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**Determinants of Empowerment in a Capability Based Poverty Approach: Evidence from The Gambia**

**Sofia Karina Trommlerová, Stephan Klasen, Ortrud Lessmann**

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Wilhelm-Weber-Str. 2 · 37073 Goettingen · Germany
Phone: +49-(0)551-3914066 · Fax: +49-(0)551-3914059

Email: crc-peg@uni-goettingen.de Web: http://www.uni-goettingen.de/crc-peg

# Determinants of Empowerment in a Capability Based Poverty Approach: Evidence from The Gambia

Sofia Karina Trommlerová (IHEID Geneva)

Stephan Klasen (University of Göttingen)

Ortrud Lessmann (Helmut-Schmidt-Universität Hamburg)

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## Abstract

Although empowerment is seen as intrinsically important and instrumentally valuable to escape poverty, there is very little research on the empirical drivers of empowerment. Using custom-made household-level information and using advanced econometric techniques that also correct for endogeneity, we examine what empowers individuals in The Gambia to change their own lives and affect changes in their communities. We show that people's self-reported capabilities are the most important drivers of empowerment. We also show that respondents' confidence that *they* will be the most powerful agents in their lives is higher for men, foreigners, people free of health limitations, and younger people.

**JEL codes**: I30, I32, O15, Z13, Z18

**Keywords**: empowerment, agency, capability approach, The Gambia, correction for endogeneity

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# 1. Introduction

Well-being and poverty are nowadays perceived as multidimensional concepts that cannot be assessed merely in monetary terms. The Capability Approach goes even further by emphasizing the importance of agency in promoting human development. Increasing agency means enhancing people's freedoms to act and to achieve what they consider valuable, i.e. having the freedom to act in line with one's own values and to pursue one's goals. Empowerment is a concept closely related to agency and thereby to human development. We define empowerment as an increase in agency which enables individuals to pursue valuable and important goals. Both agency and empowerment are intrinsically valuable, and can be instrumentally effective in promoting human development and reducing poverty (Alkire, 2009). In fact, there has been a number of theoretical and empirical studies that focus on women's empowerment or empowerment of the poor and found positive well-being outcomes of increases in agency (e.g. Thomas, 1997; Hindin, 2000; Allendorf, 2007a; Kim et al. 2007). In contrast, there is very little literature that considers empowerment outside of this gender context, which is the focus of our study. Moreover, most of these studies employ suboptimal measures of agency and empowerment. In the last few years, the Oxford Poverty and Human Development Initiative (OPHI) has developed a superior set of desirable agency and empowerment measures that aim at capturing various aspects of empowerment. Whereas some of these aspects have already been analyzed empirically, others are still to be investigated. The most widely researched empowerment measures are those focusing on household decision-making (e.g. Malhotra and Mather, 1997; Hindin, 2000; Jejeebhoy, 2000) and to a certain extent those capturing domain-specific autonomy (e.g. Chirkov et al. 2005).[1]

This article presents an empirical analysis of those aspects of empowerment which have been largely neglected so far. The analysis is based on a unique dataset from The Gambia which contains information on capabilities and on empowerment indicators as had been proposed by OPHI. The

[1] See Ibrahim and Alkire (2007) for a more detailed list of relevant empirical studies.

main goal is to look for correlates and determinants of empowerment, with a particular focus on individuals' self-reported ability to induce changes in their lives at communal and individual level. Generalized ordered logit and multinomial logit models are employed in search for correlates of this type of empowerment and tested for potential sample selection and endogeneity biases.

Our results show that individuals' ability to induce changes in communal life in The Gambia is causally related to education, age, marital status, and health. Concerning the ability to change things in one's own life (which we call 'individual' empowerment), we first show that people's self-reported capabilities are much more important correlates of individuals' desire to change something in their lives than their socio-demographic characteristics or economic situation. We also show that respondents' confidence that *they* will be the most powerful agents in their lives is significantly higher for men, foreigners, people free of health limitations, and younger people. Furthermore, economic inactivity and significant health limitations cause Gambians to rely more often on their families for support.

We argue that the results matter for several reasons. First, it is pioneering exploratory work in using new, internationally comparable direct measures of communal and individual agency and empowerment. Second, the pool of possible correlates and determinants of empowerment comprises not only objectively observable socio-demographic and economic characteristics of respondents but also a unique set of self-reported capabilities. Third, this work is of great relevance in considering empowerment in general terms, not exclusively women's or poor's empowerment. Finally, advanced econometric techniques are applied in the empirical analysis and an attempt is made to correct for endogeneity problems.

The structure of this article is as follows. The next chapter is concerned with definition and measurement of empowerment as an agency-related concept. It also formulates our hypotheses regarding the determinants of empowerment. Section 3 describes the data. Section 4 presents the empirical evidence on empowerment at both communal and individual level. Section 5 concludes and identifies areas for potential future research.

## 2. Measurement of empowerment and hypotheses

Empowerment is a relatively broad concept lacking a single clear definition. It has experienced growing importance in the development economics literature especially since the turn of the new millennium when Voices of the Poor (Narayan, 2000) and the World Development Report 2000/2001 were published. Dozens of theoretical and empirical studies have refined the concept since then; most of them focus on women's empowerment or on empowerment of the poor. Ibrahim and Alkire (2007) alone list 29 distinct definitions. Their main common feature is that they define empowerment as a process (e.g. Kabeer, 1999; Malhotra and Schuler, 2005) in which a marginalized or relatively powerless group improves its position. The critical point, in which the proposed definitions differ, is in regard of the domain or dimension of improvement brought about by empowerment. In this study, following largely Alkire (2005) and Ibrahim and Alkire (2007), empowerment is understood as an increased possibility to gain agency.[2]

Agency is one of the integral parts of Amartya Sen's Capability Approach. Sen (1985) defines agency freedom as "what the person is free to do and achieve in pursuit of whatever goals or values he or she regards as important." (p. 203). Thus, we see empowerment as a gain in agency, enabling the individual to pursue valuable and important goals. Agency, seen in Sen's definition, is both intrinsically valuable and instrumentally effective in promoting human development and reducing poverty (Alkire, 2009).

[2] Generally, the concept of empowerment is related to agency, autonomy, self-direction, self-confidence, self-worth, self-determination, liberation, participation, and mobilization (Narayan, 2005; Ibrahim and Alkire, 2007). More specifically, different studies define empowerment in different terms, for instance as an increased possibility to make choices (Alsop et al., 2006; Kabeer, 1999; Mayoux, 2000; Moser, 1991) or decisions (Appleyard, 2002; Khwaja, 2005; Rowlands, 1997), or to gain power (Lokshin and Ravallion, 2005; Malena, 2003; Moser, 1991), control (Chambers, 1993; Jackson, 1994; Mason and Smith, 2003; Moser, 1991; Strandberg, 2001), influence (Khwaja, 2005; McMillan et al., 1995; Moser, 1991; World Bank, 2001), or assets and capabilities (Grootaert, 2003; Malhotra et al., 2002; Narayan, 2005).This overview is based on a list of definitions which was assembled by Ibrahim and Alkire (2007); the definitions often refer specifically to women's empowerment.

## 2.1 Conceptualization and indicators

When framing empowerment as an increase in human agency, Ibrahim and Alkire (2007) draw on the concept of four types of power developed by Rowlands (1997): power *over* ('controlling power'), power *to* ('generative or productive power'), power *with* (collective power of a group), and power *from within* (strength based on self-acceptance). Ibrahim and Alkire (2007) think of each type of power as a distinct exercise of agency, namely in terms of control, choice, communal belonging, and change, see Table 1. The latter two, which will be the focus of this article, represent the ability to change aspects in one's life at communal and individual level, respectively.

[Table 1 approximately here]

There are two types of agency measures: proxy measures and direct measures. According to Alsop and Heinsohn (2005), commonly used proxy measures of agency are different types of assets, such as material, human, social, political, and psychological assets. Examples of these proxy measures encompass land ownership, literacy, group membership, participation in political parties, level of self-confidence, etc. (Alsop and Heinsohn, 2005). Alkire (2009) criticizes the use of proxy measures and articulates a strong need for direct measures of agency. In her critique, she identifies three reasons why proxy measures are not desirable. First, the conversion of assets into agency may vary considerably among individuals just as the conversion of resources into functionings differs. Second, changes in agency and empowerment might stem from other assets than those covered by the proxies, or they might not stem from any assets at all. Third, the very same assets which are used as proxies for agency are often used as poverty measures. Therefore, it is impossible to examine the relationship between "proxy-measured" agency and poverty.

Direct measures of agency and empowerment face, however, considerable methodological challenges related to the local of empowerment, the comparability of empowerment across contexts, and the difficulty of measuring this elusive concept with quantitative methods (Narayan, 2005).

Despite these difficulties, Ibrahim and Alkire (2007) propose a set of internationally comparable direct measures of agency and empowerment. The main criteria for empowerment indicators to qualify into Ibrahim's and Alkire's (2007) final set are: coverage of areas particularly relevant to the life of the poor, international comparability, coverage of both instrumental and intrinsic aspects of empowerment, possibility to identify changes in agency over time, and positive experience with the particular indicators in previous surveys. Regarding the first and second type of empowerment in Table 1, Ibrahim and Alkire (2007) list a number of empirical studies that were undertaken based on the proposed indicators. However, there seem to be no empirical studies focusing on the third and fourth type of empowerment. In an attempt to fill this gap, we focus on empowerment in community and empowerment as change. The indicators proposed by Ibrahim and Alkire (2007) are adopted here with minor alterations.

The empowerment in community is captured by the following question:

*Q: Do you feel that people like yourself can generally change things in their community if they want to?*

*A: Yes, very easily / Yes, fairly easily / Yes, but with a little difficulty / Yes, but with a great deal of difficulty / No, not at all*

Despite being measured at individual level, the question aims at capturing "the ability of people to change things *collectively* in their community" (Ibrahim and Alkire, 2007, p. 29, accentuations by the authors), i.e. their power *with* other community members. The formulation 'people like yourself' intends to depart at least partly from the individual empowerment and to encompass, to a certain degree, collective empowerment.

The empowerment as change in one's own life is measured by two questions:[3]

*Q1: Would you like to change anything in your life at this point in time?*

[3] Originally, there are three questions measuring empowerment as change in Ibrahim's and Alkire's (2007) proposal. Since one of them is not a subject of the investigation here, it is not mentioned in detail.

*A1: Yes / No*

*Q2: Who do you think will contribute most to any change in your own life?*

*A2: Myself / My family / Village development committee / Our community (village) / The ward development committee / The state government / Don't know / Other*

Both questions aim at measuring "the ability to induce change in one's life, thus enhancing one's own self-acceptance" (Ibrahim and Alkire, 2007, p. 28), i.e. the power *from within*. While the first question addresses individuals' willingness to change their lives, the second question assesses their actual ability to act as agents (Ibrahim and Alkire, 2007).

Overall, our indicators can be classified according to Alkire's (2009) classification of direct measures of agency as *global* measures of *autonomy* that are directed at both *one's own* and *others'* well-being and measure both *direct control* and *effective power*. In this sense, the indicators of empowerment analyzed in this article cover also the traditionally neglected aspects of autonomy, other-regarding agency, and effective power.

## 2.2 Existing literature on drivers of empowerment

As our paper is largely empirical, we will focus primarily on empirical drivers of empowerment, but briefly want to comment on some of the theoretical literature on the drivers of empowerment. Kabeer (1999) presents a useful conceptual framework and claims that a broad notion of 'resources', including material, human, and social resources available to individuals and communities affect their empowerment. Consequently, greater control over economic resources (such as control over land, property, access to paid employment), better education and access to information, and more social rights (which are often related to group membership such as membership of a caste or clan, an ethnicity, one's sex, age, etc.) can all be important drivers of both individual and communal empowerment. Empirical studies have indeed mostly focused on these factors.

The existing empirical literature that is concerned with empowerment in general terms is rather small (Samman and Santos (2009) offer an overview). In fact, we have found only one study on this topic

(Lokshin and Ravallion, 2005); the vast majority of empirical studies investigate specifically women's empowerment. Another common feature of some of these studies is that they are not primarily concerned with socio-demographic determinants or correlates of empowerment per se. Instead, they investigate the empowering effect of specific economic characteristics or interventions, such as land ownership or microcredit programs, and add socio-demographic factors merely as control variables. We restrict our literature review to research that focuses on the intrinsic importance of empowerment, examines the determinants of empowerment, and uses direct measures of empowerment. However, one caveat applies – as Samman and Santos (2009) point out, most of the current literature identifies *correlates* of empowerment rather than its *causes*, i.e. the majority of studies does not address possible endogeneity problems, such as reverse causality, and thus cannot identify causal effects. The following overview starts with studies that do not address endogeneity issues and identify correlates of women's empowerment. Subsequently, two studies that correct for endogeneity are presented. The studies are summarized in Table 2.

[Table 2 approximately here]

Gupta and Yesudian (2006) focus on a sample of ever-married women in India. In order to measure empowerment, they create indices on women's mobility and participation in household decision making. In a logit regression, they find that women's educational level, literacy, age, mass media exposure, and wealth of the household are significant correlates of women's empowerment within the household.

Allendorf (2007a) investigates the impact of female agricultural workers' land rights on their empowerment in Nepal. Empowerment is measured by women's participation in household decision making. Ordinary Least Squares (OLS) and logit estimations reveal that women's ownership of land or livestock, effective land or livestock rights, and receipt of pay for work promote empowerment. Women's age and education have also expected but relatively weak empowerment effects, as have religion and caste of the respondent. Additionally, the position of a woman within the household

structure seems to be particularly important for her empowerment in terms of her participation in household's decision making.

