The donor footprint and gender gaps

Maria Perrotta Berlin* Evelina Bonnier† Anders Olofsgård‡

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Abstract

Very preliminary. Do not cite or circulate.

1 Introduction

In this paper we look at how household level outcomes and attitudes with regards to women's and girl's rights and opportunities co-vary with the number of aid projects in the geographical neighborhood of the household. Our analysis relies on matching two distinct sets of data. Firstly, using new geo-coded data for the history of location of aid projects in Uganda we create what we refer to as the donor footprint, a map of the location of almost all aid projects dating back to 2006. Secondly, from geo-coded household level survey data we collect information about a set of outcomes related to women's empowerment and opportunities over the life cycle. We then match these data sets by creating a 10 kilometer circle around each household in our samples and count the number of aid financed projects in this immediate vicinity of each household as well as the number of years that they have been ongoing in the period of 2006-2011. Using machine learning techniques to identify a vector of exogenous instruments we then estimate the effect of aid presence on households.

Looking at a broad set of variables mainly capturing childrens education, work and household chores, household time use and expenditure patterns, and measures of the womans relative position within the household, we overall find weak support for a particularly beneficial effect of greater aid intensity in the community on women and girls. Greater aid intensity increases attendance and reduces absence in primary education (but not in secondary), but not differentially for girls and boys. Greater aid intensity also implies school children are less likely to do farm work, but again no differential effect for girls. With respect to time use we do find a differential effect for all women and girls on time spent on collecting firewood, and an overall effect when looking at school age boys and girls only. The latter still suggests a relative benefit for girls, though, as they are the ones primarily engaged in gathering firewood. Looking at expenditures patterns, coefficients have the expected signs (more aid intensity reduces male expenditures and increases expenditures on education and health care) but the results are not significant at conventional levels. This may be affected by relatively few observations in this case, though.

Turning to womens position within the household, we find that aid intensity is associated with less support for domestic violence, in particular among women. This effect is particularly large for projects directly about gender. Gender projects also seem to have a positive effect on

*SITE
†SITE, Stockholm School of Economics
‡SITE, Stockholm School of Economics

womens right to refuse sex if she knows her husband is cheating and a weak effect on the share of married women reporting they have some control over their husbands earnings. All other results are insignificant, though generally coefficients have the expected signs.

Western donors have for many years singled out women and girls in partner countries as important targets for foreign aid. This is partly driven by the perception that women and girls are discriminated against and are particularly vulnerable in situations of poverty and conflict. However, it is also emphasized that empowered and educated women are seen as more likely to make decisions that promote development (Duflo, 2012). For instance, micro credits are often targeted toward women because they are seen as more reliable lenders (Chakravarty, Iqbal, Shahriar, et al. 2013), female education is negatively correlated with fertility (McCrary and Royer 2011), and better off and educated women are more likely to make sound decisions when it comes to their children's education and health (Gakidou, Cowling, Lozano, and Murray 2010). Many aid projects therefore have an explicit gender component, which can be anything from targeting increased school enrolment of girls, to programs empowering women within the household or the community (see OECD 2016 for a breakdown of different activities of DAC members). But donors also agreed to gender mainstreaming already in the Beijing Platform of Action in 1995, i.e. that beyond specific gender projects, gender concerns should be integrated into all policy and program cycles and governments should engage in a dialogue on gender and development. For instance, even though only 6 % of the Swedish International Development cooperation Agency (Sida) funded interventions had gender equality as the prime objective in 2008-10, as many as 71 % had gender equality as a significant objective (Nanivazo and Scott, 2012). Gender mainstreaming thus implies that also projects and programs not primarily targeting gender equality are still often designed with an eye towards that objective. This ambition is also shown in the development by the OECD DAC of a Gender Equality Policy Marker, an indicator that measures how strongly specific aid financed projects support gender equality.[1].

This raises the question to what extent this concerted effort has contributed to gender equality at a level beyond the narrow impact of specific projects or programs. This is a complicated question to get a reliable answer to, in particular at the macro level. Foreign aid is partly invested in public goods and services that have been known to benefit particularly women in different ways, such as health spending on maternity care and investments in water and sanitation (Agénor, Canuto, and Da Silva 2010); (Seguino 2008). Projects aiming at women's empowerment within households and communities also sometimes show positive results (Ashraf et al., 2010), but not always (Benhassine et al. 2015). Whether this aggregates up to a positive effect of foreign aid at the macro level has, however, not been much explored. Pickbourn and Ndikumana (2016)use cross-country data to estimate the correlations between foreign aid inflows and the UNDP's Gender Inequality Index, but find no robust results. At this level of aggregation, this is perhaps not so surprising. The well known micro-macro paradox from the aid effectiveness literature may very well apply here as well, since public investments tend to be fungible and the additional resources that aid provide may also be used to strengthen an existing patriarchal system (Richey 2000). The authors do, however, find some positive effects from aid to the health sector on maternal mortality rates and from aid to the education sector on female relative to male youth literacy rates. It should also be emphasized that the UNDP index leaves out many important factors that we typically associate with gender equality.[2] A more disaggregated approach may

[1] http://www.oecd.org/dac/stats/37461060.pdf

[2] "Like all composite measures, the GII has some limitations. First, it does not capture the length and breadth of gender inequality. For example, the use of national parliamentary representation excludes participation at the local government level and elsewhere in community and public life. The labour market dimension lacks information on employment, having an adequate job, and unpaid work that is mostly done by women. The index misses other important dimensions, such as time use – the fact that many women have the additional burden of caregiving and housekeeping cuts into their leisure time and increases stress and physical exhaustion. Asset ownership, child care

therefore be more useful, looking at the influence of aid on different aspects of gender equality separately.

The purpose of this paper is to shed some more light on the question whether foreign aid generally, given the emphasis on gender mainstreaming and the importance of a gender perspective among most donor agencies and organizations, has had some impact on gender outcomes and attitudes by looking at the data a bit differently. At a substantive level, the main contribution of the paper is thus that we provide some new evidence on a question that has gotten very little attention in the academic literature despite being an important factor in aid policy. In addition, we also offer two methodological contributions. Firstly, we use an approach that falls somewhere between evaluations of the immediate impact on participants in specific gender-oriented projects and macro level cross-country studies trying to get at the overall impact of foreign aid. Similar to the former approach, we use variation in exposure at the micro level, but we do not distinguish between direct participants/beneficiaries and others who are in the vicinity of aid projects, and (typically) not between gender specific projects and others. It follows that our results should be interpreted as capturing an average community effect of the presence of foreign aid projects. We argue that aid projects can affect communities beyond the immediate participants, and that these types of externalities are valuable to capture. Externalities can come through economic multiplier effects if immediate participants increase their livelihood and contribute to increased local demand, or through health benefits if immunization and better health care reduces the spread of infectious diseases (Miguel and Kremer 2004). Equally important, perhaps in particular when it comes to gender-related behavior and attitudes, externalities can come through transmission of information and attitudes potentially in the longer run changing social norms through personal networks including both direct beneficiaries and others. Gender-related behavior and attitudes are typically thought of as driven by a combination of economic opportunities, information and social norms, so a community level analysis may more fully capture the extent to which aid financed projects do make a difference. As we focus on variation at the household level within a single country, we also avoid some of the well known pitfalls of cross-country analysis.

Our second methodological contribution concerns the use of instrumentation to capture a causal effect of aid projects on gender outcomes and attitudes. The allocation of aid projects is not exogenous, and is likely to be driven by a combination of need, cost and political considerations (Öhler and Nunnenkamp 2014); (Briggs 2015); (Jablonski 2014). The exact mapping between these factors and aid allocation is, however, not well known. We therefore model the number of aid projects as a general function of a broad set of exogenous variables capturing the geography, weather, soil conditions and some political factors in the community. We then use machine learning methods (Hastie, Tibshirani, and Friedman 2011); (James, Witten, Hastie, and Tibshirani 2013) to reduce the number of relevant predictors and recover the functional form that best fits the data, giving us a strong first-stage model with high predictive value. As some of these variables may also be correlated with community income, and community income may have an impact on gender outcomes and attitudes, we also make sure to control for an instrumented level of income (or relative wealth) to reduce concerns regarding exclusion restrictions.

Nevertheless, one should interpret the results with some care. Gender equality is a multidimensional concept and we cannot capture all parts of it. Social norms weigh heavily on gender attitudes, and they are slow to change and difficult to influence in the short to medium term through aid projects or programs. Maybe a longer run perspective than what we can offer, would produce stronger results.

The paper is organized as follows. In Section 2 we discuss more in detail how aid projects may influence gender outcomes and attitudes at the community level. In Section 3 we present

support, gender-based violence and participation in community decision-making are also not captured in the GII, mainly due to limited data availability." (http://hdr.undp.org/en/content/what-are-strengths-and-limitations-gii)

the data we use for our analysis. Section 4 discusses the empirical strategy and specification, and Sections 5 and 6 report our results. We conclude in Section 7.

2 Foreign Aid and Gender Outcomes

Aid financed projects are intended to offer citizens in poor communities additional economic and/or social opportunities. Projects have direct primary beneficiaries, such as school children in the case of investments in school buildings, mothers and small children in the case of investments in maternity care, or farmers in the case of irrigation projects. However, this does not mean that the benefits to the community stop there. Aid programs are typically intended to benefit whole communities, and there are often positive externalities that extend beyond the immediately targeted beneficiaries, think for instance of road projects connecting villages and markets and immunization drives against infectious diseases. Furthermore, conventional multiplicator effects arise from projects targeting livelihood and jobs even if not all are directly included. Finally, information about opportunities and new technologies also typically transmit within social networks in the community (Conley and Udry 2010), reaching also others than the immediate beneficiaries or early adopters. This is the first foundation on which we build our analysis: taking a community-level approach is both consistent with the typical intention of foreign aid programs and the likely effects of specific interventions even if the directly defined group of beneficiaries is more narrow.

A second cornerstone of our approach is to look at the impact of aid generally, not just aid projects with gender equality as the primary objective. The motivation for this is the ambition to gender mainstream aid and gender equality as an overall objective of aid for many bilateral donors. Just as the aid effectiveness literature typically does not separate between aid specifically targeted towards economic growth and other purposes (peace and security or human rights and democracy for instance), our baseline model looks at an average effect of all types of projects, even though we also look at the separate impact of what can broadly be classified as "gender projects". This also implies that our results can only be interpreted at this level of aggregation. In other words, just as a null-result from the aid effectiveness literature (Rajan and Subramanian 2008) cannot be interpreted as suggesting that individual aid projects or programs, or even certain categories of aid, cannot have a positive effect on economic growth, a null-result in this study would not imply that aid financed projects or programs have not at times contributed to gender equality.

A key question then is how aid financed projects can contribute to gender equality at this level of aggregation. This is further complicated by the fact that gender equality and gender empowerment can be measured in many different ways. The most direct way is of course projects explicitly targeting women or girls. For instance, a project focusing on maternal care can improve maternal health and relative female life expectancy, while a project targeting female operated start-ups can reduce the gender imbalance in entrepreneurship. Likewise, projects trying to change stereotypes of boys and girls can also influence attitudes toward women in politics or as business leaders (Duflo, 2012). More indirectly, gender relations tend to become more equal with economic development and women tend to gain more than men (Duflo, 2012). So to the extent that aid contributes to economic growth and reduced poverty, it will also indirectly contribute to gender equality.

