

Positionality in Uganda

A minor field study on relative concerns amongst the poor

Bachelor thesis
Department of Economics
Gothenburgs University
Supervisor: Olof Johansson-Stenman

Georg Treuter

August 30, 2012

Abstract

This study uses a survey experimental approach in order to quantify concerns for relative position in rural and urban Uganda along the dimensions of income, education and weddings. Positionality was found to be overall low. Income and education are more positional among urban dwellers and weddings were on average twice as positional as income and education. The rural-urban differences are found to be partly due to differences in wealth.

Contents

1	Introduction	1
2	Previous work	1
3	Modeling positionality	3
4	Data collection	4
5	The survey experiment	5
6	Descriptive results	7
7	Degree of positionality	9
8	Econometric analysis	10
9	Discussion	15
10	Concluding remarks	16
A	Questionnaire	21
A.1	Background questions	21
A.2	Scenarios	22
A.2.1	Income	22
A.2.2	Education	22
A.2.3	Wedding	23
A.2.4	Example	24
B	Robustness	25
B.1	Degree of positionality	25
B.2	Econometric analysis	25

1 Introduction

People are largely influenced by other people in almost every aspect of their lives. Others influence our mental and physical state of being, and they largely influence our decision making. This study measures how strongly people in Uganda care about being ahead of others, how strongly they prefer to be in a better position relative others, how strongly they care about their status.

Positionality is the term that is used to denote concern for relative position or status. Positional actions are actions aimed at increasing or maintaining one's relative position in society and positional goods are goods that are consumed in order to increase or maintain one's relative position.

It is a common assumption that relative concerns only matter for the rich and wealthy and that poor people only care about their absolute position, since they literally "Have to get food on their plate.". However, as Banjeree and Duflo (2007) point out, even the poorest of the poor spend considerable amounts of their income on goods like alcohol, cigarettes and festivals. These are goods that very well might be positional.

In order to investigate relative concerns among the poor, I conducted a survey experiment in rural and urban Uganda that measures positionality along three dimensions: Income, education and weddings. Through this, this study aims to contribute to the answers of the following questions. How positional are people in Uganda? Are there goods that are highly positional? Is positionality higher in urban than in rural areas? What makes people or what people are more positional?

2 Previous work

The importance of relative income or consumption and status concerns for economic decision making has long not received wide attention in mainstream economics, although many classical economists realized their importance. Veblen (1899) is often cited as the first thoroughly economic analysis of peoples concern for status. In this work he analysed what he termed conspicuous consumption, the visible consumption of luxury goods in order to get or maintain status. Other early works include Duesenberry (1949), Hirschman and Rothschild (1973) and Pollak (1976).

In the field of happiness economics there has in recent years been a substantial amount of research on the relative aspects of utility. Early, it was concluded that relative comparisons are important for well-being, and the including of a relative term in the utility function helps to explain many puzzles in the empirical literature (see Clark et al. 2008 for a survey). The early seminal work, whose revival in the 1990s sparked much of the recent research interest, was Easterlin (1974). The Easterlin paradox, that rich countries are

happier compared to poorer countries, but within a rich country more income doesn't increase happiness, can easily be explained by including a relative term in the utility function.

More recent studies have examined the question of exactly how important relative income is in developed countries. Some survey studies indicated that income was completely relativistic in North America and Europe, see for example Clark and Oswald (1996). Two recent large cross-country studies are Caporale et al. (2009) and Corazzini et al. (2012), and further references are Ferrer-i-Carbonell (2005), Luttmer (2005) and McBride (2001).

Several studies have used a survey experimental¹ approach in order to quantify the importance of relative income and consumption. Solnick & Hemenway (1998, 2005) and Solnick et al. (2007) do this by asking people to choose between a positional and an unpositional alternative. Johansson-Stenman et al. (2002) refines this method by letting people make repeated choices between an unpositional and an increasingly positional alternative. This method has further been used to measure positionality in different countries and for different goods, and this is also the method used in this study.

Carlsson et al. (2007) studies a random sample of the Swedish population. Solnick & Hemenway (1998, 2005), Solnick et al. (2007), and Alpizar et al. (2005) also investigated the positional concerns over other goods than income.

Recently, positional concerns in less developed countries have received attention. Studies using happiness data include among others Kingdon and Knight (2007) in South Africa, Knight et al. (2009) and Knight and Gunatilaka (2010) for rural China, Bookwalter and Dalenberg (2009) for South Africa and Akay and Martinsson (2011) for rural Ethiopia. Charles et al. (2009) use expenditure data to study conspicuous consumption in South Africa and Brown et al. do it for rural China. Survey experiments were made by Alpizar et al. (2005) with Costa Rican students, Carlsson et al. (2007) studied Vietnamese farmers, Carlsson et al. (2008) Indian students and Akay et al. (2011) Ethiopian farmers. While poorer people in general are shown to care less about relative income (Carlsson et al. 2007, Akay et al. 2011), positionality might still be relevant and even of high importance for certain goods. However, except for Akay et al. (2011), who look at income from aid projects, there is not much research trying to directly measure positionality for a wider range of goods in less developed countries. Examples of goods that might be positional include designer labels (van Kempen 2003), funerals (Case et al. 2008), brides (Anderson 2007) and gifts (Yan 1996).

Relative concerns and the interdependent preferences that result from them have important implications for public policy and many theoretical

¹The term survey experiment is used to distinguish these experiments from other experiments, which are usually incentivised. The only experimental study on this subject known to the author is McBride (2010).

models have been proposed to assess its effects. Positionality results in an externality, and is therefore interesting for public policy. Apart from the earlier works already mentioned, insightful models and policy recommendations were developed by Frank (1985, 1999, 2005), Jaramillo and Moizeau (2003), Luttmer (2005), Moav and Neeman (2008) and Aronsson and Johansson-Stenman (2008).

3 Modeling positionality

To account for relative effects, most generally, an utility function of the following form is needed (compare Clark et al. 2008):

$$U = U(U_1(x), U_2(x|x^*), U_3(\mathbf{z})). \quad (1)$$

Here x is the amount of an arbitrary good and x^* is some reference level. $U_1(x)$ is the utility gained from the absolute value of x , $U_2(x|x^*)$ is the utility obtained from the relative value of x compared to x^* , and $U_3(\mathbf{z})$ captures other factors that might influence the utility.

Using the survey experimental method described in the next section, we can reasonably assume that $U_3(\mathbf{z})$ is the same across decision alternatives.² We can therefore assume that an individual prefers the alternative that maximizes

$$U = U(U_1(x), U_2(x|x^*)). \quad (2)$$

To carry out calculations, we have to assume a more specific functional form of U . In the literature both a multiplicative form, $U = x^{1-\gamma}(\frac{x}{x^*})^\gamma$ and an additive form, $U = (1 - \delta)x + \delta(x - x^*)$, have been used. See Alpizar et al. (2005). In both cases the parameter γ or δ can be interpreted as the degree of positionality, as it gives the weight the relative term has in the utility. Since there is no clear evidence in favor for one or the other and in order to make comparisons easier, results will be presented for both forms.

Given these functional forms (or similar ones), γ or δ can be calculated if two pairs of x and x^* are found between which the individual is indifferent. In that case we have an equation

$$U(x_A, x_A^*) = U(x_B, x_B^*) \quad (3)$$

that can be solved for γ or δ , yielding

$$\gamma = \frac{\log \frac{x_A}{x_B}}{\log \frac{x_A^*}{x_B^*}} \quad \text{and} \quad \delta = \frac{x_A - x_B}{x_A^* - x_B^*}. \quad (4)$$

The required pairs of x and x^* can be obtained by conducting the survey experiment described in section 5.

²This is still an idealization as the ceteris paribus assumption in the survey experiment is impossible to take completely seriously.