In another study, Allendorf (2012) measures women's empowerment by their mobility and decision making in terms of spending. In an OLS regression, she identifies family relationship quality, area of residence, age, higher education, and employment outside the household as correlates of married mother's empowerment in India.

Other studies that find empowering effects of education in various countries are Malhotra and Mather (1997) for Sri Lanka, Hindin (2000) for Zimbabwe, Jejeebhoy and Sathar (2001) for India and Pakistan, and Jejeebhoy (2000) and Roy and Niranjan (2004) for India.

The only study that does not focus explicitly on women's empowerment is Lokshin and Ravallion (2005). In their analysis of Russian data, they find positive correlation between income and power. Concerning socio-demographic characteristics, men and educated individuals feel empowered. Younger and unemployed respondents, on the other hand, perceive themselves as less empowered.

The empirical studies presented until now find merely *correlates* of (women's) empowerment because they ignore a possible endogeneity bias. Two studies, that make an attempt to identify *determinants* of women's empowerment by addressing endogeneity problems, follow.

Garikipati (2008) measures Indian women's empowerment in terms of household decision making and ownership of assets and income. In a 2SLS tobit-logit regression, women's secondary education, household wealth status, and women's participation in a microcredit program are identified as significant determinants of empowerment.[4] Surprisingly, the latter shows a negative effect. This study has to be treated with a great deal of caution, though, because the data on women's empowerment were reported either by women themselves or by their husbands. As Allendorf (2007b) shows in her study on Nepal, husbands' and wives' perceptions on women's empowerment

[4] Women's participation in a microcredit program is endogenous due to self-selection. Therefore, it is instrumented by the size of respondent's neighborhood and by a dummy variable indicating whether the respondent belongs to a minority caste in her neighborhood.

differ substantially. Additionally and more importantly, using two nonlinear models (tobit and logit) in a 2SLS approach is, from econometrical point of view, incorrect and yields biased and inconsistent estimates (Stock and Watson, 2011).

Lastly, Anderson and Eswaran (2009) apply the 2SLS method in order to examine data on household heads' wives in Bangladesh. Again, empowerment is measured by women's participation in household decision making. Anderson and Eswaran (2009) correct for the endogeneity bias and find that value of woman's assets, woman's earnings from work, and the time a woman worked for income have positive impact on empowerment.[5] The household structure and age are also relevant. Surprisingly, the effect of age is negative.

To summarize, Kabeer's notion of 'resources' seem to matter for empirically matter for empowerment: education, literacy, age, and position within the household were identified as the main socio-demographic correlates of women's empowerment. Additionally, women's assets and income as well as the wealth of the household belong to economic correlates of women's empowerment. Studies focusing on empowerment in general are rare; they find that age, gender, education, employment, and income are significantly correlated with empowerment in general terms.

## 2.3 Hypotheses

Based on both the theoretical background and the empirical literature, we pose the following hypotheses regarding the correlates and determinants of agency and empowerment. First, we expect gender, age, position within the household, religion, ethnicity, education, employment, household wealth status, and area of residence to affect empowerment. Additionally, we expect marital status, foreigner status, and literacy to be relevant as well. Although these characteristics have not been explored so far, they are closely related to the correlates and determinants that were already identified. Lastly, we hypothesize that the self-reported capabilities of respondents are extremely

[5] Women's earnings from work and the time they worked for income, as potentially endogenous explanatory variables, are instrumented by exogenous shocks to the household, namely crop loss, sickness of a family member, and rainfall patterns.

relevant for empowerment, not least due to the close relationship between capabilities, agency, and empowerment.

In terms of empowerment within the community, certain groups of individuals are expected to be more influential than others. Socio-economic status, knowledge, experience, ethnic origin, and social standing are individual characteristics that are very likely to be relevant. In this sense, we hypothesize that wealth, employment, education and literacy, and being Gambian (rather than foreigner) leads to more communal empowerment. Similarly, age is expected to be a positive determinant of empowerment in the community, possibly with a diminishing marginal return. Apart from economic means and other factors mentioned to far, better health might cause individuals to feel more control over their life and therefore to feel more empowered in their communities. Gender norms and social norms might also play a role. When it comes to marital status and position within the household, household heads and married individuals might be more respected in their communities. What is unclear is whether being married has the same effect for both genders. Additionally, the type of marriage (polygamous or monogamous) could matter in terms of communal empowerment as well.

Second, in terms of the empowerment at the individual level, the question is whether individuals rely more on themselves or rather on their families or government. We expect that men rely more often on themselves whereas women more on their families. Also, younger individuals are expected to rely more on themselves and less on their families or the government. In terms of marital status and position within the household, household heads and married individuals might rely more often on their families whereas unmarried individuals on themselves. Furthermore, being employed, educated, literate, and foreigner might cause individuals to rely rather on themselves than on their families or the government. The effect of health is not clear ex ante. Concerning regional information, one can hypothesize that rural dwellers put higher expectations on their families due to stronger social networks in the villages and due to remittances sent from relatives working in the cities.

Furthermore, as a consequence of lower access to public goods in the villages, rural dwellers may expect the government to introduce developmental programs and improve infrastructure.

Lastly, the effects of tribal belonging and religious belief are not clear ex ante and will not be focused on in detail. However, it is important to include them in the analysis in order to control for cultural differences in The Gambia.

## 3. Context and data

The dataset used in this analysis stems from a household survey that was conducted in The Gambia in August 2008. The Gambia is the smallest country on the mainland of Africa, situated on the Western coast of the continent. It spreads along the river Gambia and, except for its Atlantic seaboard, it is entirely surrounded by Senegal. The climate is tropical with two distinct seasons – a hot rainy season between June and November and a cooler dry season between November and May (CIA, 2012). It belongs to the group of the least developed countries in the world, both from economic and developmental point of view. With its GDP per capita of 590 US$ in 2008, The Gambia falls into the Low Income group of countries. The GDP growth over the last five years has been relatively high, though, with annual growth rates of over 6% between 2007 and 2010. In spite of these relatively high growth rates, 48.4% of population lived below the national poverty line in 2010 (World Bank, 2012).From the developmental perspective, The Gambia ranked 155 out of 177 countries, i.e. in the Low Human Development group, according to the Human Development Index (HDI) in 2007/2008. The socio-demographic situation is characterized by a low life expectancy at birth (59 years for women and 56 years for men in 2008) and high fertility rates(5.1 births per woman in 2008); the maternal mortality reached 360 deaths per 100,000 births in 2010 (World Bank, 2012). 90% of Gambians are Muslims (CIA, 2012) and polygamous marriages are very common.

Our data stems from the 'Joint Rural Labor Force / Community Driven Development Project (CDDP) Baseline Survey' that was conducted in The Gambia in August 2008. The survey was implemented in order to collect baseline data for an impact evaluation of World Bank's CDDPs in

The Gambia and to study the characteristics of the Gambian rural labor force. A special module containing capability-approach and empowerment related questions was added in order to gather new unique data analyzed in this paper.[6] The survey collected information both at household and individual level. At the individual level, basic personal information, such as socio-demographic characteristics, was collected for all household members. Specific information, e.g. information on the Capability Approach, was gathered only for the survey respondents, who were mostly household heads (83.9% of respondents in the final sample). Since the questions on empowerment were asked within the block on the Capability Approach, our sample consists of one observation per household which is always the respondent. The final sample comprises 2184 observations on individuals with valid responses for all the variables used in the analysis.

Variables capturing empowerment in terms of communal and personal life are taken as dependent variables (see section 2.1 for the specific questions). The first dependent variable captures individuals' ability to change something in their communal life. As for empowerment at the individual level, one variable measures respondents' desire for a change in their lives and another variable captures respondents' expectations about who will contribute most to changes in their lives: respondents themselves (referred to as 'myself' hereafter), their family, the government, and other actors.[7] This variable is available only for those respondents who indicated that they want to change something in their lives, i.e. the sample size for this dependent variable is smaller.

Table 3 gives an overview of the explanatory variables and of our hypotheses on how they affect communal and individual empowerment. The variables encompass socio-demographic and socio-economic characteristics, spatial information, and self-reported information on capabilities.

[Table 3 approximately here]

[6] Since the sampling processes differed in rural and urban areas, the survey is not representative unless special sampling weights are applied. Our sample is not nationally representative given that only one household member was interviewed on empowerment related questions.

[7] Originally, there were eight answer choices. Four of them (Village development committee, Our community (village), The ward development committee, and Don't know) were subsumed into the already existing category 'Other'. The main reason was an extremely low response rate for these categories (less than 2% for each category).

As outlined earlier, the socio-demographic variables that are expected to affect empowerment include age, gender, marital status (currently not married, living in a monogamous marriage, living in a polygamous marriage), position within the household (household head or regular household member), religion (Muslim or other religion, i.e. majority or minority religion), ethnicity (tribe), and foreigner status (Gambian or foreigner). Socio-economic variables include education (attended school or not), literacy, economic activity (engages or is willing to engage in economic activities or not), and two variables created to capture short-term and long-term economic well-being of the household. Among the economic variables, short-term economic well-being is represented by the logarithm of expenditure aggregate. In general, expenditure reflects the actual economic situation of the household better than income because it is less volatile. We measure expenditure on 15 groups of items per year and in equivalence scales. The second economic variable reflects household's accumulated wealth in form of assets, and therefore its long-term economic situation. Based on 16 household's assets, a wealth index was created using polychoric principal component analysis (PCA) following an approach by Filmer and Pritchett (2001), and refined by Kolenikov and Angeles (2009). Based on the wealth index, a household's wealth percentile was created.

Spatial information included refers to the area of residence of the household (rural or urban) and on the local government area (LGA; the administrative unit in The Gambia). The self-reported information on capabilities comprises respondents' assessment of their health, accommodation, happiness, and whether they are being treated with respect or unfairly. Only the health-related variable will enter the regressions on empowerment.

## 4. Empirical results

This section presents both descriptive statistics and empirical results on correlates and determinants of empowerment. Each indicator of empowerment is investigated in a different model, depending on the nature of the indicator. We employ generalized ordered logit, binary probit, and multinomial logit models. In addition, we test and correct for a possible sample selection bias in a Heckman probit

model. However, these models do not detect causal relationships due to possible endogeneity of some explanatory variables, particularly reverse causality and simultaneity. Therefore, they detect *correlates* of empowerment rather than its *determinants*. The second step of the analysis represents an attempt to correct for possible endogeneity by applying a 2SLS technique. Given strong simplifying assumptions that will be made in both stages of the 2SLS estimation, the corresponding results are interpreted qualitatively rather than quantitatively.

## 4.1 Descriptive statistics

Table A1 in the appendix summarizes the descriptive statistics of respondents' characteristics, both overall and disaggregated by respondents' "empowerment status" on communal and individual level. Table A2 gives an overview of the empowerment variables, both overall and disaggregated by respondents' characteristics.

The average respondent (Table A1) is 47 years old, male, household head, Muslim, Gambian, with no education, illiterate, economically active, and living in a monogamous marriage in rural area. Most of the respondents live in the LGA Brikama and belong to the tribe Fula. The majority of respondents is not limited at all in their daily activities by their health, feels happy, has suitable accommodation, and is always treated with respect and never unfairly. An average respondent in the *restricted* sample has the same profile, as shown in the column 'Wants change' in Table A1.

When looking at the distribution of empowerment at communal level (Table A2 in the appendix), one half of the sample falls into the middle category (change possible albeit with difficulty), and one third feels completely empowered in the sense that people like them can change things in their community easily if they want to. At the individual level, most respondents (94%) wish to change something in their lives. Out of them, one third of respondents relies on themselves, another third on

their family, one fourth has expectations towards the government and 7% of the sample rely on other actors.[8]

## 4.2 Correlates and determinants of empowerment at communal level

The main objective of this section is to determine the respondents' characteristics that are associated with higher or lower levels of perceived empowerment at communal level. In response to the question whether they feel that people like themselves can generally change things in their community if they want to, the respondents could answer: 'Yes, easily', 'Yes, with difficulty' and 'No, not at all'. The resulting variable is ordinal and is examined using the generalized ordered logit model.[9] The first column of Table 4 shows the estimated odds-ratios; variables which violate the parallel regression assumption have two odds-ratios. Except for the variables *not Muslim*, *log(expenditure)*, and *urban*, all odds-ratios are significant at least at 10% significance level.[10]

[Table 4 approximately here]

The strongest effects are observed for foreigners as compared to the Gambians and for health-related variables. In particular, the odds of feeling any degree of empowerment ('change with difficulty' or 'change easily') as compared to no empowerment in the community are 2.65 times higher for the Gambians than for foreigners, holding all other variables constant.[11] This is one of the few cases

[8] There are some unexpected findings in the data: people completely limited by their health seem to rely on the government or on themselves rather than on their families. Furthermore, those being partially limited by their health feel disproportionately empowered in their communities. See also the discussion below on interpreting these effects.

[9] A logit model is preferred over probit because the former offers the possibility to interpret coefficients in terms of odds-ratios. The originally preferred ordered logit model cannot be used because it is based on a parallel regression assumption, which means that the coefficients are assumed to be identical across all categories of the dependent variable. This assumption was tested by both the Brant test and the approximate Likelihood Ratio test, as proposed by Long and Freese (2006), and was rejected at 1% significance level. The generalized ordered logit model, proposed by Williams (2006), starts with the parallel regression assumption but allows estimating separate coefficients for comparison of adjacent categories for those variables for which the parallel regression assumption is violated. These variables include *foreigner*, *literate*, *log(expenditure)*, *urban*, four regional variables (LGAs), and the tribe Wollof. The significance level used for testing the parallel regression assumption was set to 5%.

