$S_i(\pi,q) = \sum_{j=i+1}^{k}(\bar{q}_j - \bar{q}_i)\pi_j \qquad (2)$$

for all $(\pi,q) \in \Omega$. This reflects the sum of the functioning failure differentials with respect to individuals who are more deprived than individual i.

The feelings of deprivation to those above may be mediated by a factor capturing group identification. Generalizing the index introduced above in expression (1), Bossert *et al.* (2007) propose that in the evaluation of deprivation individuals identify with those with the same level of deprivation, and with those who are worse off; they do not identify only with the better-off. This

identification mediates deprivation: comparisons to those who are better-off matter less for individuals who have a larger identification group (i.e. for whom the percentage of the population that is better-off is smaller).

The index of deprivation proposed by Bossert *et al.* (2007) in this framework is the product of the two terms related to deprivation discussed above. The first of these is the percentage of the population who are better-off than *i* in terms of functioning failures (i.e. the percentage with fewer functioning failures). As this rises, individual *i*'s capacity to identify with other members of society falls – this is the lack of identification. The second term is the average of the differences between q_i and the functioning failures of all agents having fewer functioning failures than *i*. This element, which corresponds to the expression D_i in (1), captures the aggregate deprivation experienced by *i* with respect to those who are better off. Formally, the index is defined as:

$$ED_i(\pi, q) = \left(\sum_{l=1}^{i-1} \pi_l\right) \sum_{j=1}^{i-1} (\bar{q}_i - \bar{q}_j)\pi_j$$

for all $(\pi, q) \in \Omega$.

In a similar way, we can define an index of satisfaction obtained as the product of two terms. The first term is the percentage of the population who is worse-off than *i* in terms of functioning failures (i.e. the percentage who have more functioning failures), this is the lack of identification in case of satisfaction. The second term is the average of the differences between q_i and the functioning failures of all agents having more functioning failures than *i*. This part, which corresponds to the expression S_i in (2), captures the aggregate satisfaction experienced by *i* with respect to those who are worse off. Formally, the index is defined as:

$$ES_i(\pi, q) = \left(\sum_{l=i+1}^{k} \pi_l\right) \sum_{j=i+1}^{k} (\bar{q}_j - \bar{q}_i)\pi_j$$

for all $(\pi, q) \in \Omega$.

The third type of measure we consider here aims to capture the individual sentiment due to comparisons to others who do not share the exact level of functioning failure, without any further distinction. If we sum the two indices of deprivation and satisfaction at the individual level, we obtain the measure of individual alienation, $A_i: \Omega \to \mathbf{R}_+$, defined as:

$$A_i(\pi, q) = \sum_{j=1}^{k} |\bar{q}_i - \bar{q}_j| \pi_j.$$

While deprivation and satisfaction are asymmetric measures based on comparisons only to those who are better off or worse off respectively, alienation is assumed to be experienced with respect to everybody. Davies (2016), interpreting the Gini coefficient, highlights that the individual sum of income differences with respect to everyone else, which corresponds to the alienation measure introduced above, A_i, is the basis for an individual inequality index. The (absolute) Gini coefficient can be interpreted as the average across the population of this index. Davies also shows that this personal inequality index can be further decomposed into two components corresponding to the relative deprivation and satisfaction measures introduced above, D_i and S_i.

The sentiment of alienation can also be mediated by a factor which captures group identification with the idea now that each difference weighs more if the level of functioning failure of the individual under analysis is more common. One of the motivations behind the introduction of this measure is to better capture societal conflict (see Esteban and Ray, 1999). For this reason, the larger the relative size of the group the louder their voice may be when it comes to protesting against others. The index of income polarization is due to Esteban and Ray (1994). Polarization considers the clustering of individuals in different parts of the distribution, particularly at the extremes. The individual measure of polarization considered in the analysis is that of effective antagonism introduced by Esteban and Ray (1994), the function $EA_i: \Omega \rightarrow \mathbf{R}_+$, which, re-written in terms of functioning failures, is:

$$EA_i(\pi, q) = \pi_i \sum_{j=1}^{k} |\bar{q}_i - \bar{q}_j| \pi_j$$

for all $(\pi, q) \in \Omega$. This index has been shown to capture societal conflict (Esteban and Ray, 1999).