Finally, exposure to aid-financed projects can also convey explicit or implicit norms of behavior that stand in conflict with those of the surrounding community. This can cause cognitive dissonance motivating change in behavior and norms even when triggered by neutral and low impact instruments such as a survey (Zwane, Zinman, Van Dusen, Pariente, Null, Miguel, Kremer,

Karlan, Hornbeck, Giné, et al. 2011); (Spangenberg and Greenwald 1999). That development policy can change mental models is for instance evidenced by evaluations of the Indian law to have mandatory female leaders in one-third of village governments. Not only did males' prejudice against female leaders fall and women get elected even after reservations ended, but parents' aspirations for their daughters in general also increased (Beaman, Chattopadhyay, Duflo, Pande, and Topalova 2009), (Beaman, Duflo, Pande, and Topalova 2012). The reform also increased the reporting of crimes against women and police responsiveness to such crimes, suggesting a change in attitudes towards what is acceptable both among women and men (Iyer, Mani, Mishra, and Topalova 2012). Aid projects can also affect norms through increased personal exposure to individuals with different cultures and norm systems. As illustrated in (Andrabi and Das 2010), exposure to aid workers can increase trust in foreigners, presumably making individuals more responsive to new opportunities introduced by such foreigners. This impact can then can travel beyond the direct participants through network effects in the geographical vicinity of projects (Cai, De Janvry, and Sadoulet 2015).[3] It should be emphasized, though, that norms can be very rigid. This adds to the complexity and challenges of aid-financed projects since most interventions to succeed require some sort of change in the behavior of the targeted subjects. For instance, programs to reduce under-nutrition through subsidies, transfers and supplements rarely increase caloric and nutritional intake to the extent expected, since dietary and budget priorities are slow to change (Jensen and Miller 2008). Similarly, deworming take-up has been shown to be highly sensitive to financial fees far below their expected future financial benefits (Kremer, Leino, Miguel, and Zwane 2007). Other similar examples of failing take-up, even when services have been provided for free, have been illustrated in the contexts of immunization, oral rehydration solutions, and mosquito bed nets (Banerjee, Duflo, and Holsopple 2011).

To add some structure to the multidimensional question of gender equality, we take a life cycle approach to conceptualize how foreign aid projects at different ages may influence opportunities as well as information or social norms important for women and girls. This is by no means a complete list, but guided by the literature towards areas where donors have been more active and where data that can be used for our purpose exist.

Already from birth, gender disparities can show up in the form of missing girls at birth and excess female mortality post-birth, together estimated to add up to 2 million girls a year (World Bank, 2012). Excess female mortality post-birth is tightly related to malnutrition, both with regards to the mother and the child directly. Malnourished mothers are more likely to give birth to underweight children, and low birth weight is the strongest determinant of a child's survival (Lives et al. 2001). Even if they survive, low birth-weight infants often suffer from cognitive impairment, developmental problems, and a greater susceptibility to illness. Severely malnourished mothers are also less able to breast-feed their children, a serious issue as encouraging exclusive breast-feeding during the first 6 months has been estimated to have the potential to save 1,5 million lives (Morrow, Guerrero, Shults, Calva, Lutter, Bravo, Ruiz-Palacios, Morrow, and Butterfoss 1999). The relative level of malnourishment of young girls varies across regions, being mostly discussed in the context of South-Asia. In Sub-Saharan Africa, some evidence suggests that it may be boys who fall behind (World Bank, 2012). Early studies from Bangladesh and India

[3]Although the importance of social norms is established, still relatively little is known about them and in particular how to change them. In particular, there is abundant evidence that gender-related norms and attitudes affect important outcomes for girls and women, both in the rich and the developing part of the world. Studies from the US establish that norms on gender roles affect labor market paticipation (Fortin 2015) as well as choices on work and fertility (Fernandez and Fogli 2009). India has been the focus of many studies because of the large variation across states and castes with respect to the strength of gender norms and the associated restrictions to which women are subjected. In this setting, it has been observed that norms affect women's business activity (Field, Jayachandran, and Pande 2010), career choice (Munshi and Rosenzweig 2006), and the perceived persuasiveness of female counterparts in disputes (Hoff, Rahman, and Rao, 2014).

also suggested that girls in addition to receiving less nutrition, were less likely to receive health care and vaccination. More recent work, however, suggests that variation in nourishment and health care provision is not strong enough to explain average differences in mortality post-birth even in Southern Asia (World Bank, 2012). The differential effect instead seems to show up predominantly at times of crisis, for instance excessive relative mortality of girls in India spikes in times of droughts (Duflo, 2012).

For adolescent girls, norms related to marriage and sex strongly influence educational attainment and labor force participation (Field and Ambrus 2008). This has long term consequences since the level of education and employment influence not only income and productivity, but also fertility rates and most measures of women's empowerment within the household. Each year, almost one girl in five become pregnant before the age of 18 in developing countries, and more than 142 million girls are projected to be married before the age of 18 in the coming decade (World Bank, 2014). The lifetime opportunity cost of teen pregnancy for Uganda (calculated based on lost income) could be as high as 30 % of annual GDP (Chaaban and Cunningham 2011). Aid financed projects can directly affect behavior and norms in several different ways. As shown in (Miller 2010), the Colombian Profamilia program, focused on distribution of modern contraceptives, did only contribute to 10 % of the total decline of fertility, but also had a substantial positive effect on schooling and employment by contributing to delayed first births. A study on sexual risk-taking intentions among school-going AIDS-orphaned adolescents in rural Uganda had a treatment arm with an economic intervention including among other things a child savings account (Ssewamala, Ismayilova, McKay, Sperber, Bannon, and Alicea 2010). The study found that having access to economic assets plays an important role in influencing adolescents' sexual risk-taking intentions, as measured by an index constructed from five questions. This latter result may suggest that aid more generally could influence teenage pregnancies and sexual behavior by affecting economic conditions within a community. (Munshi and Myaux 2006) emphasize how norms with regards to contraception changed through networks based on religious affiliation in the Matlab region of Bangladesh. Women who came in contact with the relatively well educated health workers of the Matlab program were affected by new norms and information about changing norms in the rest of the world, and these women, in turn, transmitted information through their networks. This illustrates how whole communities, beyond direct beneficiaries, can be influenced by aid financed development projects.

Girls have made substantial relative progress when it comes to primary education (which is nearly universal) but less so when it comes to secondary education. Gross secondary enrolment rates for girls increased from 22 to 34 between 1991 and 2010, but the gap to boys only shrank from 8 to 7 % (Duflo, 2012). Aid projects can influence these imbalances in many ways: directly by building schools; making cash payments targeted to mothers conditional on primarily girls education and information about economic returns to girls education; and indirectly by contributing to reduced poverty and changing social norms (Duflo, 2012; Benhassine et al., 2015). Creating job opportunities can also motivate parents to send their girls to school. Jensen (2010)shows how an experiment to recruit rural women into the outsourcing business increased school enrolment of girls in treated villages 3 years later.

As a wife and mother, intra-household bargaining power and social norms around the relationship between men and women critically influence women's situation. Domestic violence affects more than 700 million globally, and even though more and more countries recognize it as a crime, social norms among both men and women are slow to change (World Bank, 2014). (Koenig, Ahmed, Hossain, and Mozumder 2003) show that in the Rakai district of Uganda, 70% of men and 90% of women viewed beating of the wife or female partner as justifiable in some circumstances. However, impact evaluations of aid financed interventions to reduce domestic violence, and change social norms for both men and women through information and discussions

groups, do show positive results (Kim, Watts, Hargreaves, Ndhlovu, Phetla, Morison, Busza, Porter, and Pronyk 2007), (Pulerwitz, Hughes, Mehta, Kidanu, Verani, and Tewolde 2015). However, the extent to which these effects extend beyond direct participants and survive in the longer run is unclear. Women are also less likely to work than men, earn less for the same type of job and are more likely to be poor despite working, and women spend substantially more time on unpaid work around the household (Duflo, 2012). For instance, women in Guinea spend six times more time on housework than men, and women in Iraq spend 10 times as much time on taking care of children as men (Berniell and Sánchez-Páramo, 2011). This is a complicated dilemma, as women with little outside earnings tend to have less say in the family, and women having less say are less likely to work. Micro-credit programs often target female entrepreneurs partly for this reason, with the hope that the opportunity of an outside income-source will be empowering (Karlan and Zinman, 2011).

3 Data

The first part of the empirical analysis uses household data from the Uganda National Panel Survey (UNPS), which is part of the World Bank's Living Standards Measurement Survey (LSMS) program. The dataset we use is the third wave of a nationally representative panel survey of 3,123 households from 322 enumeration areas (EA), 34 in the Kampala district, 58 rural and 14 urban outside Kampala.

The LSMS is particularly convenient as a starting point for our study because it includes GPS-based household locations and is already linked to a set of geospatial variables coming from various other databases. These include measures of distance to other features, climatology, soil and terrain and other environmental factors. Section 4 will detail why this is important for our empirical strategy. In 6 we will link these data with the latest wave of the Demographic and Health Survey (UDHS), in order to examine direct measures of attitude.

Our main explanatory variable is the aid presence in the neighborhood of a household. This is generated using the geo-referenced household locations from LSMS in conjunction with the AidData database, which provides the geo-referenced location of aid-financed interventions corresponding to about 80% of total aid coming to Uganda. Using the geographical coordinates of both households and aid projects, we draw a circle with 10km radius around each household in the survey and count the number of projects implemented within the circle in 2006-2011. The number of projects is then multiplied by the duration of each project in years.

Our measure of exposure to gender-focused projects is constructed in the same way, with the difference that we now only count the number of gender-focused projects. The results using this measure of exposure are reported in the Appendix.

In Figure **??**, the LSMS households are plotted on a map of Uganda as black dots, alongside aid projects in red. Around some of the households the 10 km circle is drawn to illustrate the variation in our measure of aid exposure.

```
## Error in read.dta("~/Dropbox/AidData/RawData/UGA_2009_UNPS_v01_M_STATA/UNPS_Geovars_0910.dta"):
unable to open file:  'No such file or directory'
## Error in na.omit(LSMSclu[, c(1, 3, 2)]):  object 'LSMSclu' not found
## Error in as.matrix(clustaidnew[, -1]):  object 'clustaidnew' not found
## Error in eval(expr, envir, enclos):  object 'clustaidnew' not found
## Error in apply((distanceU < radius), 2, sum):  object 'distanceU' not found
## Error in apply(clustaidnew[, c(2, 3)], 1, circles):  object 'clustaidnew' not
found
```

```
## Error in eval(expr, envir, enclos):  object 'clustaidnew' not found
## Error in ncol(test):  object 'test' not found
## Error in apply(test[, cols], 2, function(z) {:  object 'test' not found
## Error in fortify(data):  object 'LSMSclu' not found
```

The second part of the empirical analysis uses data from the 2011 Uganda Demographic and Health Survey (UDHS), which is a nationally representative survey of 10,086 households with 9,247 women in the age of 15-49 and 2,573 men in the age of 15-54. Just as the LSMS, the 2011 UDHS includes GPS-based information on the location of survey households groupings, referred to as DHS clusters. Based on these locations, we construct the same set of instruments as used for the first part of the empirical analysis, and similarly let our main explanatory variable be based on the number of aid projects and gender-focused projects within a 10km radius of each DHS cluster.

4 Empirical strategy

The likelihood for a household to be close to the location of aid-financed projects, our main variable of interest, is clearly not random, nor can be thought of as being exogenous with respect to the outcomes that we intend to look at. This creates a challenge in identifying the impact of aid on the outcomes.

We base our identification strategy on modelling explicitly the allocation of aid projects. Most of the literature on the geographic allocation of foreign aid has so far focused on the distribution across countries (see (Frot, Olofsgård, and Berlin 2014) for a literature review). The recent effort to geo-reference foreign aid projects (Findley, Powell, Strandow, and Tanner 2011), however, has sparked a small but growing literature on within-country aid allocation.

One research question receiving attention in this literature is whether poorer sub-national areas receive more aid projects. (Öhler and Nunnenkamp 2014) use infant mortality at the first-level administrative boundary (i.e. provinces), obtained from the DHS surveys, to measure the level of poverty across sub-national areas. Infant mortality is never significantly correlated with the number of World Bank projects received by provinces across many regression results they report. (Briggs 2015) instead uses the fraction of the richest 20% households living in the province, also obtained from DHS surveys in 17 African countries. He finds that more World Bank and African Development Bank projects flow into richer provinces.

These studies suffer from two limitations. First, the unit of observations is spatially too aggregated. Even if richer provinces receive foreign aid projects, most of these projects may flow into the poorer districts within such rich provinces. Second, subnational-level measures of living standards may reflect the logistical cost of implementing aid projects because high transportation cost due to bad geography affects both. Poorer provinces may receive less aid projects because it is too costly to implement projects in such provinces, not because poorer areas are politically ignored.