[10] Despite being individually insignificant, the variables on tribal belonging are jointly significant at 5% significance level.

[11] The odds-ratios represent a comparison between the category represented by the dummy variable and the base category. In order to compare the reverse, i.e. the left-out category with the category in the regression, the inverse of the odds-ratio must be taken (1/odds-ratio). Since odds-ratios higher than 1 are easier to comprehend than those below 1, the

when two separate coefficients were estimated and one notices that the second odds-ratio, which compares full empowerment with partial or no empowerment, is lower both in magnitude and significance. Concerning health, the changes in odds are even larger. People limited a lot by their health have 2.98 times higher odds to feel more able to change their communal life than people with a complete health limitation, which is the strongest effect in the regression. Remarkably, the odds when comparing absolutely healthy people to those completely limited are not as strong (2.34). Education (odds-ratio 1.52) and literacy (odds-ratio 1.44; comparison of any degree of empowerment to no empowerment) are also important correlates of higher levels of communal empowerment. Further effects that are significant and of considerable magnitude occur for gender, economic activity, and marital status. In particular, people living in polygamous marriages feel more able to change matters in their communities than both unmarried respondents (odds-ratio 1.41) and monogamously married people (odds-ratio 1.24). Additionally, there are regional effects of considerable magnitude which will not be elaborated in further detail. Variables representing age and wealth have statistically significant but economically insignificant coefficients; the variable distinguishing household head from an ordinary household member is only marginally significant.

Some explanatory variables, namely education, literacy, economic activity, and wealth may suffer from endogeneity problems such as reverse causality or unobserved heterogeneity. It is not clear a priori whether these four variables enable and facilitate empowerment or whether they result from empowerment. Since they are important and significant correlates of empowerment, as indicated both in our analysis and in various empirical studies presented in section 2, we correct for possible endogeneity in an instrumental variables approach.[12] The 2SLS procedure yields qualitatively similar

comparisons will always be made for the constellation in which the odds-ratio is larger than 1. All the interpretations that follow are to be understood as holding all other explanatory variables constant.

[12] We apply the 2SLS method in order to correct for possible endogeneity biases. In the first stage, the instrumental variables (IVs) chosen for respondents' education, literacy, and economic activity are average education, literacy, and engagement in paid work in respondent's village. The calculation is based on all adults in the village (available in our data) except for the respondent. As for wealth percentile, which is measured at household level, the IV is the average wealth percentile in respondent's village. Again, the calculation is based on all households in the village except for the respondent's household. All IVs are individually significant with regard to their respective endogenous variables and they are also jointly significant in all first stage regressions, see Table A3. We believe that these instruments do not

results to OLS (see columns 2 and 3 in Table 4) which supports the view that these variables can be interpreted causally as determinants of communal empowerment.

In Table A4, we calculate the changes in the probability of feeling a certain degree of communal empowerment when the explanatory dummy variable switches from 0 to 1, i.e. the marginal effects. Table A4 summarizes the changes in these probabilities evaluated at the median of the explanatory variables and indicates whether they are statistically significant. Most of them lie between 3 and 8 percentage points (p.p. hereafter) although some changes are substantially larger, up to 21.1 p.p.. Health, which was confirmed as a significant determinant of communal empowerment also in the 2SLS, shows the largest effects, as expected from the analysis of the odds-ratios. The health-related variable comprises four ordered categories. Probability changes between virtually all combinations of these four categories are significant, which means that the effects occur not only when comparing the worst category ('health completely limiting') to any better category but also when comparing the categories gradually. This result was not visible in the regression in the first column of Table 4. The results regarding health can be summarized as follows: Generally, less limiting health leads to a significantly lower probability of individuals thinking that they cannot change anything at all and to a higher probability of thinking that they can change things in their community easily. It also leads to a lower probability in the middle category ('change with difficulty') but these effects are not always significant and are smaller in magnitude.

Another interesting finding concerns the effect of gender and marital status. For women, the probability to feel no empowerment at all or partial empowerment is higher by 3.3 and 2.8 percentage points than for men, respectively. Accordingly, the probability to be able to change things easily is 6.1 p.p. higher for men than for women. Concerning marital status, statistically significant

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directly influence our dependent variable, i.e. they are exogenous. Their exogeneity together with their relevance (they affect the endogenous explanatory variables significantly) make them valid instruments.

The second stage of the 2SLS has been estimated with some simplifications: The dependent variable is treated as a continuous variable that indicates ascending easiness in changing one's community life. Four variables are statistically significant in the 2SLS estimation: age, marital status, education, and health. All of these variables show stronger effects than they have in the OLS regression, see columns 2 and 3 of Table 4.

We are happy to provide more information on this analysis upon request.

differences occur between polygamous and monogamous marriages, and between polygamous marriages and people living without a partner (i.e. never married, divorced, widowed). Generally, people in polygamous marriages feel more empowered – the probability that they can change things easily is 7.7 and 4.9 p.p. higher for them than for unmarried and for those living in monogamous marriages, respectively. Since polygamy affects men and women in a different way, a new estimation was made allowing for interactions between marital status and gender. The results are shown in the lower panel of Table A4. As expected, it is explicitly the polygamous men who turn out to feel more influential in their communities. The probability that they feel fully empowered is significantly higher when compared to unmarried males (14.0 p.p.), to men living in monogamous marriages (7.2 p.p.) and to women living in polygamous marriages (15.6 p.p.). At the same time, polygamous men feel hardship or powerlessness in changing their communal life with a significantly lower probability than their counterparts, the effects lie between 2.8 and 7.9 p.p.. As for the monogamously married men, there is weak evidence that they feel more empowered when compared to unmarried men and to women in monogamous marriages. In the light of these findings, the gender and marital status effects observed in the original specification are misleading. In particular, lower female empowerment occurs only within (polygamous) marriages. Marital effects emerge only for men: married men feel more influential than unmarried men and men living in polygamous marriages feel generally more empowered in their communities.

The remaining two effects concern education and age. People who went to school tend to feel completely empowered with a higher probability (9.7 p.p.) than their counterparts. In contrast, those who did not go to school are significantly more prone to feel difficulties in changing things (6.2 p.p. higher probability) or not being able to change anything at all in their community (3.6 p.p. higher probability). Given that a comparison of the OLS and 2SLS regressions in Table 4 indicates a large downward endogeneity bias one can assume that the effects of education on communal empowerment are in reality considerably larger than what was estimated in Table A4. Concerning the age, there is a positive diminishing effect. Getting older means more empowerment and less

disempowerment in the community. However, this effect is strong only for young people and it becomes less prevalent as they grow older, until it disappears completely. For example, becoming 10 years older means a 4.5 p.p. higher probability of full empowerment for a 20-year-old individual but only a 1.9 p.p. higher probability for a 40-year old.[13] For a 60-year old person, the probability becomes negative and insignificant. The turning point, after which there is a negative marginal effect of age on empowerment in the community, was estimated at 56 years of age.

## 4.3 Correlates and determinants of empowerment at individual level

We now shift from empowerment at the communal level to empowerment at the individual level. In order to analyze this issue, two stages will be considered in the analysis. In the first stage, the focus will be on respondents' desire to change something in their lives. Although it does not represent empowerment per se, it determines whether data on individual empowerment were collected. Therefore, its correlates will be examined. In the second stage, perceptions of individual empowerment will be explored conditionally on the existence of the desire for change. In particular, the question of interest will be who is expected to contribute most to any changes in respondent's life.

### 4.3.1 Desire to change something in one's life

When looking for correlates of the desire to change something in one's life at individual level, two specifications will be estimated. First, a probit model without self-reported capability variables will be fitted.[14] Subsequently, capability variables will be added in order to see whether self-reported variables alter the explanatory power of objectively observed variables and whether they have added value in analyzing empowerment-related issues. Table 5 shows results of both probit specifications. The first column indicates that age, religion, schooling, and wealth are statistically significant correlates of the desire for change. There are also regional effects. When self-reported variables on

[13] The latter effect corresponds to '10 years increase around the median' in Table A4.

[14] Although a *logit* model was preferred in the previous section due to the possibility to interpret results in terms of odds-ratios, a probit model is the preferred one in this section. One of the reasons is its comparability to a Heckman probit model which will be estimated later.

respondents' capabilities are added, none of the variables from the previous specification loses its importance. On the contrary, the coefficients generally become higher and are at least as significant as before. The only exception is wealth – its coefficient is relatively small in the first specification and it decreases further in the second regression, approximately by 40%, but stays significant. The newly added capability variables include health, happiness, accommodation, and perceptions regarding respectful and unfair treatment. All of them are highly significant.

[Table 5 approximately here]

Overall, the coefficients in the second column of Table 5 indicate a negative association between the desire for change and age, not being Muslim (i.e. belonging to a religious minority), being a foreigner, having formal education, and being wealthy. Regarding the self-reported variables, the effects can be grouped into three categories. First, there are straightforward effects of happiness and quality of accommodation – more happiness and better accommodation decrease the desire for change. Second, there seem to be nonlinear effects of health and respectful treatment in the sense that more respectful treatment and less health limitations are associated with decreases in the desire for change at first but with increases in such a desire afterwards. For instance, those who are treated with respect always or occasionally seem to be more prone to wish to change their lives than their counterparts who are treated with respect frequently. Lastly, there is a rather counter intuitive finding on unfair treatment – those who are treated unfairly less often show bigger desire for change. It is striking that this pattern holds even when controlling for socio-demographic characteristics and subjective measures of life satisfaction.

When we calculate the marginal effects, i.e. the changes in probabilities at the mean of the explanatory variables, we find that nearly all self-reported capability variables show marginal effects that are both statistically and economically significant (results not shown). Happiness and good accommodation lead to less need to change things in one's life – the marginal effects are around 3 p.p. and 5 p.p., respectively. The marginal effects corresponding to better health and more respect are approximately -2.7 p.p. and -3.4 p.p., respectively. However, they are substantial only when the

average individual moves out of the worst health or respect-related category and they become rather negligible with further improvements. Overall, these results confirm the expectation that the desire to change one's life depends on both objectively observable and self-reported variables. What is more, persons' self-reported capabilities seem to be much more relevant than their socio-demographic characteristics.

### 4.3.2 Correlates and determinants of empowerment at individual level

After studying the determinants of wishing to change things, the following analysis is performed conditionally on the existence of such a desire. Respondents' expectations about actors contributing most to changes in their lives will be examined in order to find their correlates and determinants. Actors who can bring about changes in respondents' lives are respondents themselves, their families, the state government, and other actors. Given that these categories are represented by a nominal variable, a multinomial logit model was employed in order to make pairwise comparisons between all categories. Table 6 shows the resulting six sets of odds-ratios.[15] The last three columns show that odds-ratios related to the category 'other actors' are hardly ever significant. Therefore, the following analysis will focus only on pairwise comparisons among the remaining three categories. Generally, respondents' ability to change their lives on their own is significantly influenced by their age, gender, health, and foreigner status. Reliance on family depends on economic activity of the individual. Expectations towards government depend on wealth and area of residence of the household. Lastly, marital status is correlated with the decision whether to rely on government or family. A more detailed analysis of these general patterns follows.

[Table 6 approximately here]

When comparing the categories 'myself' and 'family', the strongest effects in the whole regression emerge for health, gender, and foreigner variables. Health-related variables show the strongest effects overall but their direction are somewhat surprising. According to the results, respondents

[15] The corresponding marginal effects evaluated in terms of changes in probabilities at the median of the explanatory variables are shown in Table A5.

completely limited by their health are much more prone to rely on themselves (rather than on their family) than people with less or even no health-related limitations. In particular, the odds of relying on themselves are 3.63 and 4.14 times higher for the completely limited individuals when compared to those a lot limited and somewhat limited, respectively. This means that less limited people are by 263% and 314% more prone to rely on their families when compared to the disabled individuals. What is more, even those who are not limited at all have 1.76 times higher odds to expect their family to change their life than the disabled respondents. One possible explanation is that disabled individuals have learned that they cannot rely much on others in this generally poor socio-economic environment and consequently expect not much assistance. With regard to other substantial effects, women, when compared to men, are 2.75 times more prone to rely on their families than on themselves. Foreigners, on the other hand, tend to rely on themselves 2.43 times more often than the Gambians. Furthermore, economically inactive people are 1.67 times more prone to expect their families to contribute to changes in their own lives. Lastly, age shows a positive effect in favor of reliance on the family; the economic significance is negligible, though. Those effects are all in line with the hypotheses stated above.

The same pattern (in favor or to the detriment of the category 'myself') emerges also when comparing the choices 'myself' and 'government'. The magnitudes of the odds-ratios are smaller, though, and the economic activity variable is insignificant. Instead, the area of residence is significant – urban dwellers are 1.61 times more prone to rely on themselves than rural dwellers and the inhabitants of rural areas are, correspondingly, by 61% more likely to rely on the government than urban residents. The wealth percentile is statistically but not economically significant.

The last comparison comprises the categories family and government. Wealth and urbanization effects are similar to the previous case. Whereas the magnitude of the urbanization odds-ratio is smaller than it was in case of myself-government comparison, the wealth odds-ratio is larger, albeit still economically insignificant. Furthermore, economic activity is statistically significant: economically inactive people expect more support from their families whereas the active ones rely

1.84 times more often on the government. A very similar effect was present in the myself-government comparison as well. What is completely new are the marital status effects. People living in polygamous marriages tend to expect more from their families than from the government – they do 1.59 and 1.34 times more often than unmarried and monogamous people, respectively.