We will below apply all of these measures to data on functioning failures from five waves of the Afrobarometer to explore their relation with well-being, as measured by both current self-assessed living conditions.

3 Data, methods and results

Our empirical analysis of the relationship between the objective indices of well-being in the previous section and individuals' subjective evaluations of their living conditions is carried out using data from the Afrobarometer. This is a pan-African survey on public attitudes towards democracy, governance, economic conditions and related issues (see www.afrobarometer.org). Six rounds of data are currently available, but due to differences in questions and coding between the first and subsequent rounds our analysis is based on Waves 2 through 6. The number of countries in the survey has increased over time, with the current survey representing 76 per cent of the African population in 37 different survey countries. Our first analysis year is 2004, using the data from Wave 2, covering 16 countries. The other four years are 2005, 2008, 2011–2013 and 2016 (Waves 3 through 6), covering respectively 18, 20, 34 and 36 countries. The dataset is cross-sectional, with the sample size per country per round ranging from 1200 to 2400. The sample details appear in Appendix Table A1.

Our dependent variable is self-assessed current living conditions, which we will denote for individual *i* in year *t*, as wb_{it}. Respondents, who were between the ages of 18 and 90, were asked to answer the following question: *'In general, how would you describe your own present living conditions?'*. The possible answers were [1] Very Bad, [2] Fairly Bad, [3] Not Good or Bad, [4] Fairly Good and [5] Very Good.

Our regression analyses control for age, age-squared, gender, living in an urban or rural area, the highest level of education achieved (with three levels: at most primary, at most secondary, and at least post-secondary) and labour-force status (unemployed - not looking for a job, unemployed - looking for a job, employed part-time, and employed full-time). All regressions include wave and country dummies, although their associated coefficients are not reported for space reasons.

In order to take into account potential heterogeneity, the analysis is first carried out for the entire population, and then separately by gender, age and area of residence. We will also split the entire group of Afrobarometer countries up into three groups by level of economic development.

The descriptive statistics for our main sample appear in Table 1, and Figure 1 shows the histogram of the dependent variable. The distribution of current living conditions is bimodal, with two peaks of unequal height at fairly bad (the mode) and fairly good; the mean on the one to five scale is 2.65. The majority of the sample are of working age, do not live in urban areas and have at most achieved a level of primary education. Approximately 64 per cent of the sample are not working at the time of the survey, while 24 per cent have a full-time job.

The general model we estimate takes the form:

$$wb_{it} = \beta_1 M_{it} + \beta_2 X_{it} + \alpha_c + \lambda_t + \epsilon_{it} \quad (2)$$

where M_{it} refers to one of the objective well-being measures discussed in Section 2 above. For the indices where a comparison group has to be specified, we impose that this group consists of individuals living in the same region in the given country. X_{it} is a vector of individual control variables (age, gender, urban, education, and labour-force status), while α_c and λ_t are respectively the country and wave fixed effects. The results we present are based on linear estimations. The use of non-linear models such as ordered probit or ordered logit does not change them. We standardize both the dependent variable and all of the objective measures of deprivation, so that the estimated coefficients are β's, representing the effect of a one-standard deviation change in the objective measure on the standard deviation of the dependent variable.

3.1 Main results

The control variables attract the following coefficients (see Appendix Table A1). As in the subjective well-being literature, the relationship between age and current living conditions is U-shaped, with the minimum level at around age 50. Women have a more positive evaluation of their current living conditions, while those living in urban areas report worse living conditions. With respect to labour-force status, we find a negative estimated coefficient for unemployed who are looking for a job and employed part-time compared to individuals who are unemployed but are not looking for a job, our reference category. Education is very strongly correlated with current living conditions, which is to be expected if it is acting as a proxy for income.

Table 2 shows the estimated coefficients on our key objective well-being variable (which also appear at the head of Appendix Table A1). There are five specifications, referring first to the number of functioning failures alone, and then adding deprivation and satisfaction introduced together, both unweighted and weighted. The last two specifications consider the role of unweighted and weighted alienation, in which, as opposed to deprivation and satisfaction, the differences to better and worse off individuals are treated symmetrically.