4 Data collection

The survey was conducted in two separate areas of Uganda, one rural and one urban. The rural area was the administrative village Nvubu, Kyasimbi parish, Nabigasa sub county, Kyotera county, Rakai District in central Uganda. Nvubu consists of two natural villages and the surrounding countryside. There were 114 households in Nvubu, spread over a fairly large area. To avoid potential problems with sampling every household in that village was surveyed. As aid I had a list of residents obtained by the village chairman. Since the list was from 2004, it was updated with the help of the chairman. Furthermore the village chairman introduced me to every household in the village and explained that I am a student doing research. Special mention was made of that I am not religiously or corporately affiliated and that I'm no sponsor. I asked to talk to the household head or his or her spouse.

Nvubu was chosen as a fairly normal village in central Uganda, based on socio-economic statistics provided by the Uganda Bureau of Statistics. In particular, I got access to some data collected in the Uganda National Household Survey 2009/2010. A summary of the methodology and the findings of that survey can be found in UBOS (2010). It is however not claimed that this village is representative for rural Uganda, or even only the central region or the Rakai district as a whole. This study should therefore more be considered as a case study. During the study I found out that the village differs in two significant ways from the average other village in the region: It had become the home of an unusual number of Rwandan refugees and it had a missionary hospital fairly close.³ However, it could also be argued that positionality is something that should be relatively constant across a given culture and not subject to too much noise.

The urban part of the survey was conducted in the capital city Kampala. The survey area was naturally limited by a swamp to the north and west and by a hill in the south. It consisted of the urban districts Soya, Bunga, Bunga Hill, Buziga and Buziga Hill. The area was big enough to include both low-, middle- and high-income neighbourhoods. There were about 900 households in the survey area and during the data collection we moved from west to east, asking to talk to one knowledgeable household member in every 8th household. When I could not find anyone to talk to in a certain household, I moved on to the next one. To ensure that people were at home, I tried to do most of the surveying during the late afternoon and evening and during the weekends.

Since few people in the countryside speak good enough English, the survey was conducted with the help of an interpreter native in the local language

³Sampling households from several different villages was considered, but the potential noise given the sample size, was estimated to be too large.

Luganda. As a recent bachelor graduate growing up in Kampala, he also had a good level of English. We moved from household to household together and I was always present during the interview and experiment. The same interpreter was used in Kampala and Nvubu in order to avoid an interpreter bias. However, sometimes we had to use English in Kampala resulting in a possible translation bias.

Since in questionnaires and survey experiments, framing is of high importance (see for example Tversky and Kahneman, 1981) special attention was paid to this. To minimize potential influences that might bias the results, I asked to speak to each person in a private environment without anyone listening. Furthermore, I paid strong attention to what information we gave and the phrasing of sentences. To ensure that everyone was treated in the same way, a complete script of what was to be said was used. The script was written first by me in English, then translated into Luganda by the interpreter and then checked by several other persons. I was always present during the sessions and checked that there were not any large deviations from the script. In a first attempt we followed the script closely, when the interviewee did not understand, the relevant part of the script was then read again. First when there still were problems after this, the interpreter would try to explain it in a slightly different way.

The interview and experiment took about 20 to 30 minutes with each person. Each one was first asked a set of background questions, then we did the survey experiment consisting of three scenarios: Income, education and weddings in that order. Lastly, we played a variant of a trust game.⁴ The survey experiment and its scenarios are presented in detail below.

It was not a problem to convince people to participate. Two households in Nvubu did not want to take part in the study and in Kampala about 9 of 10 households were willing to take part.

The complete questionnaire (English version), including the scenarios that were read out to everyone, can be found in the appendix. The complete dataset is available upon request.

5 The survey experiment

The main part of the questionnaire was a survey experiment consisting of three scenarios: Income, education and weddings. In each scenario the respondent had to make series of hypothetical choices that would reveal his degree of positionality.

⁴The trust game is excluded from this report, and should mainly be seen as a fun and interesting way to compensate people for their time. We did not inform participants that they would be able to earn money through this game at the start of the interview, as we felt this might bias responses. (However most people in Nvubu probably knew about this during the last days of our study.)

A few things should be said about the choice of scenarios and their construction. Before the main survey was conducted I did a series of open interviews and tried out the phrasing of questions in a pilot study, conducted in the Hoima district, Kampala and Kyotera. This led to major modifications of how the survey experiment was constructed.

The interviews were mainly aimed at determining what goods might be positional and what peoples reference groups are. While there are several things that obviously are positional amongst the middle class in Kampala, like hairstyling at the inner-city saloons or cell phones among the young and clothing, these comparisons do not seem very relevant for the poor rural people that make up most of Uganda's population. In the villages people are subsistence farmers and spend most of their little income on either food, maintenance of their farm, education, health care and ceremonies. Since health care and food most likely is not positional and since I could not find large hints of any money spent on the farms in a positional way, I decided to survey education and ceremonies. Further, income was included as a benchmark and for comparison with other studies.

For relative comparisons, a crucial question is relative to whom. In general people compare themselves to people close to them, but there is some evidence on that people can choose whom they compare themselves to (Clark et al., 2008). Senik (2009) has found that peoples subjective well-being is influenced very differently by the average income of different reference groups. Therefore, some effort was made to find out what are peoples reference groups. When posed the direct question "In general, who do you compare yourself to?", people in the villages almost animously mentioned their neighbours or the village. In Kampala however, the interviewees responded considerably more varied, mentioning friends, co-workers and various other groups. I decided to set the reference group in the scenarios to the village in Nvubu, and the city in Kampala, because these were the smallest groups that included all the groups that people mentioned.

Furthermore, the absolute magnitude of the numbers in the scenarios, was chosen to be somewhat above what is normal in the village. The same numbers were retained in Kampala, although they are considerable below the norm, in order to make rural-urban comparisons easier.

The final scenarios used together with the alternatives are shown in table 1. Also shown is the implied degree of positionality at indifference between A and each of the B alternatives, calculated as in equation 4. The alternatives differ only in what the respondent has and what the average other person in the reference group has. Respondents were asked which society they would prefer, choosing between A and B1. Unless the respondent preferred A, he would be asked to choose between A and B2 and so on until he chose A or B5 was reached. In this way a range for the degree of positionality can be determined. If for example a respondent prefers B2 to A this implies that $\delta > 0.125$, and if he prefers A to B3 in the next question we can conclude

	Own	Average	δ	γ
Income A	300,000	400,000		
Income B_1	300,000	200,000	0	0
Income B_2	275,000	200,000	0.125	0.126
Income B_3	250,000	200,000	0.25	0.263
Income B_4	220,000	200,000	0.4	0.447
Income B_5	180,000	200,000	0.6	0.737
Education A	6	8		
Education B_1	6	4	0	0
Education B_2	5.5	4	0.125	0.126
Education B_3	5	4	0.25	0.263
Education B_4	4.4	4	0.4	0.447
Education B_5	3.6	4	0.6	0.737
Wedding A	6,000,000	8,000,000		
Wedding B_1	6,000,000	4,000,000	0	0
Wedding B_2	5,500,000	4,000,000	0.125	0.126
Wedding B_3	5,000,000	4,000,000	0.25	0.263
Wedding B_4	4,400,000	4,000,000	0.4	0.447
Wedding B_5	3,600,000	4,000,000	0.6	0.737

Table 1: The scenarios used in the survey experiment. “Own” and “Average” amounts in Ugandan shilling (UGX) (1USD \approx 2500 UGX at the time), except education which is in years.

that $0.25 > \delta > 0.125$.

To minimize potential ordering effects, the alternatives were presented pairwise and without any numbering. An example can be seen in the appendix, section A.2.4. After 50 households in Nvubu, the order of the A and B alternatives was switched. Regression analysis shows that their order had no influence on choices. I did not control for ordering effects that might be due to the ordering of B alternatives in relation to each other or the ordering of scenarios.