As was already mentioned, the variable measuring empowerment at individual level is observed only for those respondents who indicated that they want to change something in their lives. This is a potential source of sample selection bias because the restricted sample was selected in a non-random way. Despite the non-random sampling, there are two indications that the sample selection bias might not be present. First, the fraction of the "excluded" observations is small (6% of the full sample). Second, the selection criterion is correlated only with a few explanatory variables from the empowerment-regression. More precisely, most of the objectively observable respondents' characteristics turned out to be either statistically or economically insignificant when the desire for change was modeled in section 4.3.1, see Table 5. Both these facts indicate that the correlates of empowerment at individual level, which were presented in the previous section, should not be affected greatly by the sample selection. Nevertheless, we run a separate Heckman probit model for each of the actors ('myself', 'family', 'government') in order to provide empirical evidence for such a statement. Table A6 shows sample-selection-adjusted Heckman probit and unadjusted probit models for each actor. The signs and significances of coefficients in the Heckman probit model are consistent with the multinomial logit estimations presented in Table 6. Also, the differences between Heckman probit and unadjusted probit models are rather negligible. Therefore, we conclude that the sample selection, although it is indicated by a Likelihood Ratio test, is clearly of little practical importance and does not alter the results substantially.[16]

Similarly to the communal empowerment, we run a 2SLS regression in order to avoid possible endogeneity bias in education, literacy, economic activity, and wealth. A linear probability model is

[16] The Likelihood Ratio test of independent equations shows that there is a sample selection bias in case of actors 'myself' (p-value 0.025) and 'government' (p-value 0.007); 'family' equation does not suffer from this problem (p-value 0.402).

estimated in the second stage for each actor separately (see Table A7 for the first stages and Table A8 for the second stages and simple OLS results for comparison).[17] The 2SLS identifies health, gender, foreigner status, position within the household, and economic activity as the main statistically and economically significant determinants of empowerment at individual level; marital status and literacy are only marginally significant.

To sum up the main results, partially disabled people tend to rely on their families and government whereas those with great or no health problems expect to change their lives on their own. Women, as compared to men, are less prone to rely on themselves and more prone to expect their families to change their own lives. The opposite is true for foreigners – they expect to change their lives on their own whereas the Gambians rely more often on their families. Also, people not engaged and not planning to engage in economic activities feel more often than their counterparts that their families will contribute to changes in their lives. Regarding marital status, monogamously married people rely more often on government than those living in polygamous marriages. Lastly, literate respondents are more prone to rely on their government than their illiterate counterparts.

## 4.4 Discussion of the results

A qualitative summary of the results obtained in all estimations is shown in Table 7.

[Table 7 approximately here]

The correlates of empowerment at communal level in The Gambia were found to be age, gender, marital status and arrangement, foreigner status, education, literacy, economic activity, health, and to a lesser extent also the area of residence and wealth. In particular, age was shown to have a positive but diminishing marginal effect, and gender effects were found to depend on the marital status and arrangement. Surprisingly, household headship and the wealth status of the household have no (economically) significant effect on empowerment in the community. While most findings confirm

[17] The Hausman test of endogeneity indicates that there is no endogeneity bias in the category 'myself' (p-value 0.333), whereas endogeneity is a problem in case of categories 'family' and 'government' (p-value 0.015 and 0.039, respectively).

our hypotheses stated above, a surprising finding was found in case of the health status: a lot limited individuals feel fully empowered more often than anyone else, even than those completely healthy. Correcting for possible endogeneity of education, literacy, economic activity, and wealth confirmed age, marital status, education, and health as significant determinants of communal empowerment.

In terms of the ability to change aspects in one's life at individual level, the analysis comprised two stages. In the first stage, the focus was on individuals' desire to change something in their lives. The results indicate that the desire to change one's life depends both on objectively observable characteristics and self-reported capabilities. The latter are much more important than the observable socio-demographic and economic characteristics.

In the second stage of the analysis, expectations about the actors contributing to any changes in one's life were analyzed, conditionally on the existence of a desire for change. Gender, foreigner status, age, and health are significant correlates of respondents' reliance on themselves or their families. In case of expectations towards the family, wealth of the household and economic activity of the respondent are relevant as well. The correlates of expectations towards the government are the area of residence, age, wealth, health, literacy, and marital status. Most of these effects are in line with what was expected. However, the health variable yielded a surprising result again: the disabled individuals were found to believe that *they themselves* will contribute most to any changes in their lives. Testing for possible sample selection bias showed no considerable deviations from the original results. When correcting for possible endogeneity, we concluded that the category 'myself' does not suffer from endogeneity problems. Thus, gender, foreigner status, age, and health are determinants of empowerment at individual level. The results in case of categories 'family' and 'government' are less clear. Nevertheless, marital status, economic activity, and health are confirmed as determinants of empowerment in the 'family' regression.

To sum up, age, health, and marital status are determinants of empowerment at both individual and communal level. Additionally, whereas education determines positively communal empowerment, gender, foreigner status, and economic activity determine empowerment at individual level. Given

these findings, policy interventions oriented at improvements in education and health sectors could lead to a rise in empowerment of less educated groups and of individuals constrained by their health problems.

## 5. Conclusion

The concept of empowerment is closely related to agency and thereby to human development. Since both agency and empowerment are not only intrinsically valuable but also instrumentally important for poverty reduction, this study investigated empirically the correlates and determinants of empowerment and agency. Further we asked which socio-demographic groups feel particularly empowered.

In our empirical analysis, we focused on empowerment at communal and individual level. Individuals' ability and willingness to induce changes in their lives as well as respondents' expectations about the actors who will most contribute to any changes in their lives were examined using a unique dataset from The Gambia. It contains not only new and superior direct measures of agency and empowerment but also self-reported data on capabilities. We included the latter in our analysis in order to complement socio-demographic and economic characteristics of respondents. Most importantly, this analysis is concerned with empowerment in general terms, i.e. no particular group is focused on a priori. In this sense it is a pioneer work because it gives new and valuable insights into empowerment of various socio-demographic groups in a developing country setting, not exclusively into women's empowerment. Additionally, econometric techniques aimed at correcting for possible sample selection and endogeneity biases have been applied.

This work was a first attempt to determine which characteristics and capabilities of individuals in a developing country setting are particularly relevant and causal for their empowerment. Future research could deploy more sensible econometric techniques such as General Method of Moments (GMM) in order to deal with endogeneity in a more sophisticated way. Also, availability of panel data would be of great importance as it would enable to explore changes in empowerment over time.

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# Tables

Table 1: Four types of power and empowerment

| Type of power | Type of empowerment |
|---|---|
| Power over | Empowerment as control:<br>control over personal decisions |
| Power to | Empowerment as choice:<br>domain-specific autonomy, household decision-making |
| Power with | Empowerment in community:<br>changing aspects in one's life at communal level |
| Power from within | Empowerment as change:<br>changing aspects in one's life at individual level |

Note: Based on Ibrahim and Alkire (2007), p. 388.

Table 2: Empirical studies of correlates and determinants of empowerment

| Study | Sample | Estimation method | Correction for endogeneity | Correlates/determinants |
|---|---|---|---|---|
| Gupta and Yesudian (2006) | ever-married women in India | logit regression | no | education, literacy, age, mass media exposure, household wealth |
| Allendorf (2007a) | female agricultural workers in Nepal | OLS, logit regression | no | ownership of land or livestock, effective land or livestock rights, pay for work, position in the household, age, education, caste, religion |
| Allendorf (2012) | married mothers in India | OLS | no | family relationship quality, area of residence, age, education, employment outside the household |
| Lokshin and Ravallion (2005) | adults in Russia | ordered probit regression | no | income, gender, education, age, employment |
| Garikipati (2008) | women in India | 2SLS tobit-logit regression | yes | education, participation in a microcredit program, household wealth |
| Anderson and Eswaran (2009) | household heads' wives in Bangladesh | 2SLS | yes | value of assets, time worked, earnings from work, age, position in the household |

Table 3: Overview of explanatory variables and expected influence on empowerment

| Explanatory variables | | | | Expectations regarding which groups are more empowered | |
|---|---|---|---|---|---|
| Type of variable | Variable | Original scale | Measurement | Communal empowerment | Individual empowerment |
| socio-demographic | age | cardinal | years | older | younger |
| | gender | nominal | dummy | men | men |
| | marital status | nominal | set of 3 dummies | married | unmarried |
| | position within the household | nominal | dummy | household head | regular household member |
| | religion | nominal | dummy | unclear | unclear |
| | ethnicity | nominal | set of 7 dummies | unclear | unclear |
| | foreigner status | nominal | dummy | Gambian | foreigner |
| socio-economic | education | nominal | dummy | educated | educated |
| | literacy | nominal | dummy | literate | literate |
| | economic activity | nominal | dummy | employed / economically active | employed / economically active |
| | expenditure (short-term well-being) | cardinal | logarithm | wealthy | (measured at household level) |
| | wealth index (long-term well-being) | cardinal | percentile | wealthy | (measured at household level) |
| regional | rural or urban | nominal | dummy | unclear | urban |
| | local government area | nominal | set of 8 dummies | unclear | unclear |
| self-reported capabilities | health status | ordinal | set of 4 dummies | healthy | unclear |
| | accommodation | ordinal | set of 3 dummies | - | - |
| | happiness | ordinal | set of 3 dummies | - | - |
| | treated with respect | ordinal | set of 3 dummies | - | - |
| | treated unfairly | ordinal | set of 4 dummies | - | - |

Table 4: Correlates and determinants of the ability to change things in one's community in a generalized ordered logit model, OLS, and 2SLS

| Explanatory variables | Ascending grade of easiness in inducing changes in one's community | | | |
|---|---|---|---|---|
| | Correlates | | | Determinants |
| | Generalized ordered logit model (Odds-ratios) | | OLS | 2SLS |
| Age | 1.043** | | 0.014** | 0.088** |
| Age squared | 1.000** | | -0.000** | -0.001* |
| Female | 0.746** | | -0.107** | -0.085 |
| Not married | 0.709** | | -0.116** | -0.237** |
| Monogamous marriage * | 0.806** | | -0.077** | -0.246** |
| Polygamous marriage | RC | | RC | RC |
| Not household head | 1.286* | | 0.095* | -0.123 |
| Not Muslim | 1.174 | | 0.061 | 0.038 |
| Foreigner | 0.377*** | 0.692* | -0.238*** | 0.145 |
| Went to school | 1.516*** | | 0.139*** | 1.859** |
| Literate | 1.438*** | 1.044 | 0.058 | 0.091 |
| Economically inactive | 0.764** | | -0.089** | 1.605 |
| Log(expenditure) | 1.064 | 1.024 | - | - |
| Expenditure missing | 1.217 | | - | - |
| Wealth percentile | 1.006** | | 0.002*** | -0.015 |
| Health completely limiting | RC | | RC | RC |
| Health a lot limiting | 2.977*** | | 0.376*** | 0.481*** |
| Health somewhat limiting | 1.725*** | | 0.192*** | 0.401* |
| Health not limiting * | 2.336*** | | 0.299*** | 0.519** |
| Urban | 1.372 | 0.853 | -0.010 | -0.031 |
| LGA Banjul | 0.203*** | 0.832 | -0.223*** | -0.084 |
| LGA Kanifing | 0.333*** | 0.793 | -0.171*** | -0.080 |
| LGA Brikama * | RC | | RC | RC |
| LGA Mansakonko | 0.317*** | 1.243 | -0.163** | -0.228 |
| LGA Kerewan | 1.275 | | 0.076 | 0.089 |
| LGA Kuntaur | 0.628** | 1.031 | -0.074 | 0.082 |
| LGA Janjanbureh | 1.922*** | | 0.220*** | 0.104 |
| LGA Basse | 1.513** | | 0.122** | 0.211 |
| Tribe Mandinka | 1.028 | | 0.006 | 0.001 |
| Tribe Fula * | RC | | RC | RC |
| Tribe Wollof | 0.753 | 1.267 | 0.005 | -0.026 |
| Tribe Jola | 0.813 | | -0.079 | -0.170 |
| Tribe Sarehuleh | 1.679 | | 0.149 | -0.158 |
| Tribe Sererr | 1.327 | | 0.071 | -0.199 |
| Other tribe | 0.886 | | -0.038 | -0.398* |
| Constant | - | - | 1.483*** | -0.137 |

Note: The reference categories (RC) are displayed for discrete variables with more than two categories. The mode categories are marked with an asterisk for discrete variables with more than two categories; they are left out for binary variables. Significance levels are marked as follows: * 10%, ** 5%, *** 1%. Sample size: 2184 observations. Odds-ratios from a generalized ordered logit model estimation are displayed in the 1st column. The generalized ordered logit model estimates one coefficient for each variable under the parallel regression assumption. Two coefficients are estimated for those variables where this assumption is violated. For those variables, the left column coefficient compares (Change easily or Change with difficulty) and (Change not possible). The right column coefficient compares (Change easily) and (Change with difficulty or Change not possible).