Functioning failures reduce the evaluation of current living standards, as expected: the more objectively deprived the individual is, the lower the evaluations of current life. The effect size is large here: a one-standard deviation rise in the index in question reduces the evaluation of current living conditions by around one third of a standard deviation (that is, by around 0.3 on the 1-5 scale, or just under ten per cent of the scale range).

When relative comparisons are introduced in the form of deprivation and satisfaction, these both attract a positive and significant coefficient (with the coefficient on deprivation being twice as large as that on satisfaction). While this result is to be expected for satisfaction, the positive effect of

comparisons to the better off, as measured by D_i, is usually only found in volatile socio-economic environments, for example in the earlier stage of economic development, which can be argued to apply to many of the African countries in our sample. This positive effect of others' good fortune on the individual's own evaluation of their life is known in the literature as the 'tunnel effect' of Hirshman (1973): the presence of better-off individuals here does not produce the sentiment of relative deprivation due to social comparisons, but rather a positive signal that the individual may improve their own situation in the future (see Senik, 2004, for a similar result for Russia during the 1990s; and Grosfeld and Senik, 2010, for the analysis of attitudes to inequality in a growing country, Poland).

Finding that all of functioning failures, deprivation and satisfaction matter underlines the both absolute and relative nature of the evaluation of current standard of living, a point which has been found repeatedly in the poverty and subjective well-being literatures in richer countries. However, while we do find significant estimates for satisfaction and deprivation here, it should be underlined that these are small relative to the coefficient on the number of functioning failures: the link between objective well-being and subjective evaluations in Africa is mostly absolute rather than relative. This conclusion is reinforced by the adjusted R^2 figures at the foot of each column. Introducing relative concerns into the analysis of subjective living conditions does not add much in terms of explanatory power.

The same result is found for the weighted versions of deprivation and satisfaction, although the coefficient on the latter is now very much smaller than that on weighted satisfaction. We are not aware of any other work that has used the weighted versions of deprivation and satisfaction, and so cannot compare our results here to those using other data. Overall, the interpretation in terms of the tunnel effect continues to be a potential explanation. We will expand on this when we carry out the analysis separately for groups of countries at different stages of economic development in Table 3 below. Alienation in both its versions, in the last two columns of Table 2, attracts a positive and significant coefficient, indicating that the greater the differences are among individuals, the better the evaluation of current living conditions.

We expand on the overall analysis in Table 2 by splitting up the sample into three equally-sized groups based on country GDP per capita at 2016 prices (the results here are robust to experimenting with different numbers of groups). The descriptive statistics for the three country groups appear in Appendix Tables A2–A4. As countries develop, the average number of functioning failures falls, being respectively 4.43, 6.60 and 7.59 in groups A, B and C (where the richest African countries are in group A and the countries with the lowest GDP per capita in group C).

The regression results for the three country groups appear in Table 3. In group A, the tunnel effect as captured by the coefficient on D_i disappears, while it persists for the less well-off countries in groups B and C. The results also differ between the country groups for the weighted versions of the indices, not in terms of the sign or significance of the coefficients but regarding their relative size: in groups B and C the estimated coefficient on weighted deprivation is at least three times as large as that on weighted satisfaction; in group A these two are of equal size. As such for the weighted version of deprivation, it is again individuals in less-developed countries who interpret relatively better-off others as a stronger indicator of a better future. The identification with those with the same level or more of functioning failures, which is the difference between unweighted and weighted deprivation, helps to retain an information role from comparisons to the better off in richer countries. As countries develop, not only does the average number of functioning failures fall, but also attitudes towards the distribution of basic needs change. With the traditional unweighted indicators of deprivation and satisfaction, economic development switches the result of comparisons to the better-off from having a positive informational effect on current living

conditions to having no effect. We expect that with Africa's continuing economic development over the coming years, deprivation will turn to having a negative and significant effect on the evaluation of the current living conditions: this is the standard result for deprivation and measures of subjective well-being in OECD countries (see Clark and D'Ambrosio, 2015, for a survey).