The literature also identifies two political factors that appear to affect the spatial allocation of aid projects: national leader's birth place and the share of votes for the incumbent in the last election. (Öhler and Nunnenkamp 2014) find that the president's birth region receives more World Bank projects. (Dreher, Fuchs, Hodler, Parks, Raschky, and Tierney 2015), however, find that, while this is not the case for the World Bank projects, it is indeed the case for aid projects financed by China.

These findings, however, do not necessarily indicate an inefficient allocation of aid projects. The president's birth region may have been a logistically costly region while at the same time

being relatively poorer. If so, the 'regional favouritism' will improve an equal distribution of aid across the country.

A few studies look at whether aid projects flow into electoral constituencies where more citizens voted for the incumbent president during the last election. (Jablonski 2014) finds evidence in favour of the hypothesis in Kenya. (Masaki 2014) finds, instead, that more aid projects flow into the districts supporting the opposition presidential candidate in Zambia. Finally (Casey 2015) finds that the Local Government Development Grants (LGDG) program, financed by the World Bank, is allocated to districts where neither the incumbent party nor the opposition party enjoy an overwhelming support from citizens in Ghana.

These mutually inconsistent findings may reflect the failure to consider the cost of implementing aid projects. Logistically costly areas may tend to vote for the opposition because the incumbent fails to deliver benefits there. Even if the incumbent government is willing to provide aid projects to the opposition's stronghold, no aid project will then flow into these areas, creating a correlation between the aid flow and the support for the incumbent.

Our take is to model explicitly the dependency of aid on these logistical factors. The hypothesis is that aid project locations are chosen balancing the need for foreign aid (e.g., lower living standards) on one hand with the logistical cost of implementation on the other. Our empirical investigation to test this hypothesis thus requires the measurement of unobservable logistical costs.

We let them be an unknown function of geographical characteristics:

$$AID_i \quad = \quad \alpha + f(\mathbf{G}_i) + \varepsilon_i, \tag{1}$$

where AID_i is the number of aid projects in a neighborhood of household i; and $f(\mathbf{G}_i)$ is the logistical cost of implementing an aid project in location i as the (unknown) function of geographical characteristics.

Since we do not know a priori how geography affects the logistical cost of implementing aid projects, we apply machine learning methods (Hastie, Tibshirani, and Friedman 2011) (James, Witten, Hastie, and Tibshirani 2013) to recover the functional form of $f(\cdot)$. Specifically, we use subsample selection to reduce the number of predictors, then cross-validate the selected model. [4]. More in details, the procedure works as follows: we start from all the information about geography and meteorology that is available on our locations of interest, a total of p potential predictors[5]. To these we also add two political factors, the district of origin of the President and the share of coethnics of the president that live in the districts. For each $k < p$ we fit all k models that contain exactly k predictors, and pick the best model, i.e. the one with the smallest RSS. Among the k thus selected, we identify a single best model using cross-validated prediction error. This means we randomly split the data into ten subsets, estimate each model on nine of these subsets, obtain the out-of-sample prediction for the left-out subset of locations, and calculate the mean squared error in prediction. We repeat this over all the k alternatives and choose the one that minimizes the mean squared error in the out-of-sample prediction. We therefore let the data determine the best predictors for aid placement, only assuming that the functional form $f(\cdot)$ is linear. In a companion paper, we explore different ways to make the $f(\cdot)$ more sophisticated. Here we use only our preliminary results to construct a first stage predicting the likelihood of a household to be close to an aid-project location. The properties of these instrumental variables are discussed in subsection 4.2. Before that, it is useful to describe the variables that will be the outcomes in the second stage.

[4]Rewrite this footnote: In this case, LASSO with best lambda being very small, so there shouldn't be much advantage over least squares

[5]The initial set of geography variables, to be provided as inputs to this procedure, is given by all of the variables available in the LSMS. We only remove or reduce a few that show strong multicollinearity. They are described and summarized in the Appendix.

4.1 Outcomes

For the first part of our analysis, we take a reduced-form approach and hypothesize that, if aid affects norms about traditional gender roles, attitudes towards women and girls, or opportunities for them then we are likely to observe this reflected in household choices on the intra-household allocation of resources, in particular household investments in children of different genders. The areas we focus on are schooling; time use and work; and household's consumption patterns and expenditures. Table 1 reports the summary statistics of the variables we use comparing them to the first LSMS wave, from 2005, predating the aid interventions in our data. Several gender differences were significant in 2005 while much fewer are still in 2011. Another way to get an idea of time changes is to compare generations, as we do in Table 2. All the differences between adult men and women are significant, almost all to the advantage of men. When looking at boys and girls in school age, several of these differences are not significant anymore or much smaller. A few are however persistent. While we will not explicitly explain time variation in our empirical analysis, our results can be interpreted in terms of relating these changes to the households' exposure to aid since the changes occurred in the same period for which we have documented implementation of aid projects.

Table 1: Gender gaps from LSMS

	Boys-Girls 2005	p-value	Boys-Girls 2011	p-value
Attending Primary	-0.001	0.456	0.030	0.048
Attending Secondary	0.042	0.007	-0.011	0.332
Never attended	-0.006	0.227	-0.010	0.180
Dropped out of Primary	0.046	0.147	0.081	0.165
Work	0.031	0.014	0.003	0.288
Unpaid work	0.015	0.129	0.003	0.225
Work on the farm	0.023	0.047	0.031	0.091
Hours worked	1.447	0.000	0.739	0.059

Table 2: Gender gaps across generations from LSMS 2011

	Boys-Girls	p-value	Men-Women	p-value
Never attended	-0.010	0.180	-0.083	0.000
Dropped out of Primary	0.081	0.165	-0.118	0.000
Hours domestic chores	-2.757	0.000	-6.972	0.000
Hours collecting firewood	-0.539	0.000	-1.178	0.000
Hours collecting water	-0.683	0.006	-1.632	0.000
Hours preparing food	-0.127	0.000	-0.406	0.000
Hours in agriculture	0.329	0.144	-0.847	0.003
Hours hunting and fishing	0.082	0.018	0.148	0.017
Slept under bednet	-0.003	0.455	-0.038	0.004

For the second part of the empirical analysis, we examine if the intensity of aid projects can explain cross-sectional variation in gender-related attitudes. More precisely, we focus on attitudes toward gender-based violence, negotiating safer sex with husband, contraceptive use, control over household cash earnings, and participation in household decisions. These measures

Table 3: Changes in attitudes, DHS 2006-2011

	Mean 2006	Mean 2011	Change	p-value
Domestic violence (women & men)	0.676	0.548	-0.129	0.000
Domestic violence (women)	0.703	0.580	-0.123	0.000
Domestic violence (men)	0.588	0.427	-0.162	0.000
Decision making (women)	0.391	0.377	-0.014	0.209
Number of decisions (women)	1.759	1.774	0.015	0.370
Control over earnings (women)	0.642	0.693	0.051	0.000
Decision: Own health care (women)	0.608	0.602	-0.006	0.356
Decision: HHD purchases (women)	0.510	0.574	0.064	0.000
Decision: Family visits (women)	0.641	0.598	-0.043	0.007
Control: Own earnings (women)	0.865	0.852	-0.013	0.178
Control: Husband's earnings (women)	0.395	0.480	0.085	0.000
Wife can refuse sex if husband has other woman (women & men)	0.759	0.756	-0.003	0.366
Wife can refuse sex if husband has other woman (women)	0.759	0.756	-0.002	0.414
Wife can refuse sex if husband has other woman (men)	0.761	0.754	-0.007	0.348
Woman can refuse to have sex (women)	0.786	0.859	0.074	0.000
Woman can request use of contraceptives (women)	0.553	0.789	0.236	0.000
Contraception is woman's business (men)	0.238	0.198	-0.040	0.007
Contraception makes women promiscuous (men)	0.344	0.363	0.019	0.215

are all based on information retrieved from the 2011 UDHS and motivated by their reflection of women's sense of empowerment and impact important outcomes for women and girls. Table 3 provides summary statistics of the 2011 outcome variables and also compares the means to those reported in the 2006 UDHS. While our analysis will not consider changes in attitudes over time, the results in Table 3 show which attitudes have changed over the period of interest and give a hint of which attitudes are perhaps more easily changed.[6] The results indicate that there have been positive changes in some gender-related attitudes (domestic violence, women's control over cash earnings, and attitudes toward use of contraception), while other attitudes appear more rigid and slow moving (women's participation in household decisions, and ability to negotiate safe sex).

An alternative way to understand if gender-related attitudes change over time is to compare attitudes across generations. In Table 4, we report the 2011 difference in means across young and old (defined as being below or above the sample median age of 27). The results show that older individuals have more favorable attitudes toward women than younger individuals. For example, fewer individuals above age 27 agree that wife beating is sometimes justified, and more women above age 27 participate in household decisions and have control over household cash earnings.

4.2 Instrumental variables

The LSMS include around 50 geographical variables, described and summarized in the appendix. To these we add two other plausibly exogenous predictors: the share of coethnics of the President living in the district and an indicator for the districtof birth of the President. These reflect the possibility that political economy factors may play an important role in the allocation of aid funds, perhaps even overriding logistical cost considerations. There is however not much variation in these factors for this specific case, since Uganda only had one president serving during the years of the sample, Yoweri Museveni, of Banyankole ethnicity - the second largest ethnic group in Uganda (9.5% of the population).

[6] One of the chosen UDHS outcome variables was not available in the 2006 survey: whether a woman is justified to request a condom if the husband has a sexually transmitted infection (STI). The 2011 mean for this statement is 0.87 in the full sample of women and men, and 0.86 and 0.93 for women and men, respectively.

Table 4: Differences in attitudes over generations, DHS 2011

	Mean Old	Mean Young	Difference	p-value
Domestic violence (women & men)	0.522	0.572	-0.050	0.000
Domestic violence (women)	0.559	0.599	-0.040	0.001
Domestic violence (men)	0.398	0.458	-0.059	0.011
Decision making (women)	0.441	0.289	0.153	0.000
Number of decisions (women)	1.952	1.530	0.422	0.000
Control over earnings (women)	0.731	0.641	0.090	0.000
Decision: Own health care (women)	0.663	0.520	0.143	0.000
Decision: HHD purchases (women)	0.631	0.496	0.135	0.000
Decision: Family visits (women)	0.658	0.515	0.143	0.000
Control: Own earnings (women)	0.873	0.817	0.056	0.001
Control: Husband's earnings (women)	0.490	0.465	0.025	0.055
Wife can refuse sex if husband has other woman (women & men)	0.753	0.759	-0.006	0.269
Wife can refuse sex if husband has other woman (women)	0.749	0.763	-0.013	0.121
Wife can refuse sex if husband has other woman (men)	0.765	0.742	0.022	0.141
Wife can request condom if husband has STI (women & men)	0.893	0.887	0.006	0.219
Wife can request condom if husband has STI (women)	0.876	0.871	0.005	0.290
Wife can request condom if husband has STI (Men)	0.947	0.951	-0.004	0.330
Woman can refuse to have sex (women)	0.858	0.861	-0.004	0.380
Woman can request use of contraceptives (women)	0.772	0.811	-0.039	0.003
Contraception is woman's business (men)	0.172	0.228	-0.055	0.002
Contraception makes women promiscuous (men)	0.346	0.382	-0.036	0.080

We use best subset selection (following (James, Witten, Hastie, and Tibshirani 2013)) in order to identify a subset of these predictors that are most related to the response, namely the presence of aid projects or number thereof. This approach involves fitting a separate least squares regression for each possible combination of the predictors, as described above.

We start estimating equation 1 in the cross-section of LSMS household locations, using as dependent variable the number of projects started in the neighborhood of the household (within 10km) up untill 2010, one year earlier than the survey outcomes we look at. Figure 1 plots RSS, adjusted R^2, C_p and BIC of the regressions against the number of included predictors. The statitics naturally decrease (increase) monothonically with the inclusion of more predictors, but it is clear that there is not much progress to be made above 10 variables.