Table 5: Correlates of the desire to change something in one's life in a probit model

| Explanatory variables | Desire to change something in one's life | |
|---|---|---|
| | Without self-reported capability variables | With self-reported capability variables |
| Age | -0.013*** | -0.014*** |
| Female | 0.044 | 0.172 |
| Not married | -0.087 | -0.093 |
| Monogamous marriage * | -0.049 | -0.061 |
| Polygamous marriage | RC | RC |
| Not household head | -0.083 | -0.185 |
| Not Muslim | -0.411** | -0.544** |
| Foreigner | -0.230 | -0.316* |
| Went to school | -0.254* | -0.286** |
| Literate | 0.023 | 0.089 |
| Economically inactive | -0.114 | -0.084 |
| Log(expenditure) | 0.020 | 0.033 |
| Expenditure missing | -0.097 | -0.084 |
| Wealth percentile | -0.013*** | -0.008** |
| Health completely limiting | | RC |
| Health a lot limiting | | -0.891** |
| Health somewhat limiting | | -0.764* |
| Health not limiting * | | -0.574 |
| Unhappy | | RC |
| Happy * | | -0.285 |
| Very happy | | -0.719*** |
| Accommodation unsuitable | | RC |
| Accommodation suitable * | | -0.557*** |
| Accommodation very suitable | | -1.110*** |
| Respected never or occasionally | | RC |
| Respected frequently | | -1.030*** |
| Respected always * | | -0.643* |
| Treated unfairly always | | RC |
| Treated unfairly frequently | | 0.429* |
| Treated unfairly occasionally | | 0.427** |
| Treated unfairly never * | | 0.475** |
| Urban | -0.098 | -0.074 |
| LGA Banjul | -0.435* | -0.538** |
| LGA Kanifing | -0.819*** | -0.853*** |
| LGA Brikama * | RC | RC |
| LGA Mansakonko | -0.178 | -0.126 |
| LGA Kerewan | -0.722*** | -0.797*** |
| LGA Kuntaur | -0.316 | -0.540* |
| LGA Janjanbureh | -0.405 | -0.408 |
| LGA Basse | -0.464** | -0.464* |
| Tribe Mandinka | 0.118 | 0.005 |
| Tribe Fula * | RC | RC |
| Tribe Wollof | -0.228 | -0.438*** |
| Tribe Jola | 0.246 | 0.200 |
| Tribe Sarehuleh | -0.212 | -0.380 |
| Tribe Sererr | 0.205 | 0.037 |
| Other tribe | 0.161 | 0.071 |
| Constant | 3.592*** | 5.134*** |

Note: Coefficients from a probit model estimation are displayed. The reference categories (RC) are displayed for discrete variables with more than two categories. The mode categories are marked with an asterisk for discrete variables with more than two categories; they are left out for binary variables. Significance levels are marked as follows: * 10%, ** 5%, *** 1%. Sample size: 2184 observations.

Table 6: Correlates of the expectations concerning who will contribute most to any changes in one's life in a multinomial logit model

| Explanatory variables | Pairwise comparisons of the actors expected to contribute most to any changes in one's life | | | | | |
|---|---|---|---|---|---|---|
| | Myself vs. Family | Myself vs. Government | Family vs. Government | Other vs. Government | Other vs. Family | Other vs. Myself |
| Age | 0.983*** | 0.983*** | 1.000 | 1.000 | 1.000 | 1.017** |
| Female | 0.364*** | 0.436*** | 1.200 | 0.823 | 0.686 | 1.886** |
| Not married | 1.148 | 0.724 | 0.631** | 1.096 | 1.737* | 1.513 |
| Monogamous marriage * | 1.018 | 0.759* | 0.745** | 0.788 | 1.058 | 1.039 |
| Polygamous marriage | RC | RC | RC | RC | RC | RC |
| Not household head | 0.931 | 0.760 | 0.816 | 0.832 | 1.019 | 1.094 |
| Not Muslim | 0.861 | 0.544* | 0.632 | 0.524 | 0.830 | 0.964 |
| Foreigner | 2.428*** | 1.649** | 0.679 | 1.384 | 2.037* | 0.839 |
| Went to school | 1.352* | 1.156 | 0.855 | 1.126 | 1.317 | 0.974 |
| Literate | 1.016 | 0.758* | 0.745* | 0.706 | 0.947 | 0.932 |
| Economically inactive | 0.600*** | 1.106 | 1.844*** | 1.429 | 0.775 | 1.292 |
| Log(expenditure) | 1.096 | 1.070 | 0.976 | 1.096 | 1.123 | 1.024 |
| Expenditure missing | 3.199 | 1.816 | 0.568 | 1.675 | 2.951 | 0.922 |
| Wealth percentile | 0.995 | 1.008** | 1.013*** | 1.008 | 0.995 | 1.000 |
| Health completely limiting | RC | RC | RC | RC | RC | RC |
| Health a lot limiting | 0.276*** | 0.464** | 1.685 | 0.634 | 0.376* | 1.366 |
| Health somewhat limiting | 0.242*** | 0.343*** | 1.419 | 0.775 | 0.546 | 2.260 |
| Health not limiting * | 0.568** | 0.864 | 1.522 | 0.777 | 0.510 | 0.898 |
| Urban | 1.095 | 1.613** | 1.474** | 1.233 | 0.837 | 0.765 |
| LGA Banjul | 0.472** | 0.752 | 1.595 | 6.738*** | 4.224*** | 8.955*** |
| LGA Kanifing | 0.810 | 1.382 | 1.706** | 3.095*** | 1.815 | 2.239** |
| LGA Brikama * | RC | RC | RC | RC | RC | RC |
| LGA Mansakonko | 0.857 | 0.917 | 1.071 | 2.144 | 2.002 | 2.337* |
| LGA Kerewan | 0.392*** | 0.659* | 1.684** | 0.902 | 0.536 | 1.369 |
| LGA Kuntaur | 0.701 | 0.589** | 0.841 | 0.997 | 1.185 | 1.692 |
| LGA Janjanbureh | 0.721 | 1.269 | 1.759** | 2.196* | 1.248 | 1.730 |
| LGA Basse | 0.869 | 0.756 | 0.870 | 0.297** | 0.341* | 0.392 |
| Tribe Mandinka | 0.797 | 1.048 | 1.316* | 1.209 | 0.919 | 1.153 |
| Tribe Fula * | RC | RC | RC | RC | RC | RC |
| Tribe Wollof | 0.910 | 0.585*** | 0.642** | 1.092 | 1.700 | 1.867* |
| Tribe Jola | 0.825 | 0.703 | 0.852 | 0.984 | 1.155 | 1.400 |
| Tribe Sarehuleh | 0.436* | 0.760 | 1.745 | 3.219* | 1.845 | 4.234** |
| Tribe Sererr | 1.006 | 1.088 | 1.082 | 1.782 | 1.648 | 1.638 |
| Other tribe | 1.201 | 1.501 | 1.249 | 2.001 | 1.601 | 1.333 |

Note: Odds-ratios from a multinomial logit estimation are displayed. The reference categories (RC) are displayed for discrete variables with more than two categories. The mode categories are marked with an asterisk for discrete variables with more than two categories; they are left out for binary variables. Significance levels are marked as follows: * 10%, ** 5%, *** 1%. Sample size: 2052 observations.

Table 7: Summary of correlates and determinants of empowerment at communal and individual level

| | Empowerment at communal level | | Empowerment at individual level | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Ascending grade of easiness in inducing changes in one's community | | Actors expected to contribute most to any changes in one's life | | | | | |
| | Correlates (generalized ordered logit) | Determinants (2SLS) | Correlates (multinomial logit) | | | Determinants (2SLS) | | |
| | | | Myself vs. Family | Myself vs. Government | Family vs. Government | Myself | Family | Government |
| Age | + | + | - | - | 0 | 0 | 0 | 0 |
| Age squared | - | - | | | | 0 | 0 | 0 |
| Female | - | 0 | - | - | 0 | - | 0 | 0 |
| Not married | - | - | 0 | 0 | - | 0 | - | + |
| Monogamous marriage * | - | - | 0 | - | - | 0 | 0 | + |
| Polygamous marriage | RC | RC | RC | RC | RC | RC | RC | RC |
| Not household head | + | 0 | 0 | 0 | 0 | 0 | - | + |
| Not Muslim | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 |
| Foreigner | - | 0 | + | + | 0 | + | 0 | 0 |
| Went to school | + | + | + | 0 | 0 | 0 | 0 | 0 |
| Literate | + | 0 | 0 | - | - | - | + | 0 |
| Economically inactive | - | 0 | - | 0 | + | 0 | + | - |
| Log(expenditure) | 0 | | 0 | 0 | 0 | | | |
| Expenditure missing | 0 | | 0 | 0 | 0 | | | |
| Wealth percentile | + | 0 | 0 | + | + | 0 | 0 | 0 |
| Health completely limiting | RC | RC | RC | RC | RC | RC | RC | RC |
| Health a lot limiting | + | + | - | - | 0 | - | + | 0 |
| Health somewhat limiting | + | + | - | - | 0 | - | + | 0 |
| Health not limiting * | + | + | - | 0 | 0 | 0 | + | 0 |
| Urban | 0 | 0 | 0 | + | + | 0 | 0 | 0 |
| Number of observations | 2184 | 2184 | 2052 | 2052 | 2052 | 2052 | 2052 | 2052 |

Note: The table shows whether the effect of the explanatory variable on the dependent variable is significantly positive (+), significantly negative (-) or whether it is insignificant (0) at 10% significance level. The reference categories (RC) are displayed for discrete variables with more than two categories; they are left out for binary variables. The mode categories are marked with an asterisk for discrete variables with more than two categories; they are left out for binary variables.

# Appendix

Table A1: Respondent's characteristics disaggregated by respondents' ability and willingness to change things in their life, and by respondents' expectations about who will contribute most to any changes in their life