As already mentioned, close detail was paid to the phrasing of the scenarios. The full script that was read to respondents can be found in the appendix, section A.2.

6 Descriptive results

A total of 232 households were surveyed, 112 in Nvubu and 120 in Kampala. 59% of the respondents were women. The mean age was 33 years and the median age 28. In the village the average person had 5 years of education and in the city 10. 62% belonged to the main ethnic group of the central region, Baganda, and 51% were Catholic, which is the main religion. This could be compared to the total Ugandan population of about 30 million people, with 51% females, an median age of 15 years, 16% Baganda, 40% Catholics and a median level of education below 7 years. (UBOS, 2010)

Table 2 shows the choices made in the survey experiment. Most people did not show any positionality. Only 33% have a degree of positionality above zero for Income. For education and weddings the corresponding percentages

		Income		Education		Wedding	
		Freq.	Cum.	Freq.	Cum.	Freq.	Cum.
$\gamma < 0$	$\delta < 0$	0.673	0.673	0.797	0.797	0.704	0.704
$0 < \gamma < 0.126$	$0 < \delta < 0.125$	0.217	0.889	0.113	0.910	0.153	0.857
$0.126 < \gamma < 0.263$	$0.125 < \delta < 0.25$	0.049	0.938	0.018	0.928	0.020	0.877
$0.263 < \gamma < 0.447$	$0.25 < \delta < 0.4$	0.027	0.965	0.014	0.941	0.025	0.902
$0.447 < \gamma < 0.737$	$0.4 < \delta < 0.6$	0.022	0.987	0.041	0.982	0.030	0.931
$\gamma > 0.737$	$\delta > 0.6$	0.013	1.000	0.018	1.000	0.069	1.000
		n=226		n=222		n=203	

Table 2: Choices made in the survey experiment.

		Income		Education		Wedding	
		rural	urban	rural	urban	rural	urban
$\gamma < 0$	$\delta < 0$	0.851	0.513	0.914	0.692	0.784	0.624
$0 < \gamma < 0.126$	$0 < \delta < 0.125$	0.056	0.361	0.038	0.180	0.098	0.208
$0.126 < \gamma < 0.263$	$0.125 < \delta < 0.25$	0.037	0.059	0.000	0.034	0.000	0.040
$0.263 < \gamma < 0.447$	$0.25 < \delta < 0.4$	0.028	0.025	0.010	0.017	0.010	0.040
$0.447 < \gamma < 0.737$	$0.4 < \delta < 0.6$	0.009	0.034	0.019	0.060	0.029	0.030
$\gamma > 0.737$	$\delta > 0.6$	0.019	0.008	0.019	0.017	0.078	0.059
Fisher's exact test (p-value)		0.000		0.000		0.028	

Table 3: Frequency distributions of choices made in the survey experiment, separated into rural and urban. P-values of Fisher's exact test comparing the rural to urban distributions below.

are 20% and 30%. A relatively large proportion of 7% always choose the positional alternative in the wedding scenario. The percentage with very low positionality is similar to Akay et al. (2011), but somewhat larger.

In the table invalid responses are excluded. After their first choice and after their last, we always asked respondents of why they chose the way they did. In this way we could assess if respondents did understand the scenarios. Responses where it was obvious that the respondent did not understand were excluded. Furthermore, responses of the type "I can't handle so much money.", "Little education is good." or "Weddings are a waste.", that would imply that the respondent always prefers the positional alternative, but for nonpositional reasons, were also excluded. Throughout this report invalid responses will be excluded. However, results including them are presented in appendix B.1.

In order to assess rural-urban differences, table 3 shows the frequency distributions of responses separately for Nvubu and Kampala. The urban responses were considerably more positional for income and education and more positional for weddings. The significance of these differences can be assessed with the p-values for Fisher's exact test of the null hypothesis of equal distribution, presented in the last row of the table.

		Income	Education	Wedding
$\bar{\gamma}_{sk}$	standard	0.0573	0.0553	0.0954
	rural	0.0425	0.0386	0.1081
	urban	0.0704	0.0743	0.1040
$\bar{\delta}_{sk}$	standard	0.0532	0.0499	0.0879
	rural	0.0393	0.0350	0.0990
	urban	0.0653	0.0668	0.0957
$\bar{\gamma}_b$	standard	0.0511 (0.0033)	0.0454 (0.0043)	0.1198 (0.0077)
	rural	0.0398 (0.0058)	0.0279 (0.0060)	0.1170 (0.0188)
	urban	0.0658 (0.0075)	0.0655 (0.0087)	0.1350 (0.0151)
$\bar{\delta}_b$	standard	0.0469 (0.0029)	0.0402 (0.0037)	0.1023 (0.0064)
	rural	0.0354 (0.0050)	0.0241 (0.0050)	0.0987 (0.0160)
	urban	0.0614 (0.0064)	0.0590 (0.0076)	0.1176 (0.0127)

Table 4: Spearman-Karber estimates for the mean degree of positionality. Below, Bootstrap estimates of the mean degree of positionality with case resampling, $N = 10000$. Bootstrap standard error in parentheses.

7 Degree of positionality

To evaluate how important positional concerns were in the sample, the mean degree of positionality is calculated in this section. Since by construction it is only known in which interval each persons degree of positionality lies, there is no definite way to do this.

One way to estimate the mean, which does not rely on any distributional assumptions except that it assumes the values to be distributed symmetrically around the midpoint of each interval, is to use the midpoint of the intervals weighted by the relative proportion of people in the respective interval. This is also called the Spearman-Karber method, and it's found to be a good method to estimate means with interval censored data. (Hamilton et al. 1977)

The Spearman-Karber estimator is

$$\bar{\rho} = \sum_{i=1}^5 (P_i - P_{i+1})(\rho_{i+1} + \rho_i)/2 \quad (5)$$

where P_i is the proportion of people choosing the scenario B'i' over A and ρ_i is the implied degree of positionality for scenario B'i'.

To make these calculations we have to assume upper and lower bounds for ρ . We assume that everyone has at least $\rho = 0$ and that no one attains the upper bond $\rho = 1$. In the appendix (B.1) $\bar{\rho}$ is also reported for a variety of other assumptions in order to check robustness.

Table 4 shows the mean degree of positionality for income, education and weddings.

Another way to calculate the average degree of positionality is to use the coefficients estimated in the interval regressions below in combination with

a bootstrap technique.⁵ The simplest way to do this is just to resample the people and use the coefficients to calculate the mean degree of positionality for every sample.⁶ Estimates are presented in table 4 below the Spearman-Kärber estimates.

It can be seen in the table that weddings are significantly more positional than income or education and that there are significant differences between the rural and urban sample for income and education, but not for weddings.

8 Econometric analysis

Since the data are interval censored, i.e. we only know an interval in which each data point lies, the interval regression technique is used for the econometric analysis. Table 5 shows a comparison of four different regression methods for each of the scenarios in the survey experiment and table 6 defines the explanatory variables used. The regression models exhibit multicollinearity and coefficients and p-values should therefore be carefully interpreted. Especially the “kampala”, “cooperation”, “sincome”, “swealth”, “education” and “nonbantu” variables are correlated. The specification presented includes all variables that had some amount of explanatory power. However, the explanatory power of the models is still very low.

Throughout this section, the interval regressions presented use the intervals of the additive degree of positionality, δ , that are implied by the choices in the survey experiments as dependent variable. Results are similar for the multiplicative model with γ .

⁵The regressions “Int1” from table 5 were used for the coefficients.

⁶An explanation of different bootstrap methods can be found in most econometric textbooks. See for example Davidson and MacKinnon (2009).