Rather than relying on these statistics, a more robust approach to choose among alternative models is to perform cross-validation. All the statistics plotted above summarize how well the model fits the data but can be quite poor indicators of the predictive performance of the model, namely how well it might do when tested on new data. A better sense of this can be achieved by the recursive procedure described above: estimating the model on 9 out of 10 random subsets of the data, leaving out one subset at a time to test the model on, and then summarizing the performance of the model in all of the test subsamples.

Figure 2 plots the test mean squared error (MSE) so obtained, showing some local minimums but leading us to conclude that cross-validation selects a 10-variable model[7]. This is our preferred model, estimated and reported in column (1) of Table 5 below.

4.2.1 First stage regressions

Table 5 reports, in column (1), the estimation of the best model for equation 1 selected according to the procedure described above. The subset of predictors that minimizes the test MSE is

[7]Including past aid among the candidate regressors would deliver a much better model, with less than half MSE and fewer predictors. However we choose not to include it, as this strenghtens the credibility of the exclusion restrictions for the set of instruments.

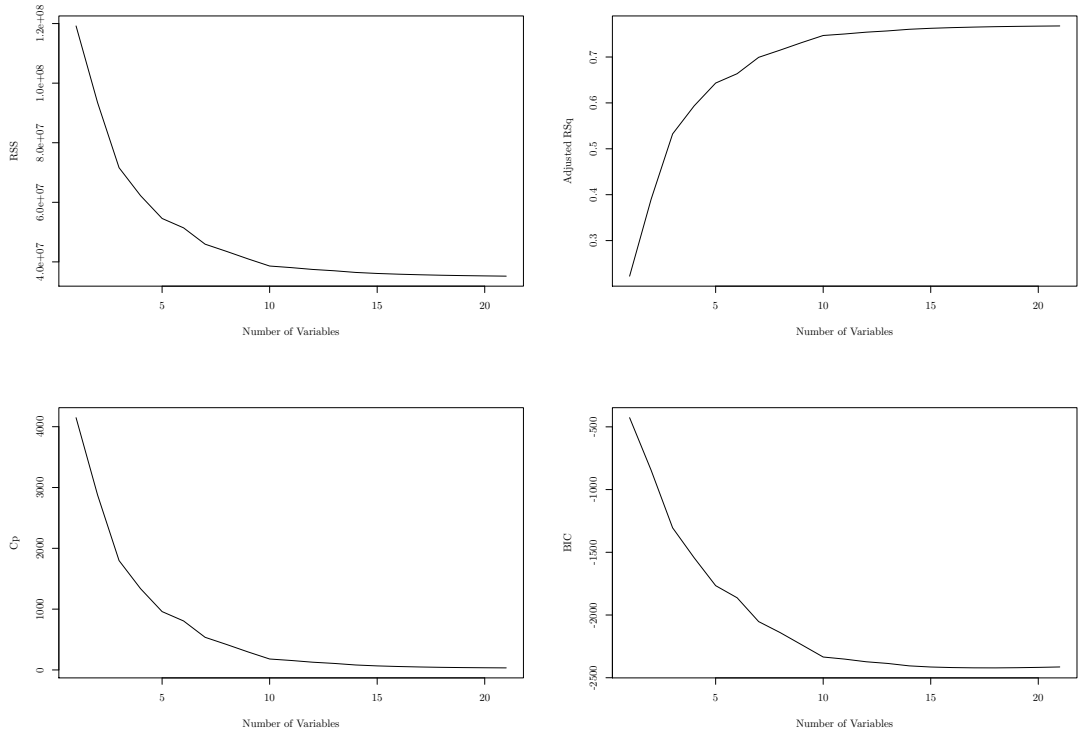

Figure 1: Model fit statistics

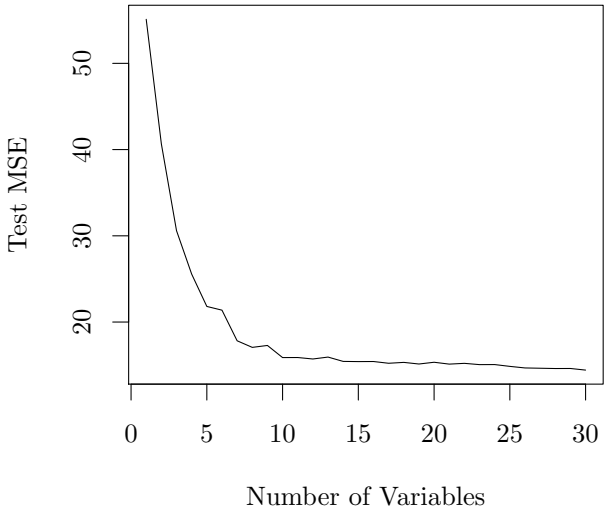

Figure 2: Sub-set selection

selected through cross-validation among all the geographical variables available in the LSMS, plus our two political-economy factors. The model can be interpreted as follows: aid projects are allocated to less isolated areas (closer to the market and to a population center, not too close to the borders); slightly warmer areas, with more rain but not too concentrated, where agriculture is less prevalent and growing seasons are later and shorter. The political variables are not among the strongly correlated with aid presence.

Column (2) reports the actual first stage, including the controls for the second stage LSMS equation. From this column we can see that the F-statistic is very high; at the same time comparing with column (1) we notice that the bulk of predictive power comes from the geographical variables (the instruments) and not the controls.

Columns (3) and (4) do the same for the DHS sample. Notice that while the variable selection was done to match the location of LSMS household, the predictive power for this different sample of locations is still considerable.

5 Results from Uganda LSMS, 2011

The tables in this section report difference-in-difference estimations of girls vs boys with the treatment intensity (number of aid project-years) instrumented as described in the previous section.

Throughout the section we report results using the number of project-years as the independent variable. For most outcomes the impact of aid is non-linear, small and insignificant for low levels but larger as aid presence increases. Comparing simply households with or without any aid, taking no account of the relative intensity, fails to capture most of this variation[8].

[8]Tables using the binary independent variable are not reported in the paper but can be requested to the

Table 5: First stage

	(1) LSMS	(2) LSMS	(3) DHS	(4) DHS
Distance to Population center (km)	-0.332**	-0.438***	-15.72	-18.46**
	(0.140)	(0.128)	(14.98)	(8.003)
Distance to Nearest Market (km)	-0.883***	-0.797***	-40.95***	-10.14
	(0.140)	(0.125)	(12.62)	(7.311)
Distance to Border (km)	0.264***	0.392***	13.54**	14.48**
	(0.0466)	(0.0527)	(5.269)	(5.923)
Mean Temp Wettest Q (mm)	1.166***	1.095***	1.642***	0.104
	(0.181)	(0.200)	(0.210)	(0.119)
Annual Precipitation (mm)	0.0967***	0.111***	0.237***	0.103***
	(0.0290)	(0.0300)	(0.0241)	(0.0292)
Precipitation Wettest month (mm)	-0.351**	-0.489***	-0.614***	-0.403***
	(0.145)	(0.166)	(0.161)	(0.144)
Share agriculture within 1km	-0.447***	-0.439***	-0.0550	0.0346
	(0.119)	(0.120)	(0.149)	(0.0577)
Av. Onset Green (day)	1.499***	1.735***	1.435***	0.126
	(0.433)	(0.431)	(0.132)	(0.102)
Av. Onset Green Dec (day)	-1.413**	-1.804***	-3.417***	-0.706***
	(0.551)	(0.569)	(0.184)	(0.240)
Av. Onset Green Dec 2nd Season (day)	-0.844**	-0.407	-1.380***	-0.252***
	(0.418)	(0.418)	(0.0842)	(0.0848)
Controls	No	Yes	No	Yes
R^2	0.652	0.672	0.767	0.902
F	27.98	1920.6	66.43	111.6
Observations	13996	13996	10363	8065

Note: Dependent variable is the number of project-years implemented in a location. Standard errors clustered at the EA level. Columns (2) and (4) include regional dummies. Column (4) includes controls for age, gender, language, dummies for muslim, rural, education and wealth level and main source of information.

To the extent that the variation captured by our IVs (distance from points of interest, rainfall, temperature, growing seasons) does not affect differentially girls and boys, the estimates can be interpreted as causal.

In order to address potential threats to the validity of our exclusion restrictions, we control for household income as predicted by the same set of instruments. Income is the main potential channel other than aid through which the geographic and climatic characteristics of an area might affect our outcomes. However we wouldn't want to control for income since it might be a mechanism through which aid impacts the outcomes (i.e., a *bad control*). In this way we only control for the function of our geospatial factors that affects income.

The tables report a battery of tests on the instruments. Hansen's J statistic is a test of overidentifying restrictions. The joint null hypothesis is that the instruments are uncorrelated with the error term (valid), and that the excluded instruments are correctly excluded from the main (second stage) equation. Both the statistic and its p-value are reported. The underidentification test checks that the excluded instruments are relevant, meaning correlated with the endogenous regressors. The LM and Wald versions of the Kleibergen-Paap (2006) rk statistic are reported along with p-values for the first one. The second one is cluster-robust. Stock and Yogo (2005) have compiled critical values for this statistic for several different configurations, but it is not always possible to find the right value to compare to.

5.1 Education outcomes

Table 6 reports impacts on primary education outcomes.The tests show that the instruments are strong and valid in all specifications.The KP statistic implies that we can reject the null hypothesis that the maximum relative bias due to weak instruments is larger than 10% (5% in column (4)).

Aid increases the probability of attending school for children in primary school age (6-12), and reduces the share of the same group that has never attended school at all. The size of the coefficient can be interpreted as follows: children living in an area with average exposure (14 project-years) is 1.5 percentage points more likely to be attending primary school and 1.3 percentage points less likely to never having attended school. These effects are however not differential for girls.

The income channel doesn't seem to play a role for these outcomes. The effect of geography that goes through income, although not significant, is negative on these likelihoods: households in areas that receive more aid projects have also a lower income, as measured by the survey proxies, which reduces the likelihood of attending school and increases the likelihood of never having attended. When both channels are included, it is the aid presence, and not the lower income, to impact these probabilities.

Table 22 in Appendix B shows a much larger impact of gender-focused project, although less precisely estimated, and still no differential for girls in particular.

Table 7, and Table 23 in the Appendix, look in a similar way to children in secondary school age. Although the sign and size of the coefficients are comparable, no effect is significant in this case, perhaps due to the smaller sample.

authors.

Table 6: Primary school outcomes

	(1) Attending - OLS	(2) Attending - IV	(3) Never attended - OLS	(4) Never attended - IV
Aid project-years	0.000608***	0.00111**	-0.000536***	-0.000967**
	(0.000170)	(0.000442)	(0.000171)	(0.000432)
Aid*Female	-0.000257	-0.000195	0.000379*	0.000296
	(0.000227)	(0.000530)	(0.000214)	(0.000472)
Female	0.0105	0.00368	-0.0216	-0.0155
	(0.0191)	(0.0222)	(0.0169)	(0.0189)
HH income	0.0000143***	-0.0000217	-0.0000130***	0.0000149
	(0.00000328)	(0.0000272)	(0.00000309)	(0.0000264)
Constant	0.849***	0.839***	0.132***	0.142***
	(0.0231)	(0.0252)	(0.0228)	(0.0245)
Observations	2135	2135	2135	2135
Hansen_j		20.86		10.05
J_pval		0.287		0.347
KPLM		60.77		58.23
KPLM_pval		0.00000292		7.83e-09
KP		5.150		14.87

Note: Independent variable is the number of project-years in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies are included. Standard errors clustered at the EA level.