| | Overall | Grade of difficulty in inducing changes in one's community | | | Desire to change something in one's life | | Actors expected to contribute most to any changes in one's life | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Change not possible | Change with difficulty | Change easily | Wants change | Does not want change | Myself | Family | Government | Other |
| Age | 46.8 | 46.7 | 46.8 | 46.8 | 46.6 | 50.4 | 44.3 | 48.2 | 47.3 | 47.0 |
| Male | 73.8 | 66.2 | 74.3 | 76.7 | 74.1 | 68.2 | 84.0 | 64.2 | 75.3 | 67.9 |
| Female | 26.2 | 33.8 | 25.7 | 23.3 | 25.9 | 31.8 | 16.0 | 35.8 | 24.7 | 32.1 |
| Not married | 14.3 | 19.5 | 14.0 | 12.1 | 13.8 | 21.2 | 11.7 | 15.0 | 12.5 | 24.1 |
| Monogamous marriage * | 59.9 | 60.4 | 60.3 | 59.1 | 59.8 | 61.4 | 63.3 | 56.0 | 61.8 | 54.0 |
| Polygamous marriage | 25.8 | 20.1 | 25.7 | 28.8 | 26.3 | 17.4 | 25.0 | 29.0 | 25.6 | 21.9 |
| Household head | 83.9 | 84.3 | 83.6 | 84.0 | 83.9 | 83.3 | 87.9 | 79.8 | 84.1 | 83.2 |
| Not household head | 16.1 | 15.7 | 16.4 | 16.0 | 16.1 | 16.7 | 12.1 | 20.2 | 15.9 | 16.8 |
| Muslim | 94.1 | 94.2 | 93.6 | 95.0 | 94.6 | 87.1 | 94.3 | 95.5 | 94.2 | 92.7 |
| Not Muslim | 5.9 | 5.8 | 6.4 | 5.0 | 5.4 | 12.9 | 5.7 | 4.5 | 5.8 | 7.3 |
| Gambian | 92.2 | 84.1 | 93.5 | 94.3 | 92.5 | 87.1 | 88.6 | 95.7 | 94.4 | 89.8 |
| Foreigner | 7.8 | 15.9 | 6.5 | 5.7 | 7.5 | 12.9 | 11.4 | 4.3 | 5.6 | 10.2 |
| Did not go to school | 72.4 | 80.5 | 73.1 | 67.3 | 73.8 | 50.8 | 69.4 | 75.9 | 79.5 | 65.0 |
| Went to school | 27.6 | 19.5 | 26.9 | 32.7 | 26.2 | 49.2 | 30.6 | 24.1 | 20.5 | 35.0 |
| Illiterate | 53.9 | 62.9 | 53.5 | 50.1 | 55.1 | 36.4 | 50.2 | 59.5 | 57.3 | 50.4 |
| Literate | 46.1 | 37.1 | 46.5 | 49.9 | 44.9 | 63.6 | 49.8 | 40.5 | 42.7 | 49.6 |
| Economically active | 83.8 | 79.1 | 83.8 | 86.2 | 84.7 | 69.7 | 89.7 | 77.2 | 89.1 | 81.0 |
| Economically inactive | 16.2 | 20.9 | 16.2 | 13.8 | 15.3 | 30.3 | 10.3 | 22.8 | 10.9 | 19.0 |
| Log(expenditure) | 7.8 | 7.2 | 8.0 | 7.8 | 7.8 | 8.2 | 7.8 | 8.0 | 7.1 | 8.3 |
| Wealth percentile | 50.5 | 49.3 | 50.6 | 50.8 | 48.8 | 76.8 | 49.9 | 52.8 | 38.7 | 59.2 |
| Health completely limiting | 5.0 | 8.0 | 6.0 | 2.2 | 5.3 | 1.5 | 6.1 | 3.5 | 6.8 | 4.4 |
| Health a lot limiting | 10.1 | 8.2 | 9.2 | 12.3 | 9.7 | 15.2 | 6.5 | 12.7 | 10.3 | 9.5 |
| Health somewhat limiting | 20.8 | 23.6 | 22.2 | 17.5 | 20.7 | 23.5 | 12.4 | 24.8 | 25.6 | 24.8 |
| Health not limiting * | 64.1 | 60.2 | 62.6 | 68.1 | 64.3 | 59.8 | 75.0 | 59.0 | 57.3 | 61.3 |
| Unhappy | 28.6 | 39.6 | 25.8 | 27.3 | 30.2 | 3.8 | 28.0 | 24.1 | 42.7 | 26.3 |
| Happy * | 59.8 | 52.5 | 63.5 | 58.0 | 59.8 | 59.8 | 62.2 | 63.5 | 50.7 | 62.0 |
| Very happy | 11.6 | 8.0 | 10.8 | 14.7 | 10.0 | 36.4 | 9.9 | 12.4 | 6.6 | 11.7 |
| Accomodation unsuitable | 34.0 | 41.2 | 33.4 | 31.2 | 35.9 | 4.5 | 32.3 | 31.7 | 46.7 | 35.8 |
| Accomodation suitable * | 58.4 | 53.0 | 60.4 | 58.0 | 58.0 | 63.6 | 60.9 | 62.3 | 48.1 | 57.7 |
| Accomodation very suitable | 7.6 | 5.8 | 6.2 | 10.8 | 6.1 | 31.8 | 6.8 | 5.9 | 5.2 | 6.6 |
| Respected occassionally or never | 5.7 | 9.3 | 6.8 | 2.2 | 5.9 | 1.5 | 4.9 | 6.1 | 7.2 | 6.6 |
| Respected frequently | 15.2 | 23.4 | 17.1 | 8.5 | 14.6 | 25.8 | 14.0 | 14.9 | 13.9 | 18.2 |
| Respected always * | 79.1 | 67.3 | 76.1 | 89.4 | 79.5 | 72.7 | 81.1 | 79.1 | 78.9 | 75.2 |
| Treated unfairly always | 7.1 | 4.1 | 6.5 | 9.4 | 6.6 | 14.4 | 7.9 | 4.9 | 8.0 | 3.6 |
| Treated unfairly frequently | 10.6 | 4.7 | 10.1 | 14.2 | 10.4 | 12.9 | 9.0 | 9.1 | 12.9 | 15.3 |
| Treated unfairly occasionally | 27.3 | 38.5 | 31.1 | 16.1 | 27.1 | 30.3 | 23.1 | 30.4 | 25.8 | 35.8 |
| Treated unfairly never * | 55.0 | 52.7 | 52.3 | 60.3 | 55.8 | 42.4 | 59.9 | 55.6 | 53.3 | 45.3 |
| Rural | 56.2 | 55.2 | 54.9 | 58.5 | 58.7 | 17.4 | 55.1 | 53.5 | 75.5 | 41.6 |
| Urban | 43.8 | 44.8 | 45.1 | 41.5 | 41.3 | 82.6 | 44.9 | 46.5 | 24.5 | 58.4 |
| LGA Banjul | 6.5 | 10.2 | 5.4 | 6.3 | 6.2 | 11.4 | 4.9 | 6.6 | 3.0 | 22.6 |
| LGA Kanifing | 21.0 | 25.8 | 21.3 | 18.1 | 18.6 | 59.1 | 21.3 | 21.4 | 8.7 | 26.3 |
| LGA Brikama * | 21.8 | 15.7 | 24.6 | 20.7 | 22.8 | 6.1 | 25.6 | 21.4 | 22.9 | 15.3 |
| LGA Mansakonko | 6.1 | 12.9 | 3.7 | 6.4 | 6.4 | 1.5 | 6.1 | 5.6 | 7.6 | 8.0 |
| LGA Kerewan | 12.2 | 8.5 | 12.3 | 13.9 | 12.3 | 10.6 | 9.2 | 15.9 | 13.3 | 7.3 |
| LGA Kuntaur | 10.6 | 15.7 | 9.8 | 9.3 | 11.1 | 3.0 | 9.5 | 7.9 | 18.5 | 8.8 |
| LGA Janjanbureh | 8.3 | 2.5 | 8.6 | 10.8 | 8.6 | 3.0 | 8.2 | 9.5 | 8.0 | 8.8 |
| LGA Basse | 13.4 | 8.8 | 14.3 | 14.5 | 13.9 | 5.3 | 15.3 | 11.7 | 18.1 | 2.9 |
| Tribe Mandinka | 30.9 | 26.6 | 31.9 | 31.5 | 31.5 | 21.2 | 29.2 | 37.5 | 27.8 | 27.0 |
| Tribe Fula * | 31.3 | 31.0 | 32.2 | 30.2 | 32.0 | 21.2 | 35.6 | 27.4 | 35.6 | 22.6 |
| Tribe Wollof | 13.6 | 17.0 | 11.4 | 15.3 | 13.0 | 24.2 | 11.3 | 11.1 | 16.7 | 17.5 |
| Tribe Jola | 9.0 | 11.3 | 9.4 | 7.4 | 9.2 | 6.8 | 9.0 | 9.1 | 9.3 | 9.5 |
| Tribe Sarehuleh | 1.9 | 1.6 | 1.6 | 2.6 | 1.7 | 5.3 | 1.1 | 2.5 | 1.0 | 3.6 |
| Tribe Sererr | 5.1 | 4.4 | 4.7 | 6.1 | 5.0 | 6.8 | 4.3 | 5.8 | 4.0 | 8.8 |
| Other tribe | 8.1 | 8.0 | 8.8 | 7.0 | 7.7 | 14.4 | 9.5 | 6.6 | 5.6 | 10.9 |
| Number of observations | 2184 | 364 | 1087 | 733 | 2052 | 132 | 719 | 693 | 503 | 137 |

Note: The table displays the sample mean in case of continuous variables (age, log(expenditure), wealth percentile) and the fraction of respondents with the corresponding characteristic in case of discrete variables. The mode category is listed first for binary variables and marked with an asterisk for discrete variables with more than two categories.

Table A2: Fractions of respondents with different possibilities to change something in their community, fractions of respondents willing to change something in their life, and fractions of respondents who expect a particular actor to contribute most to any changes in their life; disaggregated by respondent's characteristics

| | Grade of difficulty in inducing changes in one's community | | | Desire to change something in one's life | | Number of observations | Actors expected to contribute most to any changes in one's life | | | | Number of observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Change not possible | Change with difficulty | Change easily | Wants change | Does not want change | | Myself | Family | Government | Other | |
| Overall | 16.7 | 49.8 | 33.6 | 94.0 | 6.0 | 2184 | 35.0 | 33.8 | 24.5 | 6.7 | 2052 |
| Male | 15.0 | 50.2 | 34.9 | 94.4 | 5.6 | 1611 | 39.7 | 29.3 | 24.9 | 6.1 | 1521 |
| Female | 21.5 | 48.7 | 29.8 | 92.7 | 7.3 | 573 | 21.7 | 46.7 | 23.4 | 8.3 | 531 |
| Not married | 22.8 | 48.7 | 28.5 | 91.0 | 9.0 | 312 | 29.6 | 36.6 | 22.2 | 11.6 | 284 |
| Monogamous marriage * | 16.8 | 50.1 | 33.1 | 93.8 | 6.2 | 1309 | 37.1 | 31.6 | 25.3 | 6.0 | 1228 |
| Polygamous marriage | 13.0 | 49.6 | 37.5 | 95.9 | 4.1 | 563 | 33.3 | 37.2 | 23.9 | 5.6 | 540 |
| Household head | 16.8 | 49.6 | 33.6 | 94.0 | 6.0 | 1832 | 36.7 | 32.1 | 24.6 | 6.6 | 1722 |
| Not household head | 16.2 | 50.6 | 33.2 | 93.8 | 6.3 | 352 | 26.4 | 42.4 | 24.2 | 7.0 | 330 |
| Muslim | 16.7 | 49.5 | 33.9 | 94.4 | 5.6 | 2056 | 34.9 | 34.1 | 24.4 | 6.5 | 1941 |
| Not Muslim | 16.4 | 54.7 | 28.9 | 86.7 | 13.3 | 128 | 36.9 | 27.9 | 26.1 | 9.0 | 111 |
| Gambian | 15.2 | 50.5 | 34.3 | 94.3 | 5.7 | 2013 | 33.6 | 34.9 | 25.0 | 6.5 | 1898 |
| Foreigner | 33.9 | 41.5 | 24.6 | 90.1 | 9.9 | 171 | 53.2 | 19.5 | 18.2 | 9.1 | 154 |
| Did not go to school | 18.5 | 50.3 | 31.2 | 95.8 | 4.2 | 1581 | 33.0 | 34.7 | 26.4 | 5.9 | 1514 |
| Went to school | 11.8 | 48.4 | 39.8 | 89.2 | 10.8 | 603 | 40.9 | 31.0 | 19.1 | 8.9 | 538 |
| Illiterate | 19.4 | 49.4 | 31.2 | 95.9 | 4.1 | 1178 | 31.9 | 36.5 | 25.5 | 6.1 | 1130 |
| Literate | 13.4 | 50.2 | 36.4 | 91.7 | 8.3 | 1006 | 38.8 | 30.5 | 23.3 | 7.4 | 922 |
| Economically active | 15.7 | 49.8 | 34.5 | 95.0 | 5.0 | 1831 | 37.1 | 30.8 | 25.8 | 6.4 | 1739 |
| Economically inactive | 21.5 | 49.9 | 28.6 | 88.7 | 11.3 | 353 | 23.6 | 50.5 | 17.6 | 8.3 | 313 |
| Health completely limiting | 26.4 | 59.1 | 14.5 | 98.2 | 1.8 | 110 | 40.7 | 22.2 | 31.5 | 5.6 | 108 |
| Health a lot limiting | 13.6 | 45.5 | 40.9 | 90.9 | 9.1 | 220 | 23.5 | 44.0 | 26.0 | 6.5 | 200 |
| Health somewhat limiting | 18.9 | 53.0 | 28.1 | 93.2 | 6.8 | 455 | 21.0 | 40.6 | 30.4 | 8.0 | 424 |
| Health not limiting * | 15.7 | 48.7 | 35.7 | 94.4 | 5.6 | 1399 | 40.8 | 31.0 | 21.8 | 6.4 | 1320 |
| Unhappy | 23.1 | 44.9 | 32.1 | 99.2 | 0.8 | 624 | 32.5 | 27.0 | 34.7 | 5.8 | 619 |
| Happy * | 14.6 | 52.8 | 32.5 | 94.0 | 6.0 | 1306 | 36.4 | 35.9 | 20.8 | 6.9 | 1227 |
| Very happy | 11.4 | 46.1 | 42.5 | 81.1 | 18.9 | 254 | 34.5 | 41.7 | 16.0 | 7.8 | 206 |
| Accomodation unsuitable | 20.2 | 48.9 | 30.9 | 99.2 | 0.8 | 742 | 31.5 | 29.9 | 31.9 | 6.7 | 736 |
| Accomodation suitable * | 15.1 | 51.5 | 33.3 | 93.4 | 6.6 | 1275 | 36.8 | 36.3 | 20.3 | 6.6 | 1191 |
| Accomodation very suitable | 12.6 | 40.1 | 47.3 | 74.9 | 25.1 | 167 | 39.2 | 32.8 | 20.8 | 7.2 | 125 |
| Respected occassionally or never | 27.4 | 59.7 | 12.9 | 98.4 | 1.6 | 124 | 28.7 | 34.4 | 29.5 | 7.4 | 122 |
| Respected frequently | 25.5 | 55.9 | 18.6 | 89.8 | 10.2 | 333 | 33.8 | 34.4 | 23.4 | 8.4 | 299 |
| Respected always * | 14.2 | 47.9 | 37.9 | 94.4 | 5.6 | 1727 | 35.7 | 33.6 | 24.3 | 6.3 | 1631 |
| Treated unfairly always | 9.7 | 45.8 | 44.5 | 87.7 | 12.3 | 155 | 41.9 | 25.0 | 29.4 | 3.7 | 136 |
| Treated unfairly frequently | 7.4 | 47.6 | 45.0 | 92.6 | 7.4 | 231 | 30.4 | 29.4 | 30.4 | 9.8 | 214 |
| Treated unfairly occasionally | 23.5 | 56.7 | 19.8 | 93.3 | 6.7 | 596 | 29.9 | 37.9 | 23.4 | 8.8 | 556 |
| Treated unfairly never * | 16.0 | 47.3 | 36.8 | 95.3 | 4.7 | 1202 | 37.6 | 33.6 | 23.4 | 5.4 | 1146 |
| Rural | 16.4 | 48.7 | 35.0 | 98.1 | 1.9 | 1227 | 32.9 | 30.8 | 31.6 | 4.7 | 1204 |
| Urban | 17.0 | 51.2 | 31.8 | 88.6 | 11.4 | 957 | 38.1 | 38.0 | 14.5 | 9.4 | 848 |
| LGA Banjul | 26.1 | 41.5 | 32.4 | 89.4 | 10.6 | 142 | 27.6 | 36.2 | 11.8 | 24.4 | 127 |
| LGA Kanifing | 20.5 | 50.5 | 29.0 | 83.0 | 17.0 | 459 | 40.2 | 38.8 | 11.5 | 9.4 | 381 |
| LGA Brikama * | 12.0 | 56.1 | 31.9 | 98.3 | 1.7 | 476 | 39.3 | 31.6 | 24.6 | 4.5 | 468 |
| LGA Mansakonko | 35.1 | 29.9 | 35.1 | 98.5 | 1.5 | 134 | 33.3 | 29.5 | 28.8 | 8.3 | 132 |
| LGA Kerewan | 11.6 | 50.2 | 38.2 | 94.8 | 5.2 | 267 | 26.1 | 43.5 | 26.5 | 4.0 | 253 |
| LGA Kuntaur | 24.6 | 46.1 | 29.3 | 98.3 | 1.7 | 232 | 29.8 | 24.1 | 40.8 | 5.3 | 228 |
| LGA Janjanbureh | 5.0 | 51.4 | 43.6 | 97.8 | 2.2 | 181 | 33.3 | 37.3 | 22.6 | 6.8 | 177 |
| LGA Basse | 10.9 | 52.9 | 36.2 | 97.6 | 2.4 | 293 | 38.5 | 28.3 | 31.8 | 1.4 | 286 |
| Tribe Mandinka | 14.4 | 51.4 | 34.2 | 95.9 | 4.1 | 675 | 32.5 | 40.2 | 21.6 | 5.7 | 647 |
| Tribe Fula * | 16.5 | 51.2 | 32.3 | 95.9 | 4.1 | 684 | 39.0 | 29.0 | 27.3 | 4.7 | 656 |
| Tribe Wollof | 20.8 | 41.6 | 37.6 | 89.3 | 10.7 | 298 | 30.5 | 28.9 | 31.6 | 9.0 | 266 |
| Tribe Jola | 20.8 | 51.8 | 27.4 | 95.4 | 4.6 | 197 | 34.6 | 33.5 | 25.0 | 6.9 | 188 |
| Tribe Sarehuleh | 14.3 | 40.5 | 45.2 | 83.3 | 16.7 | 42 | 22.9 | 48.6 | 14.3 | 14.3 | 35 |
| Tribe Sererr | 14.3 | 45.5 | 40.2 | 92.0 | 8.0 | 112 | 30.1 | 38.8 | 19.4 | 11.7 | 103 |
| Other tribe | 16.5 | 54.5 | 29.0 | 89.2 | 10.8 | 176 | 43.3 | 29.3 | 17.8 | 9.6 | 157 |