Continuing with the other well-being measures in the last two columns of Table 3, the coefficient on alienation differs less by country group. It is always positive, but is smallest for the richer countries in group A (which is consistent with deprivation not having a positive correlation with living conditions in that group). Weighted alienation has a negative and significant correlation in group C, the least developed: individual inequality has a positive relationship with the evaluation of current living conditions (A_i) which becomes negative when interacted with identification with people in the same group, (EA_i). Our results suggest that conflict is harmful for the individual evaluation of living conditions only in the least-developed countries.

One way of formalizing the different correlations by the level of country development is to carry out the analysis in column 2 of Table 2 separately for each country in the Afrobarometer sample. We can then correlate the estimated coefficients on the number of functioning failures, deprivation and satisfaction with the country's development level (measured either by GDP per capita, or by the country-level number of functioning failures). The results suggest that more-developed countries (either with higher GDP per capita or fewer functioning failures) have somewhat lower estimated coefficients on functioning failures (q_i) and deprivation (D_i), but higher estimated coefficients on satisfaction (S_i).

The count of functioning failures, q_i, is a composite measure of five basic domains of a decent life: food, water, medical care, cooking fuel and cash income. In Table 4 we explore the effects of each domain separately on the evaluation of current living conditions. Since the results do not vary by country group we here show only the regression for the entire sample (the only difference is for cooking fuel which is insignificant in group B when all domains are considered simultaneously). We first introduce each domain one by one, and then consider all domains together. The type of deprivation that matters the most to individuals in terms of their living conditions is having enough food to eat, followed by cash income, medical care, cooking fuel and water. When all five dimensions are considered simultaneously in the last column, the estimated coefficient on clean water becomes insignificant. The ranking of the five domains is the same when they are considered separately as when they are entered simultaneously.

3.2 Heterogeneity by gender, age and urban/rural status

Women and those over age 40 have larger negative coefficients in terms of the absolute value of the coefficient on functioning failures. When relative considerations are included in the analysis, we do not find any differences for both deprivation measures, while for women only the satisfaction effects of being less deprived than others are smaller. A similar picture holds for the weighted deprivation and satisfaction measures by gender. There is notably more heterogeneity by age group: the positive effects of both weighted deprivation and satisfaction are significantly larger for those over age 40. Similarly the estimated coefficient on the weighted version of alienation indicates that those over age 40 are more sensitive to societal conflict.

The most interesting results, which arguably shed more light on the information content of comparisons to better-off individuals, come from the sample split between urban and rural residents. In the urban sample the positive effect of unweighted deprivation is considerably smaller (at 0.055-0.039), but remains significantly different from zero at the 10 per cent level. The information content of seeing others who are better off continues to hold for weighted

deprivation, when deprivation is interacted with identification. We now observe an increase in the effect of weighted satisfaction for urban residents, which is now closer to the size of the effect of weighted deprivation. There are no differences between rural and urban residents regarding unweighted alienation, while when interacted with identification, the rural sample is more affected by societal conflict.

4 Conclusion

We have here used various indices that have been introduced in the literature on the measurement of inequality to explore the relationship between objectively measured well-being and individuals' subjective evaluations of their current living conditions. Our results show that a greater number of functioning failures in five basic domains of individual life reduce the subjective evaluations of living conditions. Individuals do compare to others, but the effect depends on both the country level of development and the particular index: comparisons to those who are worse off (in terms of functioning failures) produce higher evaluations of living conditions, while comparisons to individuals who are better off also produce higher evaluations in less-developed countries and in rural areas. This latter result is consistent with a tunnel effect that is more predominant for poorer respondents, whereby others' good fortune is taken to be an indicator of the individual's own future prospects. The sign of the estimated coefficient on weighted alienation, which is a measure of societal conflict, is also of interest: this is negative only for the least-developed group of countries.