Table 7: Secondary school outcomes

	(1) Attending - OLS	(2) Attending - IV	(3) Never attended - OLS	(4) Never attended - IV
Aid project-years	0.000268	0.000733	-0.000136	-0.000171
	(0.000345)	(0.000506)	(0.000106)	(0.000146)
Aid*Female	0.0000132	-0.000568	0.000266	0.000325
	(0.000467)	(0.000899)	(0.000177)	(0.000203)
Female	0.0439	0.0603*	-0.0134	-0.0146
	(0.0355)	(0.0362)	(0.0122)	(0.0128)
HH income	0.00000652	-0.0000183	-0.00000177	-0.00000129
	(0.00000668)	(0.0000348)	(0.00000127)	(0.00000392)
Constant	0.820***	0.807***	0.0129	0.0140
	(0.0384)	(0.0420)	(0.00889)	(0.0103)
Observations	1598	1598	1598	1598
Hansen_j		17.08		6.256
J_pval		0.518		0.714
KPLM		53.83		51.59
KPLM_pval		0.0000350		0.000000136
KP		4.549		10.88

Note: Independent variable is the number of project-years in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies are included. Standard errors clustered at the EA level.

Table 8: Child work

	(1) Farm work (Pr) - OLS	(2) Farm work (Pr) - IV	(3) House work (h) - OLS	(4) House work (h) - IV
Aid project-years	-0.00177***	-0.00261***	-0.0173***	-0.00692
	(0.000332)	(0.000866)	(0.00486)	(0.00882)
Aid*Female	-0.000324	-0.0000200	-0.00242	-0.00222
	(0.000278)	(0.000560)	(0.00505)	(0.0123)
Female	0.0101	0.00574	2.689***	2.702***
	(0.0260)	(0.0267)	(0.460)	(0.509)
HH income	-0.0000193	-0.0000296	-0.0000929	-0.00137
	(0.0000148)	(0.0000557)	(0.000192)	(0.000882)
Constant	0.546***	0.577***	8.606***	8.432***
	(0.0439)	(0.0485)	(0.682)	(0.741)
Observations	3705	3705	3700	3700
Hansen_j		23.68		12.52
J_pval		0.166		0.186
KPLM		59.81		54.29
KPLM_pval		0.00000415		4.29e-08
KP		5.980		12.31

Note: Independent variable is the number of project-years in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies are included. Standard errors clustered at the EA level.

5.2 Child work

Tables 8, 9 and 10 look at child work outcomes. The tests show that the instruments are strong in all specifications but, in column (2) and (4) of Table 9, they cast doubt on their validity. This might be due to some important omitted variables that induce correlation of the instruments with the error term.

From Table 8 we can read that the probability that children in school age are working on the family is lower in areas exposed to aid projects, in column (1). Once more, the income channel seems irrelevant.

Aid also reduces time spent in domestic chores. Although there is no significantly different effect for girls in particular, this is higher for girls at baseline. A similar pattern emerges disaggregating the time use across specific activities: in Table 9 we see that the hours spent on some typically female housework are significantly reduced for all children, while being higher at baseline for girls.

When including also adults, in Tables 11 and 12, we notice that the Female dummy is always positive, significant and quite large, with the exception of the cathegory "Hunting and fishing". In this sample, the time spent on collecting firewood is differentially reduced for women and girls.

These results do not differ particularly when focusing on gender-targeted projects, in the Appendix. An interesting difference is found in the time spent on food preparation, that increases relatively for men while going down for women in areas targeted by such projects. Moreover the time spent on agriculture goes down differentially for women, see Tables 27 and 28.

Table 9: Time use on female tasks, children

	(1) Firewood - OLS	(2) Firewood - IV	(3) Water - OLS	(4) Water - IV	(5) Food - OLS	(6) Food - IV
Aid project-years	-0.00688***	-0.0101***	-0.00629*	-0.00494	0.0000286	-0.000388
	(0.00123)	(0.00276)	(0.00329)	(0.0138)	(0.0000682)	(0.000349)
Aid*F	0.000537	0.00161	0.00135	0.00682	-0.000708**	-0.00101
	(0.00153)	(0.00508)	(0.00260)	(0.00653)	(0.000357)	(0.000918)
Female	0.427***	0.417***	0.184	0.102	0.124***	0.128***
	(0.119)	(0.131)	(0.240)	(0.286)	(0.0370)	(0.0492)
HH income	-0.0000957***	-0.000339	-0.000205	-0.00114	-0.00000569	0.0000801*
	(0.0000285)	(0.000223)	(0.000163)	(0.000857)	(0.00000847)	(0.0000474)
Constant	1.267***	1.421***	3.161***	3.218***	-0.0384***	-0.0346**
	(0.203)	(0.222)	(0.451)	(0.621)	(0.0135)	(0.0170)
Observations	3701	3701	3701	3701	3701	3701
Hansen_j		28.92		37.49		22.55
J_pval		0.0494		0.00452		0.208
KPLM		59.84		59.84		59.84
KPLM_pval		0.00000411		0.00000411		0.00000411
KP		5.982		5.982		5.982

Note: Independent variable is the number of projects implemented in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies included. Standard errors clustered at the EA level.

Table 10: Time use on neutral or male tasks, children

	(1) Agriculture - OLS	(2) Agriculture - IV	(3) Hunting and Fishing - OLS	(4) Hunting and Fishing - IV
Aid project-years	-0.0109**	0.00323	-0.000175	-0.000886
	(0.00522)	(0.0203)	(0.000189)	(0.000841)
Aid*F	0.00626	0.00722	0.000194	0.000792
	(0.00430)	(0.0113)	(0.000245)	(0.000715)
Female	-0.250	-0.243	-0.0322	-0.0431
	(0.410)	(0.564)	(0.0263)	(0.0348)
HH income	0.0000177	-0.00173	0.000000829	0.0000228
	(0.000333)	(0.00138)	(0.00000309)	(0.0000324)
Constant	2.970***	2.729***	0.0279*	0.0453
	(0.769)	(1.013)	(0.0167)	(0.0309)
Observations	3701	3701	3701	3701
Hansen_j		14.14		8.233
J_pval		0.720		0.975
KPLM		59.84		59.84
KPLM_pval		0.00000411		0.00000411
KP		5.982		5.982

Note: Independent variable is the number of projects implemented in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies included. Standard errors clustered at the EA level.

Table 11: Time use on female tasks, all

	(1) Firewood - OLS	(2) Firewood - IV	(3) Water - OLS	(4) Water - IV	(5) Food - OLS	(6) Food - IV
Aid project-years	-0.00273***	-0.00250	-0.00497**	-0.00248	0.000418***	-0.00150
	(0.000853)	(0.00331)	(0.00239)	(0.0101)	(0.000125)	(0.00145)
Aid*F	-0.00428***	-0.00689***	0.00517	0.00101	-0.00124**	-0.00118
	(0.000861)	(0.00228)	(0.00594)	(0.00783)	(0.000525)	(0.00102)
Female	1.103***	1.155***	0.828***	0.909***	0.300***	0.306***
	(0.0848)	(0.0847)	(0.225)	(0.223)	(0.0625)	(0.0722)
HH income	-0.0000726***	-0.000185	-0.0000385	-0.000235	-0.0000213***	0.000106
	(0.0000253)	(0.000176)	(0.0000938)	(0.000474)	(0.00000624)	(0.0000825)
Constant	0.680***	0.743***	1.857***	1.866***	-0.116***	-0.0722*
	(0.163)	(0.201)	(0.305)	(0.419)	(0.0240)	(0.0386)
Observations	7742	7742	7742	7742	7742	7742
Hansen_j		47.68		37.38		24.86
J_pval		0.000168		0.00468		0.129
KPLM		61.39		61.39		61.39
KPLM_pval		0.00000233		0.00000233		0.00000233
KP		8.152		8.152		8.152

Note: Independent variable is the number of projects implemented in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies included. Standard errors clustered at the EA level.

Table 12: Time use on neutral or male tasks, all

	(1) Agriculture - OLS	(2) Agriculture - IV	(3) Hunting and Fishing - OLS	(4) Hunting and Fishing - IV
Aid project-years	-0.0195***	-0.00806	-0.000327	0.000693
	(0.00518)	(0.0324)	(0.000263)	(0.00173)
Aid*F	-0.00498*	-0.00892	0.000158	-0.000933
	(0.00292)	(0.0117)	(0.000192)	(0.00133)
Female	1.006***	1.045**	-0.0387	-0.0171
	(0.370)	(0.464)	(0.0264)	(0.0267)
HH income	-0.000213	-0.00108	-0.000000781	-0.0000283
	(0.000252)	(0.00137)	(0.00000369)	(0.0000707)
Constant	5.128***	4.950***	0.0709	0.0478**
	(0.849)	(1.270)	(0.0534)	(0.0227)
Observations	7742	7742	7742	7742
Hansen_j		16.43		18.03
J_pval		0.562		0.454
KPLM		61.39		61.39
KPLM_pval		0.00000233		0.00000233
KP		8.152		8.152

Note: Independent variable is the number of projects implemented in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies included. Standard errors clustered at the EA level.

Table 13: Consumption patterns

	(1)	(2)	(3)	(4)	(5)	(6)
	Male goods share - OLS	Male goods share - IV	School exp ratio - OLS	School exp ratio - IV	Med exp ratio - OLS	Med exp ratio - IV
Aid project-years	-0.0000384	-0.00000485	0.00498	0.0296	-0.0227	-0.0206**
	(0.0000878)	(0.0000982)	(0.00962)	(0.0186)	(0.0137)	(0.0104)
HH income	-0.00000118	0.0000231	-0.000145	-0.000683	-0.0000403	0.00192
	(0.00000124)	(0.0000203)	(0.000317)	(0.00183)	(0.000108)	(0.00221)
# sons in school age	0.00000883**	0.00000972***	-0.000251	-0.000269	-0.0000141	0.0000432
	(0.00000396)	(0.00000357)	(0.000216)	(0.000215)	(0.000105)	(0.000101)
# sons in school	-0.0000113***	-0.0000124***	0.000442	0.000527	-0.000136	-0.000115
	(0.00000394)	(0.00000372)	(0.000702)	(0.000694)	(0.000244)	(0.000204)
Father's education	0.00271	0.00287*	0.257	0.233*	-0.0744	-0.0545
	(0.00172)	(0.00153)	(0.174)	(0.136)	(0.267)	(0.213)
HH size	0.000000409*	0.000000169	0.00000579	0.00000125	0.0000205	-0.00000175
	(0.000000240)	(0.000000327)	(0.0000514)	(0.0000464)	(0.0000326)	(0.0000285)
Urban	0.00829	0.00281	-0.0405	-2.359	4.206	4.477
	(0.0132)	(0.0138)	(1.308)	(2.037)	(3.626)	(2.896)
Constant	0.0135	0.0104	0.851	0.121	4.354**	4.172**
	(0.0124)	(0.0119)	(1.927)	(1.615)	(2.175)	(1.791)
Observations	546	546	311	311	197	197
Hansen_j		14.71		11.34		17.41
J_pval		0.0992		0.253		0.0427
KPLM		65.90		46.64		48.20
KPLM_pval		2.73e-10		0.00000110		0.000000571
KP		61.81		19.88		15.32

Note: Independent variable is the number of project-years in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies included. Standard errors clustered at the EA level.

5.3 Consumption patterns

Table 13 reports results related to household consumption patterns. These specifications are at the household level, and hence are not difference-in-difference. We therefore include more controls here to strengthen our identification. The dependent variable in columns (1) and (2) is the share of the non-durables consumption budget spent on alcohol and tobacco, typically considered *male goods*. Controlling for the education level of the father (male household head), the household size and the number of sons, this ratio is not affected by exposure to aid. There is though a suspicion of omitted variables in this specification, as indicated by the Hansen's J statistic - the istruments might be correlated with the error term. Unfortunately adding more controls reduces the sample size.

Columns (3) to (6) look at two expenditure cathegories, on schooling and on health care, as a ratio of resources spent on female to male household members. While school expenditures are unaffected, medical expenditures are lower for women in aid intense areas. However the Hansen's J signals some issue also in this specification.

No difference is found looking at gender-focused projects, in the Appendix.

6 Results from Uganda DHS, 2011

In our assessment of how aid intensity affects indicators of womens empowerment and gender-related attitudes, we continue to use the number of aid projects (or gender-focused projects) multiplied by the number of years each project has been ongoing in the period of 2006-2011 as the independent variables. All regressions include, in addition to the control variables reported in the tables, region fixed effects and indicator variables for whether the respondent belongs to the ethnic group of Buganda, Banyankole, Basoga, Bakiga, Atesa, Langi, Acholi, Bagisu, Lugbara, Bunyoro or one of the smaller ethnic groups. In all regressions, standard errors are clustered at the DHS cluster level.