Note: The mode category is listed first for binary variables and marked with an asterisk for discrete variables with more than two categories.

Table A3: First stage of a 2SLS estimation of communal empowerment

| Explanatory variables and instrumental variables | Endogenous explanatory variable | | | |
|---|---|---|---|---|
| | Went to school | Literate | Economically inactive | Wealth percentile |
| Age | -0.016*** | -0.012*** | -0.028*** | -0.080 |
| Age squared | 0.000** | 0.000* | 0.000*** | 0.001 |
| Female | -0.134*** | -0.347*** | 0.140*** | 1.132 |
| Not married | 0.048 | -0.026 | -0.007 | -2.450* |
| Monogamous marriage * | 0.050** | 0.010 | 0.011 | -3.300*** |
| Polygamous marriage | RC | RC | RC | RC |
| Not household head | 0.020 | 0.029 | 0.121*** | 1.305 |
| Not Muslim | 0.020 | 0.099** | 0.009 | 1.913 |
| Foreigner | -0.184*** | 0.006 | -0.026 | 0.956 |
| IV Went to school | 0.513*** | -0.089 | -0.142 | 12.066** |
| IV Literate | -0.083 | 0.822*** | 0.185** | 5.205 |
| IV Paid work | -0.053 | 0.635*** | -0.154** | -3.528 |
| IV Wealth percentile | 0.004*** | 0.002 | 0.000 | 0.602*** |
| Health completely limiting | RC | RC | RC | RC |
| Health a lot limiting | 0.016 | -0.090* | -0.105*** | -1.587 |
| Health somewhat limiting | 0.020 | -0.098** | -0.146*** | 0.031 |
| Health not limiting * | 0.039 | -0.062 | -0.175*** | 0.034 |
| Urban | 0.019 | 0.067* | 0.019 | 4.733*** |
| LGA Banjul | -0.002 | -0.039 | -0.038 | 3.301 |
| LGA Kanifing | 0.003 | 0.000 | 0.012 | 3.732** |
| LGA Brikama * | RC | RC | RC | RC |
| LGA Mansakonko | 0.129*** | 0.060 | -0.100*** | -4.554** |
| LGA Kerewan | 0.035 | -0.022 | -0.051* | -3.800** |
| LGA Kuntaur | 0.082* | -0.112** | -0.173*** | -5.460*** |
| LGA Janjanbureh | 0.109** | -0.049 | -0.082** | -6.376*** |
| LGA Basse | 0.053 | -0.171*** | -0.068* | -3.770* |
| Tribe Mandinka | 0.055** | 0.039 | -0.015 | 3.595*** |
| Tribe Fula * | RC | RC | RC | RC |
| Tribe Wollof | 0.046 | 0.023 | 0.031 | 4.313*** |
| Tribe Jola | 0.104*** | -0.031 | -0.074*** | -3.262** |
| Tribe Sarehuleh | 0.135** | 0.114 | 0.136*** | 8.424*** |
| Tribe Sererr | 0.202*** | 0.075 | -0.024 | 2.944 |
| Other tribe | 0.216*** | 0.013 | -0.001 | 0.617 |
| Constant | 0.399*** | 0.180 | 0.788*** | 16.254*** |

Note: First stage OLS regressions of four endogenous explanatory variables on instrumental variables (IV) and on exogenous explanatory variables are displayed. The IVs are jointly significant at 1% level in regressions explaining education, literacy, and wealth, and at 5% level in case of economic activity. The reference categories (RC) are displayed for discrete variables with more than two categories. The mode categories are marked with an asterisk for discrete variables with more than two categories; they are left out for binary variables. Significance levels are marked as follows: * 10%, ** 5%, *** 1%. Sample size: 2184 observations.

Table A4: Change in the probability to answer Change not possible / Change with difficulty / Change easily when asked about one's ability to change things in one's community

| | Grade of difficulty in inducing changes in one's community | | |
|---|---|---|---|
| | Change not possible | Change with difficulty | Change easily |
| Age (1 s.d. increase around median/mean) | -1.23** | -1.41* | 2.64** |
| Age (increase from 20 to 30 years) | -2.97** | -1.51** | 4.48*** |
| Age (10 years increase around median/mean) | -0.85** | -1.00* | 1.85** |
| Age (increase from 60 to 70 years) | 0.64 | 0.78 | -1.42 |
| Female vs. Male | 3.28** | 2.82** | -6.10** |
| Not married vs. Polygamous marriage | 3.33** | 4.33** | -7.67** |
| Monogamous vs. Polygamous marriage | 1.99** | 2.93* | -4.91** |
| Not married vs. Monogamous marriage | 1.35 | 1.41 | -2.75 |
| Not household head vs. Household head | -2.28* | -3.47 | 5.76 |
| Not muslim vs. Muslim | -1.51 | -2.11 | 3.62 |
| Foreigner vs. Gambian | 13.95*** | -6.41 | -7.54** |
| Went to school vs. Did not go to school | -3.55*** | -6.19*** | 9.74*** |
| Literate vs. illiterate | -3.16*** | 2.21 | 0.95 |
| Economically inactive vs. Active | 2.99* | 2.65** | -5.64** |
| Expenditure (10% increase around median/mean) | -6.28 | 1.10 | 5.18 |
| Wealth (10% points increase around median/mean) | -0.60** | -0.72** | 1.32** |
| Health a lot vs. completely limiting | -13.85*** | -7.22** | 21.07*** |
| Health somewhat vs. completely limiting | -8.22** | -0.99 | 9.21*** |
| Health not at all vs. completely limiting | -11.64*** | -3.89* | 15.53*** |
| Health somewhat vs. a lot limiting | 5.63*** | 6.23** | -11.86*** |
| Health not at all vs. a lot limiting | 2.21* | 3.34 | -5.55* |
| Health not at all vs. somewhat limiting | -3.42** | -2.90** | 6.31*** |
| Urban vs. Rural | -2.80 | 6.20** | -3.40 |
| | Interactions between gender and marital status | | |
| Male not married vs. Male monogamous marriage | 3.87 | 2.96** | -6.83* |
| Male not married vs. Male polygamous marriage | 6.70** | 7.31*** | -14.01*** |
| Male monogamous vs. Male polygamous marriage | 2.83*** | 4.35** | -7.18*** |
| Female not married vs. Female monogamous marriage | -0.14 | -0.07 | 0.21 |
| Female not married vs. Female polygamous marriage | -1.63 | -0.68 | 2.31 |
| Female monogamous vs. Female polygamous marriage | -1.50 | -0.61 | 2.10 |
| Female not married vs. Male not married | -0.49 | -0.24 | 0.73 |
| Female monogamous vs. Male monogamous marriage | 3.52 | 2.79* | -6.31* |
| Female polygamous vs. Male polygamous marriage | 7.85** | 7.75*** | -15.60*** |

Note: Based on generalized ordered logit model estimation. Changes in probabilities are measured in percentage points and evaluated at the median of the explanatory variables. Significance levels are marked as follows: * 10%, ** 5%, *** 1%.

Table A5: Change in the probability to answer Myself / Family / Government / Other when asked who will contribute most to any changes in one's life

| | Actors expected to contribute most to any changes in one's life | | | |
|---|---|---|---|---|
| | Myself | Family | Government | Other |
| Age (10 years increase around median/mean) | -4.22*** | 2.07*** | 1.85** | 0.29 |
| Age (1 s.d. increase around median/mean) | -6.01*** | 2.96*** | 2.64** | 0.41 |
| Female vs. Male | -21.51*** | 14.09*** | 7.11* | 0.31 |
| Not married vs. Polygamous marriage | -2.58 | -4.36 | 5.44 | 1.49 |
| Monogamous vs. Polygamous marriage | -2.66 | -1.68 | 4.38** | -0.04 |
| Not married vs. Monogamous marriage | 0.08 | -2.67 | 1.06 | 1.53 |
| Not household head vs. Household head | -4.18 | -0.34 | 4.51 | 0.01 |
| Not muslim vs. Muslim | -9.20 | -1.13 | 11.03* | -0.70 |
| Foreigner vs. Gambian | 15.35*** | -11.05*** | -4.60 | 0.30 |
| Went to school vs. Did not go to school | 5.19 | -4.41* | -1.02 | 0.24 |
| Literate vs. illiterate | -3.05 | -1.78 | 5.24** | -0.41 |
| Economically inactive vs. Active | -6.59 | 10.77*** | -4.60* | 0.42 |
| Expenditure (10% increase around median/mean) | 18.06 | -13.23 | -6.80 | 1.98 |
| Wealth (10% points increase around median/mean) | 0.28 | 1.30** | -1.60*** | 0.03 |
| Health a lot vs. completely limiting | -23.58*** | 18.15*** | 6.22 | -0.78 |
| Health somewhat vs. completely limiting | -28.64*** | 17.34*** | 10.63** | 0.67 |
| Health not at all vs. completely limiting | -7.54 | 8.29** | 0.18 | -0.93 |
| Health somewhat vs. a lot limiting | -5.07 | -0.81 | 4.42 | 1.45 |
| Health not at all vs. a lot limiting | 16.04*** | -9.86*** | -6.04 | -0.15 |
| Health not at all vs. somewhat limiting | 21.11*** | -9.05*** | -10.46*** | -1.60 |
| Urban vs. Rural | 6.39* | 0.66 | -6.58*** | -0.47 |

Note: Based on multinomial logit model estimation. Changes in probabilities are measured in percentage points and evaluated at the median of the explanatory variables. Significance levels are marked as follows: * 10%, ** 5%, *** 1%.

Table A6: Correlates of the expectations concerning who will contribute most to any changes in one's life in a Heckman probit model