	Income			Education			Wedding					
	Int1	Int2	Opro	Prob	Int1	Int2	Opro	Prob	Int1	Int2	Opro	Prob
age	0.003 (0.235)	0.051 (0.444)	0.039 (0.272)	0.055 (0.175)	0.001 (0.844)	0.012 (0.420)	0.016 (0.718)	0.012 (0.795)	0.008 (0.100)	0.186*** (0.009)	0.047 (0.232)	0.032 (0.431)
age2	-0.000 (0.324)	0.000 (0.584)	-0.000 (0.471)	-0.000 (0.324)	-0.000 (0.981)	0.000 (0.474)	-0.000 (0.888)	0.000 (0.978)	-0.000 (0.222)	-0.002** (0.033)	-0.000 (0.347)	-0.000 (0.567)
kampala	0.009 (0.671)	0.793 (0.113)	0.705*** (0.008)	1.074*** (0.000)	-0.014 (0.551)	0.224 (0.310)	0.208 (0.544)	0.390 (0.281)	-0.065* (0.080)	-0.757 (0.108)	-0.006 (0.984)	0.257 (0.378)
education	0.001 (0.694)	-0.033 (0.580)	0.001 (0.957)	-0.008 (0.796)	0.008*** (0.001)	0.286*** (0.000)	0.137*** (0.000)	0.141*** (0.000)	0.016*** (0.000)	0.320*** (0.000)	0.086*** (0.006)	0.082** (0.015)
sex	-0.004 (0.804)	-0.779** (0.046)	-0.073 (0.736)	-0.053 (0.828)	-0.009 (0.623)	-0.035 (0.467)	-0.164 (0.522)	-0.201 (0.467)	-0.008 (0.778)	-0.906** (0.042)	-0.172 (0.439)	-0.240 (0.305)
child	0.034 (0.279)	1.530** (0.031)	0.429 (0.348)	0.182 (0.707)	0.005 (0.873)	0.218 (0.375)	0.062 (0.890)	0.145 (0.762)	0.082 (0.150)	2.252*** (0.007)	0.450 (0.348)	0.412 (0.407)
lichurch	0.023 (0.314)	0.500 (0.035)	0.354 (0.181)	0.556* (0.078)	0.033 (0.168)	0.660* (0.087)	0.392 (0.231)	0.255 (0.479)	0.015 (0.690)	-0.233 (0.366)	0.121 (0.676)	0.122 (0.690)
moslem	-0.021 (0.436)	-0.987 (0.139)	0.071 (0.832)	0.311 (0.398)	0.042 (0.149)	1.735*** (0.001)	0.679* (0.055)	0.683* (0.078)	0.079 (0.121)	2.130*** (0.005)	0.199 (0.550)	0.100 (0.783)
pentec	-0.001 (0.958)	-0.155 (0.825)	0.276 (0.409)	0.722* (0.080)	-0.007 (0.819)	-0.574 (0.169)	0.069 (0.866)	0.072 (0.868)	-0.008 (0.863)	-0.675 (0.203)	-0.232 (0.530)	-0.226 (0.560)
protest	0.022 (0.294)	1.10 (0.193)	0.333 (0.204)	0.311 (0.297)	-0.015 (0.517)	-0.967** (0.015)	-0.280 (0.440)	-0.320 (0.405)	-0.044 (0.253)	-0.915* (0.073)	-0.186 (0.534)	-0.097 (0.756)
ochrist	0.088*** (0.002)	2.790*** (0.000)	1.086*** (0.001)	1.048*** (0.007)	0.087*** (0.004)	2.329*** (0.000)	0.890** (0.018)	0.798* (0.054)	0.090* (0.086)	1.488*** (0.042)	0.339 (0.359)	0.167 (0.675)
swealth	0.002 (0.110)	0.043 (0.193)	0.010 (0.531)	-0.003 (0.887)	0.001 (0.389)	0.007 (0.425)	-0.020 (0.319)	-0.032 (0.154)	-0.001 (0.596)	-0.047 (0.150)	-0.013 (0.503)	-0.022 (0.285)
sincome	-0.001 (0.101)	-0.0019** (0.018)	-0.007 (0.145)	-0.006 (0.234)	-0.000 (0.310)	-0.012 (0.116)	0.001 (0.884)	0.006 (0.320)	0.002* (0.062)	0.022* (0.063)	0.001 (0.821)	-0.000 (0.952)
deserve	0.015** (0.016)	0.401** (0.011)	0.167** (0.038)	0.144 (0.119)	-0.006 (0.369)	-0.100 (0.249)	-0.063 (0.491)	-0.041 (0.679)	0.004 (0.746)	0.090 (0.328)	-0.023 (0.784)	-0.078 (0.381)
single	0.009 (0.582)	0.0086 (0.817)	0.146 (0.489)	0.267 (0.270)	0.017 (0.352)	-0.193 (0.301)	0.464* (0.086)	0.544* (0.058)	0.026 (0.385)	0.608 (0.118)	0.147 (0.511)	0.105 (0.658)
cooperation	-0.030 (0.113)	-1.333*** (0.001)	-0.717*** (0.002)	-0.938*** (0.000)	0.003 (0.883)	-0.419 (0.142)	-0.122 (0.666)	-0.158 (0.605)	-0.054 (0.127)	-1.297*** (0.009)	-0.359 (0.156)	-0.367 (0.176)
nonbantu	0.039 (0.298)	1.275 (0.109)	0.431 (0.311)	0.308 (0.545)	0.029 (0.467)	0.833 (0.151)	0.179 (0.718)	0.214 (0.689)	0.047 (0.494)	0.555 (0.310)	0.107 (0.832)	-0.179 (0.742)
cons	-0.109* (0.091)	-8.098*** (0.000)	(0.311)	-2.632*** (0.007)	-0.047 (0.502)	-7.919*** (0.000)	(0.718)	-2.850*** (0.009)	-0.247** (0.029)	-11.727*** (0.000)	(0.832)	-1.779* (0.057)
Insigma	-2.292*** (0.000)	0.746*** (0.000)		(0.007)	-2.218*** (0.000)	-1.967*** (0.000)		(0.009)	-1.784*** (0.000)	-2.488*** (0.000)		(0.057)
N	200.000	200.000	200.000	200.000	196.000	196.000	196.000	196.000	180.000	180.000	180.000	180.000

Table 5: Regressions on positionality in the income, education and wedding scenarios. Int1 is an interval regression assuming a normally distributed dependent variable, Int2 is an interval regression assuming a Weibull distributed dependent variable, Opro is an ordered probit regression (cut points omitted), and Probit is a probit regression on a binary dependent variable that is zero unless there is some positionality. P-values are given in parenthesis. Significance levels: ***=0.01, **=0.05, *=0.1 and . =0.2.

In table 5, regression “Int1” is an interval regression assuming a normal distributed dependent variable implemented by Stata’s “intreg” command. Its coefficients can be directly interpreted like those for OLS. However the dependent variable does not seem normally distributed and the regressions “Int2” therefore fit a general Weibull distribution to the data and do the interval regression based on this. This distribution is a reasonable fit for income, and okay for education, but not good for weddings. Basically, it enhances the influence of the positional people, by considering them less likely. “Int2” was implemented in R. “Opro” is an ordered probit regression and it is presented because it is independent of the specific form of the utility function assumed, which might seem rather arbitrary. Furthermore, since most respondents are not very positional, and since the repeated choices between the increasingly positional scenarios might be subject to biases due to learning, tiredness and heuristics, a collapsed probit regression is presented. “Prob” uses a binary dependent variable that is zero unless there is some positionality.

An important predictor is wealth. The wealth variable was constructed differently in Nvubu and Kampala. In the village, people were asked how much land and animals they own and these numbers were converted into a monetary value using current market prices. In Kampala the property of each person was rated on a scale from 1 to 5. These numbers were then converted into approximate monetary values of houses and plots of that type in the area. Together this was used as a proxy for wealth. The regression coefficients for wealth and their significance depend on how high the houses in Kampala were valued. Higher valuation results in higher significance, therefore conservative valuations were used.