Unlike the LSMS, the UDHS does not collect information on the respondent's income. To proxy for household income, we use the wealth factor score index provided in the UDHS. This is

a composite measure of the household's living standard and places the individual households on a continuous scale of relative wealth. For the same reasons as provided in the previous section, we will only control for the relative wealth index score that is predicted by our function of geographical factors.

6.1 Domestic violence

Our first attitude outcome of interest is attitudes toward wife beating. We denote this variable 'domestic violence' and let it take the value one if respondents replied that wife beating is justified in at least one of the following five situations: (i) wife goes out without telling husband; (ii) wife neglects the children; (iii) wife argues with husband; (iv) wife refuses to have sex with husband; and (v) wife burns the food, and zero otherwise. The impact of aid project intensity are reported in Table 14, and the impact of gender-focused projects are reported in Table 30. Columns 1-2 report estimations using the full sample of women and men, while columns 3-4 report the results only looking at the subsample of women and columns 5-6, the subsample of men. The results indicate that having a higher aid project intensity in the neighborhood lowers the acceptance of wife beating (Table 14, column 1-2), but only statistically significantly so for women (Table 14, column 3-4). The coefficient for men has almost exactly the same size, but the sample size is much smaller. Much of this affect appear to come from a higher intensity of gender-focused projects (Table 30, column 1-4) but since the Hansen's J statistics in the regressions with this independent variable are rejected, the latter results should be interpreted with caution.

6.2 Negotiating safe sex

Next, we turn to a wife's ability to negotiate safer sex with her husband. This is measured in the UDHS by the following two statements: (i) a wife is justified in refusing sex with her husband if she knows that he has sex with other women; and (ii) a wife is justified in asking the husband to use a condom if she knows that he has a sexually transmitted infection (STI). We construct these variables so that they take the value one if the respondent agrees with the statement, and zero otherwise. Table 15 and Table 31 report the results for how aid project intensity and gender project intensity affect these attitudes, respectively. All these estimations are carried out on the full sample of women and men. The only statistically significant result is found in column 2 in Table 31. Having a higher intensity of gender-focused projects appear to increase the number of individuals reporting that a wife is justified in refusing sex when she knows her husband is cheating. All other coefficients go in the expected direction but are small and insignificant, which can potentially be explained by the high share of respondents agreeing with these statement (see Table 3).

6.3 Attitudes toward contraceptive use

Women's ability to negotiate safe sex can also be captured by men and women's attitude toward contraceptive use. For men, we use the following two statements from the 2011 UDHS: (i) whether the respondent agrees that contraception is women's business, and (ii) whether women who use contraception become promiscuous. The results are reported in Table 17 and Table 33. Questions about these attitudes were unfortunately not asked to women. Instead, we use more general statements reflecting a woman's ability to refuse sex and to request use of condom. All variables take the value one if respondents agreed with the statement, and zero otherwise. The results are reported in Table 32 and 16, and show that none of the attitudes are statistically significantly related to local intensity of aid projects or gender-focused projects.

Table 14: Aid projects and attitudes toward wife beating

	(1) Domestic Violence (Women & Men) OLS	(2) Domestic Violence (Women & Men) IV	(3) Domestic Violence (Women) OLS	(4) Domestic Violence (Women) IV	(5) Domestic Violence (Men) OLS	(6) Domestic Violence (Men) IV
Aid project years	-0.00117***	-0.00574**	-0.00134***	-0.00523**	-0.000672	-0.00520
	(0.000256)	(0.00245)	(0.000307)	(0.00223)	(0.000442)	(0.00420)
Wealth index factor score	0.000130	0.0172	-0.000710	0.00967	0.00207	0.0157
	(0.00120)	(0.0275)	(0.00144)	(0.0255)	(0.00243)	(0.0439)
Female	0.150***	0.127**				
	(0.0205)	(0.0493)				
Age	-0.00625***	-0.00727***	-0.00633***	-0.00684***	-0.00604***	-0.00666***
	(0.000714)	(0.00182)	(0.000798)	(0.00186)	(0.00118)	(0.00186)
Urban	-0.0668**	-0.161	-0.0578*	-0.106	-0.101**	-0.162
	(0.0323)	(0.205)	(0.0344)	(0.184)	(0.0502)	(0.342)
Currently married	-0.00265	0.00795				
	(0.0151)	(0.0214)				
Years of education	-0.0149***	-0.0226	-0.0134***	-0.0177	-0.0206***	-0.0255
	(0.00227)	(0.0146)	(0.00276)	(0.0150)	(0.00392)	(0.0177)
Muslim	0.0593***	0.0539***	0.0648***	0.0633***	0.0460	0.0375
	(0.0171)	(0.0203)	(0.0184)	(0.0212)	(0.0400)	(0.0435)
Speak Luganda, Luo, Runyankole-Rukiga	-0.0102	-0.0104	-0.132***	-0.138***	0.134**	0.131
	(0.0366)	(0.0412)	(0.0451)	(0.0456)	(0.0623)	(0.0802)
Employed for cash	0.0685***	0.0727***	0.0562**	0.0587**	0.0589	0.0785*
	(0.0202)	(0.0214)	(0.0257)	(0.0266)	(0.0400)	(0.0444)
Ever read newspaper	0.0177	0.00460	-0.00176	-0.00324	0.0491	0.0205
	(0.0164)	(0.0295)	(0.0198)	(0.0282)	(0.0329)	(0.0755)
Ever listen to radio	0.0266	-0.00921	0.0225	-0.00267	0.0523	0.0309
	(0.0193)	(0.0464)	(0.0213)	(0.0406)	(0.0548)	(0.0887)
Ever watch TV	-0.0322*	-0.0522	-0.0352	-0.0467	0.00957	0.0238
	(0.0180)	(0.0791)	(0.0246)	(0.0986)	(0.0304)	(0.0505)
Constant	0.787***	1.890***	1.022***	1.919***	0.590***	1.652
	(0.0785)	(0.673)	(0.0881)	(0.592)	(0.141)	(1.070)
Hansen_j		11.40		11.36		15.39
J_pval		0.180		0.182		0.0520
KPLM		8.030		10.61		7.476
KPLM_pval		0.531		0.303		0.588
KP		1.796		2.032		0.811
Observations	7827	7827	5832	5832	1995	1995

Note: The independent variable is the total number of aid projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for aid project years. All regressions include indicator variables for region and ethnicity. Regressions 1-2 are estimated using the full sample of women and men. Regressions 3-4 use only women, and regressions 5-6 use only men. Standard errors are clustered at the DHS cluster level.
*significant at 10% **significant at 5% ***significant at 1%

Table 15: Aid projects and negotiation of safe sex

	(1) Wife refuse sex husband has other woman OLS	(2) Wife refuse sex husband has other woman IV	(3) Wife request condom if husband STI OLS	(4) Wife request condom if husband STI IV
Aid project years	0.000150	0.000798	0.000123	0.00146
	(0.000226)	(0.00130)	(0.000188)	(0.000995)
Wealth index factor score	0.0000904	-0.000279	0.000929	-0.0131
	(0.00102)	(0.0173)	(0.000733)	(0.0129)
Age	0.000120	0.000122	0.000716	0.00144
	(0.000617)	(0.00110)	(0.000460)	(0.000889)
Urban	0.0103	0.00720	0.00201	0.105
	(0.0187)	(0.133)	(0.0175)	(0.103)
Years of education	0.00280	0.00275	0.00459***	0.0118*
	(0.00178)	(0.00926)	(0.00123)	(0.00694)
Muslim	0.0149	0.0148	-0.00512	-0.000283
	(0.0167)	(0.0174)	(0.0154)	(0.0170)
Speak Luganda, Luo, Runyankole-Rukiga	-0.0562*	-0.0538	-0.00636	-0.0176
	(0.0307)	(0.0333)	(0.0247)	(0.0294)
Employed for cash	-0.00753	-0.00859	0.00567	0.00433
	(0.0144)	(0.0146)	(0.0127)	(0.0140)
Ever read newspaper	0.0131	0.0127	0.00457	0.0162
	(0.0140)	(0.0208)	(0.0110)	(0.0147)
Ever listen to radio	0.0580***	0.0602**	0.0718***	0.0922***
	(0.0179)	(0.0290)	(0.0182)	(0.0261)
Ever watch TV	-0.0152	-0.0188	0.000670	0.0325
	(0.0160)	(0.0467)	(0.0116)	(0.0345)
Constant	0.700***	0.555	0.723***	0.371
	(0.0652)	(0.351)	(0.0573)	(0.270)
Hansen_j		22.18		8.312
J_pval		0.00459		0.404
KPLM		8.547		8.590
KPLM_pval		0.480		0.476
KP		1.764		1.691
Observations	7887	7887	7794	7794

Note: The independent variable is the total number of aid projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for aid project years. All regressions include indicator variables for region and ethnicity, are estimated using a sample of both women and men. Standard errors are clustered at the DHS cluster level.
*significant at 10% **significant at 5% ***significant at 1%

Table 16: Aid projects and women's attitudes toward contraceptive use

	(1)	(2)	(3)	(4)
	Woman can refuse sex OLS	Woman can refuse sex IV	Woman can request contraception OLS	Woman can request contraception IV
Aid project years	-0.0000465	0.000232	-0.000533***	-0.00104
	(0.000164)	(0.00122)	(0.000189)	(0.00152)
Wealth index factor score	0.00299***	0.00305	0.00469***	0.0169
	(0.00106)	(0.0169)	(0.00133)	(0.0229)
Age	-0.000799	-0.000827	-0.00478***	-0.00648*
	(0.000784)	(0.00253)	(0.000996)	(0.00337)
Urban	-0.000980	-0.00358	-0.00655	-0.0941
	(0.0178)	(0.118)	(0.0232)	(0.164)
Years of education	0.00486**	0.00466	0.0113***	0.00330
	(0.00206)	(0.0109)	(0.00255)	(0.0149)
Muslim	-0.0113	-0.0115	0.0190	0.0108
	(0.0184)	(0.0211)	(0.0202)	(0.0247)
Speak Luganda, Luo, Runyankole-Rukiga	-0.00350	-0.00206	-0.000150	0.00161
	(0.0369)	(0.0367)	(0.0478)	(0.0466)
Employed for cash	0.0114	0.0111	0.0399*	0.0356
	(0.0168)	(0.0182)	(0.0217)	(0.0230)
Ever read newspaper	0.0141	0.0132	0.00849	-0.00495
	(0.0137)	(0.0230)	(0.0196)	(0.0307)
Ever listen to radio	-0.00543	-0.00477	0.0106	-0.00806
	(0.0186)	(0.0320)	(0.0215)	(0.0400)
Ever watch TV	0.0167	0.0145	-0.00966	-0.0484
	(0.0165)	(0.0537)	(0.0258)	(0.0744)
Constant	0.819***	0.759*	0.932***	1.145**
	(0.0537)	(0.400)	(0.0720)	(0.506)
Hansen_j		17.03		17.91
J_pval		0.0298		0.0219
KPLM		8.466		9.154
KPLM_pval		0.488		0.423
KP		1.032		1.073
Observations	3975	3975	4023	4023

Note: The independent variable is the total number of aid projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for aid project years. All regressions include indicator variables for region and ethnicity, and are estimated using only ever married women. Standard errors are clustered at the DHS cluster level.
*significant at 10% **significant at 5% ***significant at 1%