| Explanatory variables | Separate models for actors expected to contribute most to any changes in one's life | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Myself | | | Family | | | Government | | |
| | Heckman probit | | Probit model (restricted sample) | Heckman probit | | Probit model (restricted sample) | Heckman probit | | Probit model (restricted sample) |
| | Selection model | Probit model | | Selection model | Probit model | | Selection model | Probit model | |
| Age | -0.014*** | -0.010*** | -0.010*** | -0.015*** | 0.006** | 0.005** | -0.012*** | 0.006** | 0.005* |
| Female | 0.155 | -0.536*** | -0.555*** | 0.162 | 0.356*** | 0.362*** | 0.147 | 0.136 | 0.153 |
| Not married | -0.083 | -0.054 | -0.045 | -0.092 | -0.193* | -0.201* | -0.124 | 0.17 | 0.168 |
| Monogamous marriage * | -0.111 | -0.061 | -0.06 | -0.074 | -0.08 | -0.083 | -0.116 | 0.146** | 0.147* |
| Polygamous marriage | RC | RC | RC | RC | RC | RC | RC | RC | RC |
| Not household head | -0.197 | -0.083 | -0.078 | -0.166 | -0.005 | -0.011 | -0.18 | 0.154 | 0.151 |
| Not Muslim | -0.512** | -0.218 | -0.162 | -0.534** | 0.01 | -0.025 | -0.520** | 0.374** | 0.308* |
| Foreigner | -0.319* | 0.340*** | 0.395*** | -0.321* | -0.391*** | -0.414*** | -0.301* | -0.059 | -0.111 |
| Went to school | -0.262* | 0.101 | 0.129 | -0.292** | -0.13 | -0.146* | -0.294** | 0.042 | 0.004 |
| Literate | 0.072 | -0.054 | -0.057 | 0.097 | -0.076 | -0.077 | 0.093 | 0.163** | 0.170** |
| Economically inactive | -0.034 | -0.176* | -0.173* | -0.062 | 0.317*** | 0.314*** | -0.075 | -0.201** | -0.230** |
| Log(expenditure) | 0.032 | 0.037 | 0.039 | 0.024 | -0.041 | -0.042 | 0.056 | -0.005 | -0.011 |
| Expenditure missing | -0.077 | 0.4 | 0.448 | -0.155 | -0.55 | -0.581 | 0.11 | 0.087 | 0.002 |
| Wealth percentile | -0.008** | 0 | 0.001 | -0.009** | 0.005*** | 0.005*** | -0.008** | -0.004** | -0.006*** |
| Health completely limiting | RC | RC | RC | RC | RC | RC | RC | RC | RC |
| Health a lot limiting | -0.898** | -0.607*** | -0.571*** | -0.917** | 0.580*** | 0.549*** | -0.822* | 0.147 | 0.078 |
| Health somewhat limiting | -0.799* | -0.713*** | -0.695*** | -0.803* | 0.521*** | 0.496*** | -0.712* | 0.245* | 0.197 |
| Health not limiting * | -0.572 | -0.183 | -0.162 | -0.61 | 0.306** | 0.289* | -0.505 | -0.004 | -0.04 |
| Unhappy | RC | | | RC | | | RC | | |
| Happy * | -0.26 | | | -0.243 | | | -0.452** | | |
| Very happy | -0.612** | | | -0.620** | | | -0.922*** | | |
| Accommodation unsuitable | - | | | RC | | | RC | | |
| Accommodation suitable * | -0.588*** | | | -0.557*** | | | -0.518*** | | |
| Accommodation very suitable | -1.133*** | | | -1.139*** | | | -0.939*** | | |
| Respected never or occasionally | RC | | | RC | | | RC | | |
| Respected frequently | -1.172*** | | | -1.107*** | | | -1.093*** | | |
| Respected always * | -0.742** | | | -0.708* | | | -0.700* | | |
| Treated unfairly always | RC | | | RC | | | RC | | |
| Treated unfairly frequently | 0.586** | | | 0.464* | | | 0.491** | | |
| Treated unfairly occasionally | 0.613*** | | | 0.510** | | | 0.458** | | |
| Treated unfairly never * | 0.561*** | | | 0.503*** | | | 0.486*** | | |
| Urban | -0.09 | 0.155* | 0.160* | -0.093 | 0.072 | 0.071 | -0.022 | -0.216** | -0.234** |
| LGA Banjul | -0.520** | -0.570*** | -0.549*** | -0.499* | 0.139 | 0.116 | -0.588** | -0.117 | -0.206 |
| LGA Kanifing | -0.819*** | -0.189* | -0.095 | -0.815*** | 0.153 | 0.102 | -0.887*** | -0.095 | -0.268** |
| LGA Brikama * | RC | RC | RC | RC | RC | RC | RC | RC | RC |
| LGA Mansakonko | -0.016 | -0.127 | -0.113 | -0.134 | 0.036 | 0.029 | 0.152 | 0.007 | -0.021 |
| LGA Kerewan | -0.693*** | -0.437*** | -0.397*** | -0.765*** | 0.475*** | 0.447*** | -0.704*** | 0.047 | -0.039 |
| LGA Kuntaur | -0.414 | -0.323*** | -0.300** | -0.457 | 0.066 | 0.048 | -0.560* | 0.247** | 0.201 |
| LGA Janjanbureh | -0.405 | -0.101 | -0.073 | -0.391 | 0.251* | 0.234* | -0.497* | -0.203 | -0.259* |
| LGA Basse | -0.363 | -0.131 | -0.097 | -0.404 | 0.054 | 0.031 | -0.447* | 0.195* | 0.137 |
| Tribe Mandinka | -0.004 | -0.059 | -0.073 | 0.028 | 0.141* | 0.148* | -0.027 | -0.111 | -0.098 |
| Tribe Fula * | RC | RC | RC | RC | RC | RC | RC | RC | RC |
| Tribe Wollof | -0.475*** | -0.217** | -0.198* | -0.417** | -0.075 | -0.094 | -0.514*** | 0.273*** | 0.253** |
| Tribe Jola | 0.219 | -0.119 | -0.144 | 0.229 | 0.026 | 0.041 | 0.142 | 0.084 | 0.137 |
| Tribe Sarehuleh | -0.416 | -0.460* | -0.453* | -0.378 | 0.313 | 0.29 | -0.404 | -0.02 | -0.11 |
| Tribe Sererr | 0.105 | 0.019 | 0.002 | 0.095 | -0.017 | -0.008 | 0.06 | -0.091 | -0.062 |
| Other tribe | 0.095 | 0.137 | 0.118 | 0.078 | -0.059 | -0.047 | 0.085 | -0.195 | -0.183 |
| Constant | 5.128*** | 0.405 | 0.29 | 5.248*** | -1.075** | -0.988** | 4.935*** | -0.912** | -0.678 |
| Number of observations | 2184 | 2052 | 2052 | 2184 | 2052 | 2052 | 2184 | 2052 | 2052 |

Note: Heckman probit models (1st and 2nd column of each panel) correct for sample selection bias; Probit models (3rd column of each panel) are estimated on the restricted sample without correction for sample selection. The Likelihood Ratio test of independent equations indicates that there is a sample selection bias in case of actors 'myself' (p-value 0.025) and 'government' (p-value 0.007); there is no sample selection bias in case of 'family' (p-value 0.402). The reference categories (RC) are displayed for discrete variables with more than two categories. The mode categories are marked with an asterisk for discrete variables with more than two categories; they are left out for binary variables. Significance levels are marked as follows: * 10%, ** 5%, *** 1%.

Table A7: First stage of a 2SLS estimation of individual empowerment

| Explanatory variables and instrumental variables | Endogenous explanatory variable | | | |
|---|---|---|---|---|
| | Went to school | Literate | Economically inactive | Wealth percentile |
| Age | -0.018*** | -0.014*** | -0.028*** | -0.013 |
| Age squared | 0.000*** | 0.000** | 0.000*** | 0.000 |
| Female | -0.128*** | -0.346*** | 0.134*** | 1.277 |
| Not married | 0.056* | -0.032 | 0.005 | -3.129** |
| Monogamous marriage * | 0.045** | 0.006 | 0.008 | -3.680*** |
| Polygamous marriage | RC | RC | RC | RC |
| Not household head | 0.020 | 0.037 | 0.122*** | 1.296 |
| Not Muslim | 0.004 | 0.102* | 0.005 | 2.266 |
| Foreigner | -0.179*** | 0.011 | -0.037 | 0.007 |
| IV Went to school | 0.415*** | -0.176 | -0.101 | 8.337* |
| IV Literate | -0.055 | 0.863*** | 0.158* | 6.295 |
| IV Paid work | -0.073 | 0.633*** | -0.131* | -2.560 |
| IV crop | 0.026 | 0.007 | -0.081*** | -4.575*** |
| IV Wealth percentile | 0.004*** | 0.002 | 0.000 | 0.581*** |
| Health completely limiting | RC | RC | RC | RC |
| Health a lot limiting | 0.022 | -0.096* | -0.092** | -1.915 |
| Health somewhat limiting | 0.035 | -0.089* | -0.144*** | -0.658 |
| Health not limiting * | 0.035 | -0.065 | -0.171*** | -0.620 |
| Urban | 0.033 | 0.074* | -0.005 | 3.841** |
| LGA Banjul | 0.011 | -0.044 | -0.081** | 2.525 |
| LGA Kanifing | -0.006 | -0.019 | -0.022 | 1.614 |
| LGA Brikama * | RC | RC | RC | RC |
| LGA Mansakonko | 0.106** | 0.050 | -0.109*** | -5.216** |
| LGA Kerewan | 0.020 | -0.027 | -0.041 | -3.763** |
| LGA Kuntaur | 0.066 | -0.124** | -0.170*** | -6.701*** |
| LGA Janjanbureh | 0.088** | -0.059 | -0.085** | -6.882*** |
| LGA Basse | 0.041 | -0.173*** | -0.076* | -4.499** |
| Tribe Mandinka | 0.065*** | 0.049* | -0.009 | 4.003*** |
| Tribe Fula * | RC | RC | RC | RC |
| Tribe Wollof | 0.040 | 0.017 | 0.017 | 3.386** |
| Tribe Jola | 0.102*** | -0.030 | -0.071** | -2.737* |
| Tribe Sarehuleh | 0.152** | 0.162** | 0.122** | 7.902*** |
| Tribe Sererr | 0.198*** | 0.064 | -0.021 | 2.253 |
| Other tribe | 0.203*** | 0.009 | 0.005 | -0.518 |
| Constant | 0.452*** | 0.216 | 0.882*** | 20.971*** |

Note: First stage OLS regressions of four endogenous explanatory variables on instrumental variables (IV) and on exogenous explanatory variables are displayed. The IVs are jointly significant at 1% level in all four regressions. The reference categories (RC) are displayed for discrete variables with more than two categories. The mode categories are marked with an asterisk for discrete variables with more than two categories; they are left out for binary variables. Significance levels are marked as follows: * 10%, ** 5%, *** 1%. Sample size: 2052 observations.

Table A8: Determinants of the expectations concerning who will contribute most to any changes in one's life in a 2SLS estimation

| Explanatory variables | Separate models for actors expected to contribute most to any changes in one's life | | | | | |
|---|---|---|---|---|---|---|
| | Myself | | Family | | Government | |
| | 2SLS | OLS | 2SLS | OLS | 2SLS | OLS |
| Age | 0.009 | 0.005 | 0.023 | -0.015*** | -0.030 | 0.007* |
| Age squared | 0.000 | -0.000** | 0.000 | 0.000*** | 0.000 | 0.000 |
| Female | -0.210*** | -0.182*** | 0.136 | 0.141*** | 0.092 | 0.041 |
| Not married | -0.022 | 0.003 | -0.122* | -0.092** | 0.111* | 0.057* |
| Monogamous marriage * | -0.026 | -0.013 | -0.080 | -0.033 | 0.100* | 0.047** |
| Polygamous marriage | RC | RC | RC | RC | RC | RC |
| Not household head | -0.022 | -0.022 | -0.168** | -0.029 | 0.173** | 0.050 |
| Not Muslim | -0.060 | -0.075 | -0.014 | 0.008 | 0.087 | 0.085* |
| Foreigner | 0.211** | 0.152*** | -0.067 | -0.139*** | -0.153 | -0.023 |
| Went to school | 0.361 | 0.050* | 0.212 | -0.057* | -0.589 | -0.003 |
| Literate | -0.203* | -0.017 | 0.255* | -0.029 | 0.043 | 0.053** |
| Economically inactive | -0.020 | -0.042 | 1.123** | 0.088*** | -1.008* | -0.052* |
| Wealth percentile | 0.000 | 0.000 | -0.004 | 0.002*** | 0.002 | -0.002*** |
| Health completely limiting | RC | RC | RC | RC | RC | RC |
| Health a lot limiting | -0.223*** | -0.194*** | 0.286*** | 0.182*** | -0.026 | 0.033 |
| Health somewhat limiting | -0.266*** | -0.239*** | 0.331*** | 0.171*** | -0.045 | 0.066 |
| Health not limiting * | -0.087 | -0.064 | 0.274** | 0.094** | -0.146 | -0.011 |
| Urban | 0.024 | 0.048 | 0.013 | 0.034 | -0.019 | -0.077*** |
| LGA Banjul | -0.182** | -0.178*** | 0.104 | 0.025 | -0.096 | -0.037 |
| LGA Kanifing | -0.016 | -0.025 | 0.054 | 0.032 | -0.078 | -0.053 |
| LGA Brikama * | RC | RC | RC | RC | RC | RC |
| LGA Mansakonko | 0.010 | -0.023 | 0.000 | -0.022 | -0.076 | 0.002 |
| LGA Kerewan | -0.119** | -0.133*** | 0.191*** | 0.152*** | -0.070 | -0.009 |
| LGA Kuntaur | -0.074 | -0.096** | 0.155 | 0.003 | -0.094 | 0.085** |
| LGA Janjanbureh | -0.018 | -0.022 | 0.118 | 0.077* | -0.138* | -0.080** |
| LGA Basse | -0.006 | -0.028 | 0.098 | 0.000 | -0.076 | 0.051 |
| Tribe Mandinka | -0.035 | -0.028 | 0.051 | 0.060** | -0.015 | -0.033 |
| Tribe Fula * | RC | RC | RC | RC | RC | RC |
| Tribe Wollof | -0.075** | -0.070** | -0.046 | -0.031 | 0.098** | 0.075** |
| Tribe Jola | -0.085 | -0.054 | 0.056 | 0.011 | 0.027 | 0.036 |
| Tribe Sarehuleh | -0.178 | -0.160** | -0.055 | 0.119 | 0.144 | -0.034 |
| Tribe Sererr | -0.054 | -0.010 | -0.059 | 0.000 | 0.074 | -0.027 |
| Other tribe | -0.010 | 0.050 | -0.096 | -0.021 | 0.077 | -0.056 |
| Constant | 0.446 | 0.507*** | -0.616 | 0.401*** | 1.092** | 0.101 |

Note: The Hausman test of endogeneity indicates that there is no endogeneity bias in the category 'myself' (p-value 0.333), whereas endogeneity is a problem in case of categories 'family' and 'government' (p-value 0.015 and 0.039, respectively). The reference categories (RC) are displayed for discrete variables with more than two categories. The mode categories are marked with an asterisk for discrete variables with more than two categories; they are left out for binary variables. Significance levels are marked as follows: * 10%, ** 5%, *** 1%. Sample size: 2052 observations.