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Figure 1: Distribution of Present Living Conditions

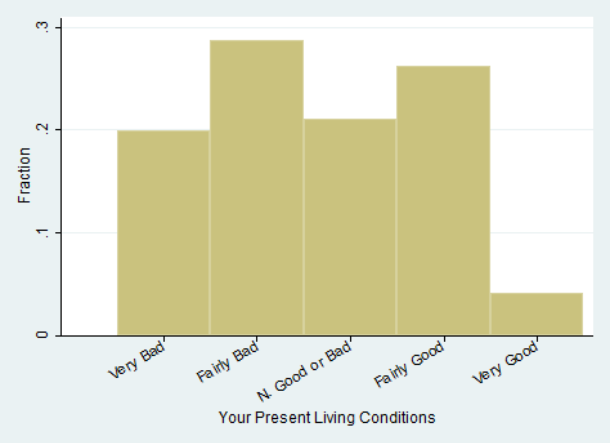

Table 1: Descriptive Statistics – Whole Sample

	Observations	Mean	SD	Min	Max
Dependent Variables:					
Present Living Conditions [1-5]	171619	2.65	1.18	1	5
Deprivation Measures:					
q_i	171619	6.22	4.70	0	20
D_i	171619	2.18	2.42	0	18.71
S_i	171619	2.21	1.95	0	13.49
A_i	171619	4.42	1.82	0	18.71
EA_i	171619	0.41	0.30	0	2.77
ED_i	171619	1.39	1.89	0	13.10
ES_i	171619	2.29	2.20	0	13.70
Socio-Demographics:					
Age	171619	37.38	14.32	19	89
Gender	171619	0.50	0.50	0	1
Urban	171619	0.40	0.50	0	1
Highest Education Level Achieved:					
At Most Primary	171619	0.52	0.50	0	1
At Most Secondary	171619	0.35	0.48	0	1
At Least Post-Secondary	171619	0.13	0.34	0	1
Labour-Force Status:					
Unemployed (Not looking for a job)	171619	0.36	0.48	0	1
Unemployed (Looking for a job)	171619	0.28	0.45	0	1
Part-time	171619	0.13	0.34	0	1
Full-time	171619	0.24	0.43	0	1

Table 2: Living Conditions and Well-Being Measures – OLS results

Present Living Conditions	(1)	(2)	(3)	(4)	(5)
No. functioning failures (q_i)	-0.291***	-0.322***	-0.348***	-0.304***	-0.282***
	(0.002)	(0.007)	(0.005)	(0.003)	(0.003)
Deprivation (D_i)		0.054***			
		(0.005)			
Satisfaction (S_i)		0.026***			
		(0.004)			
Weighted Deprivation (ED_i)			0.066***		
			(0.005)		
Weighted Satisfaction (ES_i)			0.008**		
			(0.003)		
Alienation (A_i)				0.032***	
				(0.003)	
Weighted Alienation (EA_i)					0.024***
					(0.003)
Observations	171619	171619	171619	17169	17169
Adjusted R^2	0.157	0.158	0.158	0.158	0.158

Notes: Standard errors are in parentheses. The dependent variable and deprivation indices are standardised. The controls include gender, labour-force status, living in an urban or rural area, educational, country and wave dummies. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 3: Living Conditions and Well-Being Measures – OLS results – Groups of Countries