Table 17: Aid projects and men's attitudes toward contraceptive use

	(1) Contraception women's business OLS	(2) Contraception women's business IV	(3) Contraception makes women promiscuous OLS	(4) Contraception makes women promiscuous IV
Aid project years	-0.000323	-0.00537	-0.000943	-0.00505
	(0.000409)	(0.00333)	(0.000633)	(0.00346)
Wealth index factor score	-0.00103	0.0577*	0.00264	0.0350
	(0.00176)	(0.0336)	(0.00253)	(0.0367)
Age	-0.00310***	-0.00453***	-0.00221*	-0.00319*
	(0.00105)	(0.00159)	(0.00118)	(0.00165)
Urban	0.00614	-0.443	0.0521	-0.182
	(0.0365)	(0.271)	(0.0609)	(0.298)
Years of education	-0.0116***	-0.0347**	-0.0157***	-0.0281*
	(0.00277)	(0.0140)	(0.00369)	(0.0147)
Muslim	-0.0215	-0.0531	0.0172	-0.000678
	(0.0287)	(0.0493)	(0.0379)	(0.0492)
Speak Luganda, Luo, Runyankole-Rukiga	0.0444	0.113	0.0747	0.120
	(0.0398)	(0.0875)	(0.0775)	(0.0883)
Employed for cash	0.000120	0.0217	0.0248	0.0460
	(0.0321)	(0.0434)	(0.0385)	(0.0478)
Ever read newspaper	-0.0495*	-0.131**	-0.0357	-0.0832
	(0.0266)	(0.0572)	(0.0325)	(0.0613)
Ever listen to radio	0.0665	-0.0279	0.125**	0.0739
	(0.0477)	(0.0751)	(0.0485)	(0.0755)
Ever watch TV	0.0348	-0.0203	0.0397	0.0169
	(0.0258)	(0.0519)	(0.0331)	(0.0542)
Constant	0.388***	1.677**	0.515***	1.522*
	(0.121)	(0.847)	(0.171)	(0.867)
Hansen_j		4.495		16.90
J_pval		0.810		0.0311
KPLM		7.064		9.033
KPLM_pval		0.630		0.434
KP		0.796		1.115
Observations	1923	1923	1817	1817

Note: The independent variable is the total number of aid projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for aid project years. All regressions include indicator variables for region and ethnicity, are estimated using the sample of men. Standard errors are clustered at the DHS cluster level.

*significant at 10% **significant at 5% ***significant at 1%

6.4 Control over household's cash earnings

Another important indicator of women's empowerment is whether women have some control over the household's cash earnings. We report the result for three different outcomes in this respect: (i) whether the woman alone or jointly with her husband/partner decides how to spend her own cash earnings (columns 1-2 in Table 19 and 34), (ii) whether the woman alone or jointly with her husband/partner decides how to spend his cash earnings (columns 3-4 in Table 19 and 34), and (iii) a composite measure of (i) and (ii) that takes the value one if the woman has answered yes to both (i) and (ii), and zero otherwise (columns 3-4 in Table 18 and 35). These questions were only asked to married women and therefore estimations are carried out using only the subsample of married women. The only statistically significant effect can be seen from higher intensity of gender-focused projects on the share of married women reporting to have some control over husband's cash earnings (Table 34, column 4).

6.5 Participation in household decision-making

Our final indicator of women's autonomy and status is their participation in household decisions. Three different areas of household decisions were considered in the 2011 survey: (i) personal health care; (ii) large household purchases; and (iii) family visits. We examine these decisions separately in Table 20 and 36. A woman is considered to participate if she has answered that she alone or jointly with her husband decides in these respective matters. The results show that neither the intensity of aid projects nor the intensity of gender-focused projects can explain the cross-sectional variation in participation in household decision-making.

We also construct a composite measure of participation in household decision-making, which takes the value one only if the woman has answered that she alone or jointly with her husband decides in all three areas of decisions, and zero otherwise. While we find a statistically significant effect of the intensity of gender-focused projects (see column 2 in Table 35), the Hansen's J statistic is rejected, which indicates that the excluded instruments are correlated with the error terms. Therefore, this result should be interpreted with caution.

Table 18: Aid projects and women's participation in household decisions

	(1) Decision Making (Women) OLS	(2) Decision Making (Women) IV	(3) Control over earnings (Women) OLS	(4) Control over earnings (Women) IV
Aid project years	0.000906*	0.00225	-0.000353	-0.000855
	(0.000470)	(0.00202)	(0.000393)	(0.00171)
Wealth index factor score	-0.00595***	-0.00517	-0.00370**	0.0263
	(0.00206)	(0.0265)	(0.00152)	(0.0247)
Age	0.0121***	0.0119***	0.00287***	-0.00140
	(0.00125)	(0.00381)	(0.000956)	(0.00358)
Urban	0.0810**	0.0648	0.0565**	-0.164
	(0.0377)	(0.192)	(0.0280)	(0.182)
Years of education	0.0106***	0.00925	0.00850***	-0.0116
	(0.00355)	(0.0174)	(0.00238)	(0.0161)
Muslim	-0.0782***	-0.0789***	0.00632	-0.0128
	(0.0271)	(0.0303)	(0.0222)	(0.0288)
Speak Luganda, Luo, Runyankole-Rukiga	0.0639	0.0712	-0.0139	-0.00549
	(0.0472)	(0.0471)	(0.0338)	(0.0371)
Employed for cash	0.0369	0.0350	0.389***	0.378***
	(0.0235)	(0.0250)	(0.0240)	(0.0286)
Ever read newspaper	0.0286	0.0239	0.0293	-0.00531
	(0.0274)	(0.0390)	(0.0180)	(0.0363)
Ever listen to radio	0.0144	0.0168	0.0460**	0.00226
	(0.0264)	(0.0487)	(0.0230)	(0.0458)
Ever watch TV	0.0895***	0.0769	0.0553***	-0.0454
	(0.0309)	(0.0868)	(0.0178)	(0.0784)
Constant	-0.316**	-0.602	0.391***	0.754
	(0.125)	(0.643)	(0.0972)	(0.540)
Hansen_j		18.54		8.169
J_pval		0.0175		0.417
KPLM		9.036		9.152
KPLM_pval		0.434		0.423
KP		1.079		1.066
Observations	4005	4005	4003	4003

Note: The independent variable is the total number of aid projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for aid project years. All regressions include indicator variables for region and ethnicity, are estimated using the sample of currently married women. Regressions 3-4 are further restricted to employed women. Standard errors are clustered at the DHS cluster level.
*significant at 10% **significant at 5% ***significant at 1%

Table 19: Aid projects and women's control over household earnings

	(1) Own Earnings OLS	(2) Own Earnings IV	(3) Husband's Earnings OLS	(4) Husband's Earnings IV
Aid project years	-0.0000626	-0.00304	-0.000552**	0.000661
	(0.000366)	(0.00242)	(0.000257)	(0.00169)
Wealth index factor score	-0.00237	0.0602*	-0.00445***	-0.0179
	(0.00166)	(0.0313)	(0.00168)	(0.0220)
Age	0.00557***	-0.00329	0.00254**	0.00408
	(0.00104)	(0.00465)	(0.000988)	(0.00270)
Urban	0.0716***	-0.347	0.0340	0.136
	(0.0273)	(0.216)	(0.0328)	(0.172)
Years of education	0.0111***	-0.0318	0.0119***	0.0191
	(0.00258)	(0.0211)	(0.00279)	(0.0124)
Muslim	0.0224	-0.0163	-0.0408*	-0.0270
	(0.0260)	(0.0476)	(0.0238)	(0.0317)
Speak Luganda, Luo, Runyankole-Rukiga	0.00207	-0.000747	-0.00380	-0.00876
	(0.0374)	(0.0497)	(0.0381)	(0.0390)
Ever read newspaper	0.0185	-0.0499	0.0764***	0.0877***
	(0.0212)	(0.0495)	(0.0234)	(0.0311)
Ever listen to radio	0.0424	-0.0569	0.0119	0.0362
	(0.0257)	(0.0600)	(0.0236)	(0.0451)
Ever watch TV	0.0431**	-0.152	0.0565***	0.0863
	(0.0210)	(0.103)	(0.0190)	(0.0585)
Constant	0.549***	1.706**	0.316***	-0.0477
	(0.0934)	(0.756)	(0.0793)	(0.523)
Hansen_j		8.685		8.532
J_pval		0.370		0.383
KPLM		6.706		9.906
KPLM_pval		0.668		0.358
KP		0.649		1.191
Observations	2860	2860	5930	5930

Note: The independent variable is the total number of aid projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for aid project years. All regressions include indicator variables for region and ethnicity, are estimated using the sample of currently married and employed women. Standard errors are clustered at the DHS clster level.
*significant at 10% **significant at 5% ***significant at 1%

Table 20: Aid projects and women's participation in different household decisions

	(1) Own Health Care OLS	(2) Own Health Care IV	(3) HHD Purchase OLS	(4) HHD Purchase IV	(5) Family Visits OLS	(6) Family Visits IV
Aid project years	-0.000323	-0.00167	0.000468*	0.000520	-0.0000632	-0.000473
	(0.000282)	(0.00170)	(0.000279)	(0.00174)	(0.000329)	(0.00198)
Wealth index factor score	-0.00662***	0.0140	-0.00372*	-0.0000124	-0.00495**	0.0184
	(0.00202)	(0.0243)	(0.00191)	(0.0272)	(0.00208)	(0.0331)
Age	0.0127***	0.00989***	0.0106***	0.0101***	0.0117***	0.00857*
	(0.00112)	(0.00354)	(0.00112)	(0.00385)	(0.00100)	(0.00465)
Urban	0.0837**	-0.0664	0.0813**	0.0528	0.0735**	-0.102
	(0.0334)	(0.185)	(0.0364)	(0.202)	(0.0367)	(0.249)
Years of education	0.0170***	0.00456	0.0116***	0.00910	0.0121***	-0.00284
	(0.00295)	(0.0152)	(0.00329)	(0.0167)	(0.00318)	(0.0207)
Muslim	-0.0198	-0.0428	-0.0592**	-0.0632	-0.0895***	-0.115***
	(0.0252)	(0.0372)	(0.0278)	(0.0394)	(0.0271)	(0.0429)
Speak Luganda, Luo, Runyankole-Rukiga	0.00840	0.0127	0.0459	0.0483	0.0304	0.0404
	(0.0366)	(0.0402)	(0.0464)	(0.0458)	(0.0438)	(0.0473)
Ever read newspaper	0.0167	-0.00639	0.0155	0.0108	0.0334	0.00502
	(0.0227)	(0.0361)	(0.0263)	(0.0415)	(0.0221)	(0.0453)
Ever listen to radio	0.0142	-0.0235	0.0376	0.0322	0.00553	-0.0320
	(0.0221)	(0.0490)	(0.0236)	(0.0548)	(0.0244)	(0.0639)
Ever watch TV	0.0960***	0.0276	0.0117	-0.00343	0.0461*	-0.0421
	(0.0260)	(0.0855)	(0.0247)	(0.0951)	(0.0248)	(0.114)
Constant	0.0543	0.524	0.0215	0.0408	0.189*	0.474
	(0.0904)	(0.559)	(0.0910)	(0.598)	(0.103)	(0.695)
Hansen_j		12.88		2.205		25.42
J_pval		0.116		0.974		0.00132
KPLM		11.22		11.06		11.04
KPLM_pval		0.261		0.272		0.273
KP		1.360		1.329		1.335
Observations	5021	5021	5021	5021	5009	5009

Note: The independent variable is the total number of aid projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for aid project years. All regressions include indicator variables for region and ethnicity, and are estimated using the sample of currently married women. Standard errors are clustered at the DHS cluster level.

*significant at 10% **significant at 5% ***significant at 1%

7 Conclusion

Summing up our results, exposure to aid seems to affect important outcomes for children, relating to school and work. We don't find however differential effects for girls, not even when looking at gender-focused aid projects. On the other hand there didn't seem to be large gaps between girls and boys in this respect. These effects are consistent with a purely material impact of aid. Schooling could be improved simply by increased supply (schools, teachers, equipment) or improved access (roads and transport, safety).

Large gaps were identified on time-use patterns, and this is where we see larger impacts of aid exposure, too, in particular gender-specific projects. Since in this case the impacts are larger for women and driven mostly by gender-targeted projects, they are consistent with changed attitudes. However they can also be explained by simply material impacts (roads, wells, stoves).