As can be seen in table 5, results differ between the models and should therefore be interpreted with care. However, the signs of coefficients and relative effects are similar. “Int1” seems to be the most conservative method, mostly showing lower significance than the others. A few observations can be made. Education seems to be highly positively correlated with positionality for education and weddings. The minority Christian religions seem more positional in income and education than the Catholics. People who think they deserve more, are more positional in income. Cooperation with others in society is negatively correlated with positionality. There is little evidence of gender differences. Wealth and income have little effects on their own, only for weddings, an higher income is related to higher positionality. The “single” coefficient is always positive, but only significant for the probit regressions on education. The Int1 coefficients can be interpreted directly, so for all three scenarios, being of a minority Christian religion is associated with the largest increase in positionality. For example 0.088 larger than other peoples for income, all else equal.

To evaluate the rural-urban differences, a series of regressions on income positionality including the Kampala dummy are conducted. They are pre-

variable	description	mean
age	age in years	32.79
age2	age squared	1278.64
kampala	1 if Kampala, otherwise 0	0.51
education	education in years	7.89
sex	1 if female, otherwise 0	0.59
child	1 if children in household, otherwise 0	0.91
lichurch	1 if attend church less than twice a month, otherwise 0	0.14
moslem	1 if moslem, otherwise 0	0.10
pentec	1 if religion is pentecostal, otherwise	0.13
protest	1 if religion is protestant, otherwise 0	0.18
catholic	omitted religion category	0.51
ochrist	1 if religion is other christian, otherwise	0.08
swealth	wealth in UGX divided by 10,000,000	5.82
sincome	income in UGX divided by 100,000	7.58
deserve	answer to deserve question (11c), 4 = very strong to 0 = very little	2.56
single	1 if single, 0 otherwise	0.45
cooperation	1 if answer is yes to cooperation question (9 in questionnaire), 0 otherwise	0.59
nonbantu	1 if not of bantu people, 0 otherwise	0.05
east	1 if belongs to a tribe originally from the east, otherwise 0	0.09
north	1 if belongs to a tribe originally from the north, otherwise 0	0.04
rwandese	1 if Rwandese, otherwise 0	0.09
munyankole	1 if Munyankole, otherwise 0	0.07
othwest	1 if belongs to a tribe originally from the west (not Munyankole), otherwise 0	0.07
foreign	1 if foreign origin (not rwandese), otherwise 0	0.10
muganda	omitted ethnicity category	0.62

Table 6: Definition of explanatory variables.

sented in table 7. The normal interval regression was used since it seems to be the most conservative and is straight forward to interpret. Since Uganda is one of the most ethnically fractionalized countries in the world (Alesina, 2003), it is important to include controls for the different ethnical groups. The Kampala dummy survives the inclusion of ethnicity dummies and most other controls, but if any of “cooperation”, “education” or “swealth” are included this lowers its coefficient.⁷ The effects of wealth and education are largely collinear, but the effect of cooperation is separate. Thus, if all three are included in a regression model the Kampala coefficient is significantly diminished. This implies that while people in Kampala are more positional, this has to do with that they are wealthier or are exposed to competitive higher education and can depend less on the average person in their surroundings. These effects are similar for education (see appendix B.2), but for the wedding scenario the Kampala dummy is never significant.

⁷The inclusion of “swealth” leads to the omission of some 30 people, due to missing values. This is unfortunate, but the omission does not change much *ceteris paribus*, except a larger coefficient for “kampala” and a smaller one for “child”.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
kampala	0.026*	0.033*	0.039**	0.033*	0.031.	0.025	0.016
	(0.072)	(0.054)	(0.029)	(0.075)	(0.101)	(0.244)	(0.461)
age		0.001	0.001	0.001	0.001	0.002	0.003
		(0.796)	(0.841)	(0.610)	(0.831)	(0.380)	(0.229)
age2		-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
		(0.859)	(0.888)	(0.727)	(0.905)	(0.415)	(0.304)
sex		-0.015	-0.014	-0.015	-0.012	-0.004	-0.005
		(0.355)	(0.373)	(0.328)	(0.454)	(0.807)	(0.757)
child		0.057**	0.058**	0.053*	0.058**	0.030	0.025
		(0.032)	(0.032)	(0.052)	(0.030)	(0.345)	(0.435)
single		0.013	0.010	0.008	0.010	0.008	0.006
		(0.426)	(0.527)	(0.606)	(0.512)	(0.629)	(0.718)
lichurch		0.026	0.030.	0.024	0.030.	0.034.	0.027
		(0.229)	(0.166)	(0.280)	(0.162)	(0.133)	(0.233)
moslem		-0.019	-0.021	-0.023	-0.022	-0.019	-0.022
		(0.453)	(0.419)	(0.373)	(0.397)	(0.473)	(0.425)
pentec		0.020	0.023	0.021	0.022	0.010	0.006
		(0.423)	(0.342)	(0.389)	(0.380)	(0.712)	(0.837)
protest		0.023	0.026	0.025	0.023	0.029.	0.025
		(0.267)	(0.206)	(0.229)	(0.262)	(0.177)	(0.242)
ochrist		0.082***	0.090***	0.090***	0.084***	0.094***	0.092***
		(0.002)	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)
deserve		0.013**	0.013**	0.012**	0.013**	0.016**	0.015**
		(0.035)	(0.034)	(0.040)	(0.036)	(0.014)	(0.018)
sincome		-0.000	-0.000	-0.000	-0.000	-0.001*	-0.001*
		(0.779)	(0.707)	(0.590)	(0.561)	(0.096)	(0.072)
east			-0.033	-0.032	-0.033	-0.041.	-0.038.
			(0.226)	(0.231)	(0.222)	(0.161)	(0.187)
north			0.010	0.015	0.009	0.033	0.039
			(0.800)	(0.710)	(0.817)	(0.479)	(0.406)
rwandese			0.019	0.028	0.017	0.031	0.039
			(0.750)	(0.647)	(0.777)	(0.617)	(0.528)
munyankole			-0.035	-0.031	-0.033	-0.029	-0.022
			(0.210)	(0.276)	(0.241)	(0.330)	(0.467)
othwest			-0.012	-0.013	-0.010	-0.014	-0.014
			(0.663)	(0.652)	(0.733)	(0.642)	(0.656)
foreign			-0.006	-0.015	-0.000	-0.015	-0.023
			(0.908)	(0.785)	(0.994)	(0.794)	(0.689)
cooperation				-0.025.			-0.029.
				(0.151)			(0.140)
education					0.002		0.000
					(0.277)		(0.830)
swealth						0.003**	0.003*
						(0.040)	(0.067)
cons	0.033***	-0.081.	-0.077	-0.070	-0.092.	-0.104.	-0.099.
	(0.001)	(0.182)	(0.209)	(0.257)	(0.144)	(0.112)	(0.139)
lnsigma	-2.226***	-2.270***	-2.278***	-2.283***	-2.278***	-2.295***	-2.299***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
aic	-37.164	-30.672	-22.092	-22.147	-18.579	-24.845	-20.284
N	226.000	225.000	225.000	225.000	224.000	201.000	200.000

Table 7: Series of regressions assessing the effect of “kampala” on income positionality, using normal interval regression. P-values are given in parenthesis. Significance levels: ***=0.01, **=0.05, *=0.1 and .=0.2.

9 Discussion

The results differ from other studies on positionality in that the found mean degree of positionality is lower. Even in the study closest to this one, Akay et al. (2011), conducted in rural Ethiopia, one of the poorest areas of the world, the marginal degree of positionality was found to be as large as 0.158 for income. They used the additive utility function and the Spearman-Kärber estimator, so this value should therefore be compared to $\bar{\delta}_{sk} = 0.039$ for Nvubu. Even compared to the considerably richer Kampala sample with $\bar{\delta}_{sk} = 0.065$, their estimate is high. This is rather disturbing, since wealth and positionality are considered to be positively associated.