Panel A: Present Living Conditions	(1)	(2)	(3)	(4)	(5)
No. functioning failures (q_i)	-0.313***	-0.292***	-0.329***	-0.335***	-0.290***
	(0.004)	(0.013)	(0.010)	(0.006)	(0.005)
Deprivation (D_i)		0.011			
		(0.010)			
Satisfaction (S_i)		0.046***			
		(0.007)			
Weighted Deprivation (ED_i)			0.034***		
			(0.010)		
Weighted Satisfaction (ES_i)			0.031***		
			(0.007)		
Alienation (A_i)				0.029***	
				(0.005)	
Weighted Alienation (EA_i)					0.033***
					(0.003)
Observations	56451	56451	56451	56451	56451
Adjusted R^2	0.168	0.169	0.169	0.169	0.170
Panel B: Present Living Conditions	(1)	(2)	(3)	(4)	(5)
No. functioning failures (q_i)	-0.289***	-0.330***	-0.345***	-0.306***	-0.285***
	(0.004)	(0.013)	(0.010)	(0.005)	(0.005)
Deprivation (D_i)		0.087***			
		(0.010)			
Satisfaction (S_i)		0.045***			
		(0.007)			
Weighted Deprivation (ED_i)			0.075***		
			(0.008)		
Weighted Satisfaction (ES_i)			0.019**		
			(0.006)		
Alienation (A_i)				0.052***	
				(0.004)	
Weighted Alienation (EA_i)					0.013**
					(0.006)
Observations	57953	57953	57953	57953	57953
Adjusted R^2	0.138	0.140	0.139	0.140	0.138
Panel C: Present Living Conditions	(1)	(2)	(3)	(4)	(5)
No. functioning failures (q_i)	-0.268***	-0.305***	-0.320***	-0.276***	-0.274***
	(0.004)	(0.012)	(0.009)	(0.004)	(0.004)
Deprivation (D_i)		0.069***			
		(0.009)			
Satisfaction (S_i)		0.026***			
		(0.007)			
Weighted Deprivation (ED_i)			0.070***		
			(0.007)		
Weighted Satisfaction (ES_i)			0.015**		
			(0.005)		
Alienation (A_i)				0.036***	
				(0.004)	
Weighted Alienation (EA_i)					-0.033***
					(0.007)
Observations	57215	57215	57215	57125	57125
Adjusted R^2	0.130	0.131	0.132	0.131	0.131

Notes: Standard errors are in parentheses. The dependent variables and deprivation indices are standardised. The controls include gender, labour-force status, living in an urban or rural area, educational, country and wave dummies. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 4: Living Conditions and Well-Being Measures – OLS results

Present Living Conditions	(1)	(2)	(3)	(4)	(5)	(6)
Food	-0.201***					-0.118***
	(0.002)					(0.002)
Water		-0.093***				0.000
		(0.002)				(0.002)
Medical Care			-0.152***			-0.046***
			(0.002)			(0.002)
Cooking Fuel				-0.126***		-0.018***
				(0.002)		(0.002)
Cash					-0.185***	-0.114***
					(0.002)	(0.002)
Observations	171619	171619	171619	171619	171619	171619
Adjusted R^2	0.096	0.055	0.075	0.061	0.099	0.124

Notes: Standard errors are in parentheses. The dependent variable and deprivation indices are standardised. The controls include gender, labour-force status, living in an urban or rural area, educational, country and wave dummies. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 5: Living Conditions and Well-Being Measures – OLS results – Gender Heterogeneity

Present Living Conditions	(1)	(2)	(3)	(4)	(5)
q_i	-0.272***	-0.260***	-0.297***	-0.292***	-0.260***
	(0.003)	(0.007)	(0.006)	(0.004)	(0.004)
qi x Female	-0.013**	-0.026**	-0.017**	-0.010**	-0.013***
	(0.005)	(0.009)	(0.008)	(0.005)	(0.005)
D_i		0.038***			
		(0.007)			
D_i x Female		0.002			
		(0.009)			
S_i		0.063***			
		(0.005)			
S_i x Female		-0.015*			
		(0.006)			
ED_i			0.057***		
			(0.006)		
ED_i x Female			-0.005		
			(0.009)		
ES_i			0.041***		
			(0.004)		
ES_i x Female			-0.014**		
			(0.006)		
A_i				0.047***	
				(0.004)	
A_i x Female				-0.008	
				(0.005)	
EA_i					0.031***
					(0.004)
EA_i x Female					-0.000
					(0.005)
Observations	171619	171619	171619	17619	17619
Adjusted R^2	0.110	0.112	0.111	0.112	0.111

Notes: Standard errors are in parentheses. The dependent variable and deprivation indices are standardised. The controls include gender, labour-force status, living in an urban or rural area, educational, country and wave dummies. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 6: Living Conditions and Well-Being Measures – OLS results – Age Heterogeneity