The difference might be due to the way in which this survey was conducted. Since both the Nvubu and Kampala sample show similarly low degrees of positionality, it is unlikely that I happened to survey a unusually tight-knit rural community.

Scale effects can not explain the lower degree of positionality. The absolute value of the numbers used in the income scenario is lower than in studies in developed countries. People choosing the positional society are almost implicitly saying they'd be okay with letting everyone else starve just so that they are better off. 200.000 UGX is about 80 USD. However the amounts used by Akay et al. (2011) for Ethiopia lie as low as 26 USD a month. Furthermore, for the education and wedding scenarios the values were not particularly low and positionality is similarly low.

An explanation might be, that the framing I used in the scenarios differs slightly from other studies and that my scenarios might not isolate concerns for relative position as well as previously used ones. Mainly, I did not explicitly state that respondents should not consider what society is best as a whole, but only asked them to consider what society would be best for them. However, Akat et al. (2011) also do not explicitly state this.

Further, the survey was conducted in a private and personal manner. People had to tell their answers directly to me and the interpreter. This might bias choices into the unpositional direction, since people might care about being perceived as good and altruistic, or they might think that the unpositional society is the right answer or the answer that I want to hear. However Carlsson et al. (2007) used the same survey method in Vietnam and got a mean degree of positionality of 0.28.

It seems as if part of the explanation for the low positionality is cultural. The Buganda society might very well be the least positional society studied so far. Sub-Saharan African cultures are fundamentally different from western, but African cultures also differ considerably from each other. In general they are traditionally oriented with strong survival values. See for example the World Values Survey Association (2009). Their cultures are non-individualistic and more group-orientated (Triandis, 1995). Herein part of the explanation for the low positionality may lie. After their first and

last choice for each scenario, we asked the respondents why they chose the way they did. 29%, resp. 53% and 44% of those choosing completely unpositional said that they preferred to be in a richer society, because they expected others to help them (income scenario), or because they expected to learn from others (education scenario) or because they expected others to contribute a lot to the wedding (wedding scenario). A large proportion also stressed the opportunities that a richer society offers.

Even for weddings, which were roughly twice as positional as income or education, the degree of positionality is still very low. This suggests that the largest part of the explanation to why even poor people spend so much on a wedding, is not some concern for relative position. Weddings in rural Uganda are largely a social event, where the whole village participates and contributes. Maybe psychological theories of mental accounting or compensation can better explain the large amount of money spent on weddings in rural Uganda (see for example Thaler, 1999). People might use these rarely occurring happy ceremonies as a way to balance out or compensate for all the hardships of their daily lives.

As already mentioned, the regression analysis presented should be interpreted with care. Since a high degree of positionality is very uncommon and the sample size is rather small, the regressions are largely influenced by the few positional values. This can be seen by for example the large change in estimators when including a dummy for the first 19 observations in the regressions. Furthermore there is high collinearity between the explanatory variables, especially between Kampala, Education and Income. Besides, the inferences about significance of coefficients depends to a high degree on the model assumptions and regression techniques and specifications used. All models have very low predictive power, indicating that important predictive variables are missing.

A further complication arises from the fact that it is far from evident that choices in hypothetical scenarios reflect real-life preferences. This is discussed in Bertrand & Mullainathan (2001). Ordering effects and framing (Tversky & Kahneman 1981) might even further bias this study in different directions. Solnick (1998) and their results indicate substantial ordering effects. Johansson-Stenman et al. (2002) also found significant ordering effects. Only ordering regarding the placement of A and B scenarios was controlled for in the surveys.

10 Concluding remarks

In this study a survey experimental method was used to examine positional concerns in two areas of rural and urban Uganda. Relative concerns were measured along three dimensions: Income, education and weddings. Positionality is considerably lower than found in other studies and this is at least

partly attributed to the specific Buganda culture. Weddings are found to be about twice as positional as income or education, but positional concern for weddings is still low.

Differences between the rural and urban areas are substantial, and support is found for the proposition that these differences are largely related to the higher wealth of the urban population. However, the still relatively low positional concerns of the urban population suggest that traditional values do not decline as fast as one might expect once people start to live a more western lifestyle.

References

- Akay and Martinsson (2011) Does relative income matter for the very poor? Evidence from rural Ethiopia. *Economics Letters*, 110, 213-215.
- Akay, A., Martinsson, P. and Medhin, H. (2011) Does Positional Concern Matter in Poor Societies? Evidence from a Survey Experiment in Rural Ethiopia. *World Development*, 40(2), 428-435.
- Alesina, A. et al. (2003) Fractionalization. *Journal of Economic Growth*, 8, 155-94.
- Alpizar, F., Carlsson, F. and Johansson-Stenman, O. (2005) How much do we care about absolute versus relative income and consumption? *Journal of Economic Behavior and Organization*, 56, 405-421.
- Anderson, S. (2007) The Economics of Dowry and Brideprice. *Journal of Economic Perspectives*, 21(4), 151-174.
- Aronsson, T. and Johansson-Stenman, O. (2008) When the Joneses' consumption hurts: Optimal public good provision and nonlinear income taxation. *Journal of Public Economics*, 92, 986-997.
- Banerjee, A. and Duflo, E. (2007) The Economic Lives of the Poor. *Journal of Economic Perspectives*, 21(1), 141-168.
- Bertrand, M. and Mullainathan, S. (2001) Do people mean what they say? Implication for subjective survey data. *AEA Papers and Proceedings*, 91(2), 67-72.
- Bookwalter, J.T. and Dalenberg, D.R. (2009) Relative to What or Whom? The Importance of Norms and Relative Standing to Well-Being in South Africa. *World Development*, 38(3), 345-355.
- Brown, P., Bulte, E. and Zhang, X. (2011) Positional spending and status seeking in rural China. *Journal of Development Studies*, 96, 139-149.
- Caporale, M.C. et al. (2009) Income and happiness across Europe: Do reference values matter? *Journal of Economic Psychology*, 30, 42-51.
- Carlsson, F. et al. (2007) Are vietnamese farmers concerned with their relative position in society? *Journal of Development Studies*, 43, 1177-1188.
- Carlsson, F., Gupta, G. and Johansson-Stenman, O. (2008) Keeping up with the Vaishyas? Caste and relative standing in India. *Oxford Economic Papers*, 61, 52-73.
- Case, A. et al. (2008) Paying the Piper: The High Cost of Funerals in South Africa. NBER Working Paper No. 14456.
- Charles, K.K., Hurst, E. and Roussanov, N. (2009) Conspicuous consumption and race. *The Quarterly Journal of Economics*, 74(2).
- Clark, A.E., Frijters P. and Shields, M.A. (2008) Relative Income, Happiness, and Utility: An Explanation for the Easterlin Paradox and Other Puzzles. *Journal of Economic Literature*, 46(1), 95-144.
- Clark, A.E. and Oswald, A.J. (1996) Satisfaction and Comparison Income. *Journal of Public Economics*, 61(3), 359-81.

- Davidson, R. and MacKinnon, J.G. (2009) *Econometric Theory and Methods*. Oxford University Press, Oxford.
- Duesenberry, J. (1949) *Income, Savings and the Theory of Consumer Behavior*. Harvard University Press, Harvard.
- Corazzini, L., Esposito, L. and Majorano, F. (2012) Reign in hell or serve in heaven? A cross-country journey into the relative vs absolute perceptions of well-being. *Journal of Economic Behavior & Organization*, 81, 715-730.
- Easterlin, R.A. (1974) Does Economic Growth Improve the Human Lot? Some Empirical Evidence. In *Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz*, ed. R. David and M. Reder. Academic Press, New York.
- Ferrer-i-Carbonell, A. (2005) Income and well-being: an empirical analysis of the comparison income effect. *Journal of Public Economics*, 89, 997-1019.
- Frank, R.H. (1985) The Demand for Unobservable and Other Nonpositional Goods. *American Economic Review*, 75(1), 101-116.
- Frank(1999) Frank, R.H. (1999) *Luxury Fever: Why Money Fails to Satisfy in an Era of Excess*. Free Press, New York.
- Frank, R.H. (2005) Are Concerns about relative income relevant for public policy? Positional Externalities Cause Large and Preventable Welfare Losses. *AEA Papers and Proceedings*, 95(2), 137-141.
- Hamilton, M.A. et al. (1977) Trimmed Spearman-Kärber Method for Estimating Median Lethal Concentrations in Toxicity Bioassays. *Environmental Science & Technology*, 11(7), 714-719.
- Hillesheim, I. and Mechtel, M. (2011) What makes us want to have more than others? Explaining relative consumption effects of public and private goods. Working paper.
- Hirschman, A. O. and Rothschild, M. (1973) The changing tolerance for income inequality in the course of economic development. *Quarterly Journal of Economics*, 87(4), 544-66.
- Jaramillo and Moizeau (2003) Conspicuous Consumption and Social Segmentation. *Journal of Public Economic Theory*, 5(1), 1-24.
- Johansson-Stenman, O., Carlsson, F. and Daruvala, D. (2002) Measuring future grandparents' preferences for equality and relative standing. *Economic Journal*, 112, 362-383.
- Kapten, A. et al. (1978) Individual Welfare Functions and Social Reference Spaces. *Economics Letters*, 1, 173-177.
- Kaus, W. (2010) *Conspicuous Consumption and Race: Evidence from South Africa*. Papers on Economics and Evolution, Max Planck Institute of Economics, Evolutionary Economics Group, <http://EconPapers.repec.org/RePEc:esi:evopap:2010-03>.
- Kempen, L.v. (2003) Are the poor willing to pay a premium for designer labels? A field experiment in Bolivia. *Oxford Development Studies* 32, 205-224.

- Kingdon, G.G. and Knight, J. (2007) Community, comparisons and subjective well-being in a divided society. *Journal of Economic Behavior & Organization*, 64, 69-90.
- Knight, J., Song, L. and Gunatilaka, R. (2009) Subjective well-being and its determinants in rural China. *China Economic Review*, 20, 635-649.
- Knight, J. and Gunatilaka, R. (2010) Great Expectations? The Subjective Well-being of Rural-Urban Migrants in China. *World Development*, 38(1), 113-124.
- Luttmer, E.F.P. (2005) Neighbors as Negatives: Relative Earning and Well-Being. *Quarterly Journal of Economics*, 120(3), 963-1002.
- McBride, M. (2001) Money, happiness, and aspirations: An experimental study. *Journal of Economic Behavior & Organization*, 74, 262-276.
- Moav, O. and Neeman, Z. (2008) Conspicuous Consumption, Human Capital and Poverty. CEPR Discussion Paper No. 6864.
- Pollak, R. A. (1976) Interdependent Preferences. *American Economic Review*, 66(3), 309-320.
- Senik, C. (2009) Direct evidence on income comparisons and their welfare effects. *Journal of Economic Behavior & Organization*, 72, 408-424.
- Solnick, S. and Hemenway, D. (1998) Is more always better? A survey on positional concerns. *Journal of Economic Behavior and Organization*, 37, 373-383.
- Solnick, S. and Hemenway, D. (2005) Are positional concerns stronger in some domains than in others? *The American Economic Review*, 95, 147-151.
- Solnick, S., Hemenway, D. and Hong, L. (2007) Positional goods in the United States and China. *The Journal of Socio-Economics*, 36, 537-545.
- Thaler, R. H. (1999) Mental Accounting Matters. *Journal of Behavioral Decision Making*, 12, 183-206.
- Triandis, H.C. (1995) *Individualism & Collectivism*. Westview Press, Boulder, USA.
- Tversky, A. and Kahneman, D. (1981) The framing of decisions and the psychology of choice. *Science*, 211, 453-458.
- UBOS (2010) Uganda National Household Survey - Socio-Economic Module - Abridged report. <http://www.ubos.org/UNHS0910/home.html> (2012-08-15).
- Veblen, T. (1994)[1899] *The Theory of the Leisure Class*. Penguin Books, New York.
- World Values Survey Association (2009) *World Values Survey 1981-2008 Aggregate v.20090901*. www.worldvaluessurvey.org. Aggregate File Producer: ASEP/JDS, Madrid.
- Yan, Y. (1996) The Culture of Guanxi in a North China Village. *The China Journal*, 35, 1-25.

A Questionnaire

A.1 Background questions

1. How many adults and how many children live in this household?
2. What is your marital status? (Alternatives: married, divorced, widowed, single)
3. How long have you lived in Kampala?^{*8}
4. What is your religion?
5. How often do you normally attend church in one month?
6. What is your ethnicity?
7. How many years of education have you had?
8. Are you currently involved in any community organization?
9. Have you ever, during the past five years, gotten together with people in your community in order to solve a common problem?
10. How many acres of land does this household own?^{**9}
11. What animals and how many of them does this household rear?^{**}
12. How much money do you earn in this household from all the work you do and all the land and animals you own?^{**}
13. What is the total monthly income in your household?^{*}
14. How strongly do you agree with the following statements? (Alternatives: very strong, strong, moderately, little, very little)
 - a) Generally speaking, most people can be trusted.
 - b) It is important to be ahead of others.
 - c) I deserve more than the average other person in my society.
15. Generally speaking, how satisfied are you with your life? (Alternatives: very satisfied, satisfied, so-so, unsatisfied, very unsatisfied)
16. How healthy are you currently? (Alternatives: very healthy, healthy, so-so, unhealthy, very unhealthy)^{*}
17. How often have you borrowed or given money to friends and family (outside of your household) during the last month? (Alternatives: 0 times, 1-5 times, 6-10 times, 11-15 times, more than 15 times)^{*}
18. How often have you borrowed or received money from friends and family (outside of your household) during the last month? (Alternatives: 0 times, 1-5 times, 6-10 times, 11-15 times, more than 15 times)^{*}

⁸Starred questions were asked only in Kampala.

⁹Double-starred questions were asked only in Nvubu.

A.2 Scenarios

A.2.1 Income

We are going to present you with different pairs of imaginary societies. You are to choose which one you would prefer to live in. The societies differ only in how large your monthly income is and how large the average income of other people in your village is.¹⁰ Everything else is assumed to be exactly the same.¹¹

The monthly income is the monetary value in shillings of all the things you produce in your household, including any money you get as payment for work or services you perform.

*On the paper in front of you, each circle represents one imaginary society. In the society to the right, you would have an income of 300,000 shs a month, while the average, the typical, other person in your village would have an income of 400,000 shs a month. This means that you would earn 100,000 shs less than average.

On the other hand, in the society to the left, you'd have an income of 300,000 shs a month, while the average other person in your village would have an income of 200,000 shs a month. This means that you would earn 100,000 shs more than average.

Which of these societies would you prefer to live in?

(If a question, repeat the relevant part above.)

(Wait for answer and ask only after first and last choice:) Why?

(If the left society is chosen, show next pair and explain exactly as above, starting at *, otherwise stop.)

A.2.2 Education

We are again going to present you with different pairs of imaginary societies. This time, you are to choose which one you'd prefer your child to live in. If you don't have children, try to imagine you had. The societies differ only in how many years of education your child gets, and how many years of education the average other child in that society gets. Everything else is assumed to be exactly the same.

In the imaginary societies education is completely free of charge.

*On the paper in front of you, each circle represents one imaginary society. In the society to the right, your child would get 6 years of education and the average or typical other child would get 8 years of education. This means that your child

¹⁰Village was changed to city in Kampala.

¹¹While this assumption is unrealistic, it was used instead of the assumption that prices are the same and that some list of other things are the same, since this seemed to distract people when I tried it during the pilot study.

would get 2 years less education than the average other child in society.