Present Living Conditions	(1)	(2)	(3)	(4)	(5)
q_i	-0.269***	-0.264***	-0.291***	-0.285***	-0.261***
	(0.003)	(0.006)	(0.005)	(0.003)	(0.003)
q_i x 40+	-0.024***	-0.022*	-0.038***	-0.032***	-0.013***
	(0.005)	(0.010)	(0.008)	(0.005)	(0.005)
D_i		0.039***			
		(0.006)			
D_i x 40+		0.003			
		(0.009)			
S_i		0.052***			
		(0.004)			
S_i x 40+		0.012			
		(0.007)			
ED_i			0.048***		
			(0.006)		
ED_i x 40+			0.020**		
			(0.009)		
ES_i			0.031***		
			(0.004)		
ES_i x 40+			0.012**		
			(0.006)		
A_i				0.041***	
				(0.003)	
A_i x 40+				0.007	
				(0.005)	
EA_i					0.021***
					(0.003)
EA_i x 40+					0.026***
					(0.005)
Observations	171619	171619	171619	17619	17619
Adjusted R^2	0.110	0.112	0.111	0.112	0.111

Notes: Standard errors are in parentheses. The dependent variable and deprivation indices are standardised. The controls include gender, labour-force status, living in an urban or rural area, educational, country and wave dummies. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 7: Living Conditions and Well-Being Measures – OLS results – Urban Heterogeneity

Present Living Conditions	(1)	(2)	(3)	(4)	(5)
q_i	-0.266***	-0.275***	-0.299***	-0.289***	-0.260***
	(0.003)	(0.006)	(0.005)	(0.003)	(0.003)
q_i x Urban	-0.032***	0.004	-0.014	-0.034***	-0.018***
	(0.005)	(0.010)	(0.009)	(0.005)	(0.005)
D_i		0.055***			
		(0.006)			
D_i x Urban		-0.039***			
		(0.010)			
S_i		0.053***			
		(0.004)			
S_i x Urban		0.007			
		(0.006)			
ED_i			0.059***		
			(0.005)		
ED_i x Urban			-0.016		
			(0.009)		
ES_i			0.029***		
			(0.004)		
ES_i x Urban			0.015***		
			(0.006)		
A_i				0.045***	
				(0.003)	
A_i x Urban				-0.004	
				(0.005)	
EA_i					0.022***
					(0.004)
EA_i x Urban					0.013**
					(0.005)
Observations	171619	171619	171619	171619	171619
Adjusted R^2	0.110	0.112	0.111	0.111	0.112

Notes: Standard errors are in parentheses. The dependent variable and deprivation indices are standardised. The controls include gender, labour-force status, living in an urban or rural area, educational, country and wave dummies. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Appendix

Table A1: Living Conditions and Well-Being Measures – OLS results

Present Living Conditions	(1)	(2)	(3)	(4)	(5)
No. functioning failures (q_i)	-0.291***	-0.322***	-0.348***	-0.304***	-0.282***
	(0.002)	(0.007)	(0.005)	(0.003)	(0.003)
Deprivation (D_i)		0.054***			
		(0.005)			
Satisfaction (S_i)		0.026***			
		(0.004)			
Weighted Deprivation (ED_i)			0.066***		
			(0.005)		
Weighted Satisfaction (ES_i)			0.008**		
			(0.003)		
Alienation (A_i)				0.032***	
				(0.003)	
Weighted Alienation (EA_i)					0.025***
					(0.003)
Age	-0.017***	-0.017***	-0.017***	-0.017***	-0.017***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$Age^2/100$	0.016***	0.015***	0.015***	0.015***	0.015***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Female	0.015***	0.015***	0.015***	0.015***	0.015***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Unemployed (looking for a job)	-0.115***	-0.115***	-0.114***	-0.115***	-0.114***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Part-time	-0.033***	-0.033***	-0.033***	-0.033***	-0.032***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Full-time	0.006	0.005	0.005	0.005	0.006
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Urban	-0.020***	-0.025***	-0.027***	-0.023***	-0.020***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
At most Secondary Education	0.045***	0.045***	0.044***	0.045***	0.045***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
At least Post-Secondary Education	0.169***	0.167***	0.166***	0.167***	0.166***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Observations	171619	171619	171619	171619	171619
Adjusted R^2	0.157	0.158	0.158	0.158	0.158

Note: Wave and country dummy estimates are not shown.

Table A2: Descriptive Statistics – Group A

	Observations	Mean	SD	Min	Max
Dependent Variables:					
Present Living Conditions [1-5]	56451	2.87	1.14	1	5
Deprivation Measures:					
q_i	56451	4.43	4.49	0	20
D_i	56451	2.03	2.61	0	18.71
S_i	56451	2.09	1.72	0	12.06
A_i	56451	4.12	2.01	0	18.71
EA_i	56451	0.52	0.42	0	2.77
ED_i	56451	1.24	1.75	0	12.22
ES_i	56451	1.64	1.67	0	11.79
Socio-Demographics:					
Age	56451	37.49	14.77	19	89
Gender	56451	0.50	0.50	0	1
Urban	56451	0.52	0.50	0	1
Highest Education Level Achieved:					
Primary	56451	0.38	0.48	0	1
Secondary	56451	0.42	0.49	0	1
Post-Secondary	56451	0.20	0.40	0	1
Labour-Force Status:					
Unemployed (not looking for a job)	56451	0.30	0.46	0	1
Unemployed (Looking for a job)	56451	0.28	0.45	0	1
Part-time	56451	0.12	0.33	0	1
Full-time	56451	0.29	0.46	0	1

Note: The countries in group A are: Algeria, Botswana, Cape Verde, Egypt, Gabon, Mauritius, Morocco, Namibia, Nigeria, South Africa, Sudan, Swaziland and Tunisia.

Table A3: Descriptive Statistics – Group B

	Observations	Mean	SD	Min	Max
Dependent Variables:					
Present Living Conditions [1-5]	57953	2.48	1.16	1	5
Deprivation Measures:					
q_i	57953	6.60	4.49	0	20
D_i	57953	2.19	2.33	0	17.26
S_i	57953	2.19	1.98	0	12.95
A_i	57953	4.40	1.70	0.99	17.26
EA_i	57953	0.38	0.22	0.01	2.11
ED_i	57953	1.42	1.89	0	13.10
ES_i	57953	2.43	2.21	0	12.81
Socio-Demographics:					
Age	57953	38.17	14.65	19	89
Gender	57953	0.50	0.50	0	1
Urban	57953	0.38	0.48	0	1
Highest Education Level Achieved:					
Primary	57953	0.61	0.49	0	1
Secondary	57953	0.29	0.45	0	1
Post-Secondary	57953	0.10	0.30	0	1
Labour-Force Status:					
Unemployed (not looking for a job)	57953	0.37	0.48	0	1
Unemployed (Looking for a job)	57953	0.29	0.45	0	1
Part-time	57953	0.13	0.33	0	1
Full-time	57953	0.21	0.41	0	1

Note: The countries in group B are: Benin, Cameroon, Cote d'Ivoire, Ghana, Kenya, Lesotho, Mali, Sao Tome and Principe, Senegal, Tanzania and Zambia.

Table A4: Descriptive Statistics – Group C

	Observations	Mean	SD	Min	Max
Dependent Variables:					
Present Living Conditions [1-5]	57215	2.62	1.18	1	5
Deprivation Measures:					
q_i	57215	7.59	4.59	0	20
D_i	57215	2.33	2.34	0	16.60
S_i	57215	2.35	2.12	0	13.49
A_i	57215	4.71	1.68	1.25	16.60
EA_i	57215	0.35	0.19	0.00	2.48
ED_i	57215	1.52	2.00	0	12.74
ES_i	57215	2.79	2.47	0	13.70
Socio-Demographics:					
Age	57215	37.00	13.76	19	89
Gender	57215	0.50	0.50	0	1
Urban	57215	0.28	0.45	0	1
Highest Education Level Achieved:					
Primary	57215	0.61	0.49	0	1
Secondary	57215	0.31	0.46	0	1
Post-Secondary	57215	0.09	0.28	0	1
Labour-Force Status:					
Unemployed (not looking for a job)	57215	0.45	0.50	0	1
Unemployed (Looking for a job)	57215	0.27	0.44	0	1
Part-time	57215	0.11	0.31	0	1
Full-time	57215	0.17	0.38	0	1

Note: The countries in group C are: Burkina Faso, Burundi, Guinea, Liberia, Madagascar, Malawi, Mozambique, Niger, Sierra Leone, Togo, Uganda and Zimbabwe.