On the other hand, in the left society, your child would get 6 years of education, while the average other child would get 4. This means that your child would get 2 years more education than the average other child in society.

Which of these societies would you prefer your child to live in?

(If a question, repeat the relevant part above.)

(Wait for answer and ask only after first and last choice:) Why?

(If the left society is chosen, show next pair and explain exactly as above, starting at *, otherwise stop.)

A.2.3 Wedding

We are again going to present you with different pairs of imaginary societies. This time, you are to choose which one you would prefer your grandchild to live in. If you don't have a grandchild, try to imagine you had. The societies differ only in how much the wedding of your grandchild did cost, and in how much the average other wedding in society did cost.

In the imaginary societies, your grandchild's wedding is fully paid for by an external donor.

*On the paper in front of you, each circle represents one imaginary society. In the society to the right, the wedding of your grandchild would cost 6 M, 6 million shillings, and the average other wedding in that society would cost 8 million shillings. This means that the wedding of your grandchild would cost 2 million shillings less than the average other wedding.

On the other hand, in the left society, the wedding of your grandchild would cost 6 million shilling, and the average other wedding in your village would cost 4 million shilling. This means that the wedding of your grandchild would cost 2 million shillings more than the average other wedding.

Which of these societies would you prefer your grandchild to live in?

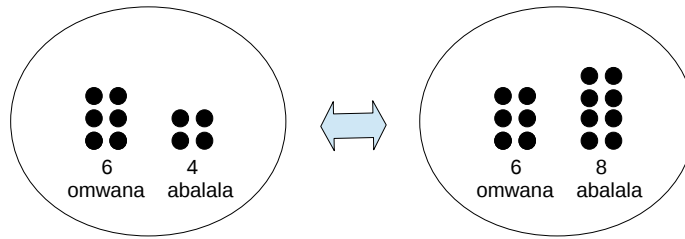
(If a question, repeat the relevant part above.)

(Wait for answer and ask only after first and last choice:) Why?

(If the left society is chosen, show next pair and explain exactly as above, starting at *, otherwise stop.)

A.2.4 Example

Below is an example of how the alternatives were presented.



	Income	Education	Wedding
standard	0.0532	0.0499	0.0879
including doubtful answers	0.0587	0.0673	0.1102
only rural including doubtful answers	0.0450	0.0492	0.1227
only urban including doubtful answers	0.0653	0.0730	0.1090
excluding first two research days	0.0461	0.0405	0.0848
upper limit at 2	0.0596	0.0585	0.1257
lower limit at -0.05	0.0444	0.0346	0.0810
trimmed off 0 and 1	0.0956	0.1175	0.0188
trimmed off 10%	0.0802	0.0558	0.0734
standard	0.0469 (0.0029)	0.0402 (0.0037)	0.1023 (0.0064)
large regression	0.0471 (0.0031)	0.0400 (0.0039)	0.1017 (0.0066)
including doubtful answers	0.0497 (0.0031)	0.0495 (0.0038)	0.1221 (0.0078)
only rural including doubtful answers	0.0391 (0.0057)	0.0368 (0.0053)	0.1164 (0.0165)
only urban including doubtful answers	0.0614 (0.0063)	0.0655 (0.0083)	0.1320 (0.0147)
excluding first two research days	0.0393 (0.0030)	0.0310 (0.0038)	0.0901 (0.0061)

Table 8: Robustness of the estimates for the median degree of positionality. Upper half Spearman-Kärber, below bootstrap. All estimates for additive utility (δ).

B Robustness

B.1 Degree of positionality

Table 8 shows the difference between different ways to calculate the mean degree of positionality. The inclusion of doubtful answers, that is answers classed as invalid, tends to bias the estimates upward. In the first two research days people answered unusually positional.

B.2 Econometric analysis

Table 9 shows the same regressions as table 7 but with the choices in the education scenario as dependent variable.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
kampala	0.034** (0.041)	0.026. (0.176)	0.030. (0.137)	0.034. (0.108)	-0.002 (0.912)	0.005 (0.833)	-0.009 (0.693)
age		0.001 (0.850)	-0.000 (0.979)	-0.000 (0.874)	0.000 (0.978)	0.001 (0.856)	0.000 (0.932)
age2		-0.000 (0.892)	0.000 (0.902)	0.000 (0.834)	0.000 (0.833)	-0.000 (0.922)	0.000 (0.911)
sex		-0.021 (0.238)	-0.024. (0.181)	-0.023. (0.194)	-0.016 (0.361)	-0.014 (0.430)	-0.012 (0.491)
child		0.004 (0.893)	0.003 (0.929)	0.005 (0.861)	0.007 (0.807)	-0.012 (0.725)	0.001 (0.975)
single		0.021 (0.257)	0.018 (0.329)	0.019 (0.304)	0.020 (0.241)	0.005 (0.780)	0.014 (0.436)
lichurch		0.035. (0.137)	0.038. (0.113)	0.041* (0.093)	0.042* (0.069)	0.032. (0.184)	0.034. (0.146)
moslem		0.045. (0.121)	0.047. (0.104)	0.048* (0.096)	0.041. (0.138)	0.052* (0.078)	0.040. (0.164)
pentec		0.012 (0.648)	0.018 (0.513)	0.019 (0.484)	0.010 (0.719)	0.020 (0.500)	0.007 (0.819)
protest		0.003 (0.889)	0.007 (0.769)	0.008 (0.745)	-0.005 (0.818)	-0.004 (0.872)	-0.012 (0.603)
ochrist		0.116*** (0.000)	0.127*** (0.000)	0.126*** (0.000)	0.099*** (0.001)	0.114*** (0.000)	0.099*** (0.001)
deserve		-0.007 (0.288)	-0.008 (0.213)	-0.008 (0.224)	-0.009. (0.188)	-0.005 (0.475)	-0.007 (0.318)
sincome		0.000 (0.952)	0.000 (0.936)	0.000 (0.863)	-0.000 (0.475)	-0.001. (0.130)	-0.001. (0.185)
east			-0.020 (0.503)	-0.020 (0.499)	-0.022 (0.436)	-0.028 (0.368)	-0.024 (0.434)
north			0.037 (0.401)	0.035 (0.434)	0.032 (0.453)	0.068. (0.177)	0.050 (0.309)
rwandese			0.064 (0.345)	0.059 (0.381)	0.055 (0.396)	0.076 (0.256)	0.063 (0.337)
munyankole			-0.005 (0.880)	-0.007 (0.823)	0.005 (0.879)	-0.021 (0.509)	-0.010 (0.754)
othwest			-0.055* (0.096)	-0.055* (0.094)	-0.039 (0.221)	-0.072** (0.037)	-0.062* (0.067)
foreign			-0.050 (0.420)	-0.045 (0.466)	-0.025 (0.675)	-0.056 (0.358)	-0.033 (0.584)
cooperation				0.013 (0.505)			0.004 (0.864)
education					0.009*** (0.000)		0.008*** (0.002)
swealth						0.004*** (0.008)	0.002. (0.174)
cons	0.025** (0.035)	0.013 (0.847)	0.030 (0.666)	0.025 (0.719)	-0.038 (0.575)	0.023 (0.741)	-0.032 (0.653)
lnsigma	-2.100*** (0.000)	-2.151*** (0.000)	-2.162*** (0.000)	-2.163*** (0.000)	-2.203*** (0.000)	-2.209*** (0.000)	-2.234*** (0.000)
aic	-98.791	-95.706	-88.637	-87.082	-103.074	-102.657	-106.787
N	222.000	221.000	221.000	221.000	220.000	197.000	196.000

Table 9: Series of regressions assessing the effect of “kampala” on education positionality, using normal interval regression. P-values are given in parenthesis. Significance levels: ***=0.01, **=0.05, *=0.1 and .=0.2.