When we then look directly at attitudes in the UDHS, we see impacts arising overwhelmingly from exposure to gender-focused projects. The attitudes that we found to be affected by aid are: the degree to which beating one's wife is accepted, the idea that a woman can refuse sex when she knows her husband is cheating, and some improvement of women's control over husbands cash earnings and in general household decision making. The effects might be small but these are important domains of household life. These are also often explicit components of aid-sponsored packages.

By and large we conclude that aid has some positive effects on the lives of women and children in Uganda. We do not find support to go as far as claim that these effects happen through changed social norms or general attitudes, because we don't see consistent changes over the board. However the attitudes and behaviors that have long been explicit targets of aid programs testify to a degree of effectiveness.

Some of the relevant domains of gender-related inequality are still left unexplored. Our ambition to understand gender gaps over the whole life cycle of a girl and a woman leaves us with some more work to do.

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Appendices

A Geo-spatial variables

Table 21: Geo-spatial variables. Source:

Variable	Source	Dataset	Period	Description	Web
dist_road	AICD & RAFU	Household Distance to Main Road	N/A	Household distance to nearest international or national trunk road (functional class A, B)	
dist_popcenter	CityPop and UBOS	Household Distance to Towns	2011	Household distance to nearest town of ¿20,000 based on 2011 projections from UBOS	http://www.citypop.de/
dist_market	USAID FEWS-NET	Household Distance to Key Market Centers	N/A	Household distance to nearest major market (FEWSNET key market centers)	http://www.fews.net/Pages/marketcenter.aspx?loc=3&gb=ug&l=en
dist_borderpost	Tracks for Africa, PADKOS	Household Distance to Border Posts	N/A	Household distance to nearest land border crossing on main road	http://tracks4africa.co.za/listings/
dist_admctr	UN COD-FOD	Household Distance to District Capital	N/A	Household distance to to the headquarter of the district of residence, according to 2006 district boundaries	http://cod.humanitarianresponse.info/
af_bio_1	UC Berkeley	WorldClim Bioclimatic Variables	1960-1990	Average annual temperature calculated from monthly climatology, multiplied by 10 (C)	http://www.worldclim.org/bioclim
af_bio_8	UC Berkeley	WorldClim Bioclimatic Variables	1960-1990	Average temperature of the wettest quarter, from monthly climatology, multiplied by 10. (C)	http://www.worldclim.org/bioclim
af_bio_12	UC Berkeley	WorldClim Bioclimatic Variables	1960-1990	Total annual precipitation, from monthly climatology (mm)	http://www.worldclim.org/bioclim
af_bio_13	UC Berkeley	WorldClim Bioclimatic Variables	1960-1990	Precipitation of wettest month, from monthly climatology (mm)	http://www.worldclim.org/bioclim
af_bio_16	UC Berkeley	WorldClim Bioclimatic Variables	1960-1990	Precipitation of wettest quarter, from monthly climatology (mm)	http://www.worldclim.org/bioclim

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Table 21 – *Continued from previous page*

Variable	Source	Dataset	Period	Description	Web
fsrad3_lcmaj	ESA and UC Louvain	GlobCover v2.3	2009	Majority landcover class within approximately 1km buffer	http://ionia1.esrin.esa.int/
fsrad3_agpct	ESA and UC Louvain	GlobCover v2.3	2009	Percent under agriculture within approx 1 km buffer	http://ionia1.esrin.esa.int/
ssa_aez09	IFPRI	IFPRI standardized AEZ based on elevation, climatology		Agro-ecological zones created using WorldClim climate data and 0.0833dd resolution LGP data from IIASA.	http://harvestchoice.org/production/biophysical/agroecology
srtm_uga	NASA	SRTM 90m		Elevation (m)	ftp://xftp.jrc.it/pub/srtmV4/arcasci/
slopepct_uga	USGS	Slope (percent)		Derived from 90m SRTM, aggregated to 1km block	http://pubs.usgs.gov/of/2007/1188/, data provided USGS upon request
twi_uga	AfSIS	Topographic Wetness Index		Downloaded from AfSIS website. Derived from modified 90m SRTM. Local upslope contributing area and slope are combined to determine the potential wetness index: WI = ln (A s / tan(b)) where A s is flow accumulation or effective drainage area and b is slope gradient.	http://www.ciesin.columbia.edu/afsis/afsis_fullmap.htm#
srtm_uga_5_15	LSMS-ISA	Terrain Roughness		Derived from 90m SRTM using 15 Meybeck relief classes and 5x5 pixel neighborhood	
SQ1	FAO	Harmonized World Soil Database		Nutrient availability	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
SQ2	FAO	Harmonized World Soil Database		Nutrient retention capacity	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/

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Table 21 – *Continued from previous page*

Variable	Source	Dataset	Period	Description	Web
SQ3	FAO	Harmonized World Soil Database		Rooting conditions	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
SQ4	FAO	Harmonized World Soil Database		Oxygen availability to roots	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
SQ5	FAO	Harmonized World Soil Database		Excess salts	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
SQ6	FAO	Harmonized World Soil Database		Toxicity	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
SQ7	FAO	Harmonized World Soil Database		Workability (constraining field management)	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
anntot_avg	NOAA CPC	Rainfall Estimates (RFE)	2001-2010	Avg 12-month total rainfall (mm) for Jan-Dec	ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/
wetQ_avg	NOAA CPC	Rainfall Estimates (RFE)	2001-2010	Avg rainfall (mm) in wettest quarter within Jan-Dec, or Jan-Jun for bimodal	ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/
wetQ_avgstart	NOAA CPC	Rainfall Estimates (RFE)	2001-2010	Avg start of wettest quarter in dekads 1-36, where first week of January = 1	ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/
anntot_2009	NOAA CPC	Rainfall Estimates (RFE)	2009	12-month total rainfall (mm) in Jan- Dec, starting January 2009	ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/
wetQ_2009	NOAA CPC	Rainfall Estimates (RFE)	2009	Rainfall (mm) in wettest quarter within Jan-Dec 2009, or Jan-Jun for bimodal	ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/
wetQstart_2009	NOAA CPC	Rainfall Estimates (RFE)	2001-2010	Start of wettest quarter in dekads 1-36, where first week of January 2009 = 1	ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/
wetQ2_avg	NOAA CPC	Rainfall Estimates (RFE)	2001-2010	Avg rainfall in wettest quarter in second growing season Jul-Dec, bimodal only	ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/
wetQ2_avgstart	NOAA CPC	Rainfall Estimates (RFE)	2009	Avg start of wettest quarter in second growing season in dekads, bimodal only	ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/

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Table 21 – *Continued from previous page*

Variable	Source	Dataset	Period	Description	Web
wetQ2_2009	NOAA CPC	Rainfall Estimates (RFE)	2009	Rainfall (mm) in wettest quarter in second growing season of 2009, bimodal only	ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/
wetQ2start_2009	NOAA CPC	Rainfall Estimates (RFE)	2009	Start of wettest quarter in second growing season in dekads 19-36, bimodal only	ftp://ftp.cpc.ncep.noaa.gov/fews/newalgo_est_dekad/
rf_regime	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2001-2010	District-level assignment of predominantly bi-modal or uni-modal growing season, derived from phenology data	
eviarea_avg	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2001-2010	Avg total change in greenness in main, or first, growing season, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
evimax_avg	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2001-2010	Avg EVI value at peak in main, or first, growing season, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
grn_avg	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2001-2010	Avg onset of greenness increase in day of year 1-356, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
sen_avg	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2001-2010	Avg onset of greenness decrease in day of year 1-356, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
eviarea_2009	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2009	Total change in greenness within main, or first, growing season 2009	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
evimax_2009	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2009	EVI value at peak of greenness within main, or first, growing season 2009	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005

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Table 21 – *Continued from previous page*

Variable	Source	Dataset	Period	Description	Web
grn_2009	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2009	Onset of greenness increase in day of year in 2009, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
sen_2009	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2009	Onset of greenness decrease in day of year in 2009, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
eviarea2_avg	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2001-2010	Avg total change in greenness in second growing season, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
evimax2_avg	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2001-2010	Avg EVI value at peak in second growing season, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
grn2_avg	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2001-2010	Avg onset of greenness increase in second growing season, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
sen2_avg	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2001-2010	Avg onset of greenness decrease in second growing season, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
eviarea2_2009	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2009	Total change in greenness within second growing season of 2009	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
evimax2_2009	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2009	EVI value at peak of greenness within second growing season of 2009	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005

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Table 21 – *Continued from previous page*

Variable	Source	Dataset	Period	Description	Web
grn2_2009	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2009	Onset of greenness increase in second growing season of 2009, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005
sen2_2009	NASA / Boston University	MOD12Q2 Land Cover Dynamics (PHENOLOGY)	2009	Onset of greenness decrease in second growing season of 2009, avg by district	ftp://e4ftl01.cr.usgs.gov/MOTA/MCD12Q2.005

B Gender-specific projects

This section replicates all the Tables from the result section where the dependent variable is based only on projects that are specifically targeted to improving gender equality. We identify these project by looking for a list of words in the title and the description of the projects. The words we use are: *women, gender, girl, bride, genital, maternal, child.*

Table 22: Primary school outcomes - Gender projects

	(1) Attending - OLS	(2) Attending - IV	(3) Never attended - OLS	(4) Never attended - IV
GenderPrYr	0.0106	0.107*	-0.00692	-0.0852
	(0.0143)	(0.0611)	(0.0140)	(0.0606)
Aid*Female	0.00620	-0.0338	-0.00382	0.0284
	(0.00908)	(0.0557)	(0.00898)	(0.0486)
Female	0.00650	0.00483	-0.0155	-0.0143
	(0.0177)	(0.0200)	(0.0160)	(0.0173)
HH income	0.0000147***	-0.0000225	-0.0000133***	0.0000146
	(0.00000322)	(0.0000295)	(0.00000313)	(0.0000284)
Constant	0.859***	0.824***	0.123***	0.152***
	(0.0226)	(0.0321)	(0.0222)	(0.0329)
Observations	2135	2135	2135	2135
Hansen_j		24.50		9.398
J_pval		0.139		0.401
KPLM		32.61		41.88
KPLM_pval		0.0266		0.00000788
KP		3.092		8.295

Note: Independent variable is the number of project-years in a location.

Household income is predicted using the same set of instruments as for aid.

Region dummies are included. Standard errors clustered at the EA level.

Table 23: Secondary school outcomes - Gender projects

	(1) Attending - OLS	(2) Attending - IV	(3) Never attended - OLS	(4) Never attended - IV
GenderPrYr	0.00649	0.0295	-0.00191	-0.0155
	(0.0117)	(0.0613)	(0.00120)	(0.0196)
Aid*Female	-0.0111	-0.0436	0.00461	0.0156
	(0.0180)	(0.0689)	(0.00375)	(0.0140)
Female	0.0455	0.0545*	-0.00892	-0.0116
	(0.0324)	(0.0328)	(0.0106)	(0.0125)
HH income	0.00000678	-0.0000120	-0.00000169	0.00000122
	(0.00000674)	(0.0000330)	(0.00000128)	(0.00000379)
Constant	0.829***	0.820***	0.00935	0.0176
	(0.0365)	(0.0571)	(0.00568)	(0.0187)
Observations	1598	1598	1598	1598
Hansen_j		18.91		4.713
J_pval		0.397		0.859
KPLM		38.78		35.72
KPLM_pval		0.00471		0.0000941
KP		2.625		5.230

Note: Independent variable is the number of project-years in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies are included. Standard errors clustered at the EA level.

Table 24: Child work - Gender projects

	(1) Work - OLS	(2) Work - IV	(3) Farm work - OLS	(4) Farm work - IV
GenderPrYr	-0.0222	-0.131	-0.256	-0.518
	(0.0256)	(0.0821)	(0.417)	(0.942)
GenderPrYr Pr*Female	-0.0265	-0.0490	-0.353	-0.907
	(0.0171)	(0.0551)	(0.244)	(0.941)
Female	0.00522	0.00848	2.668***	2.764***
	(0.0250)	(0.0257)	(0.443)	(0.471)
HH income	-0.0000214	-0.0000475	-0.000113	-0.00103*
	(0.0000149)	(0.0000412)	(0.000192)	(0.000622)
Constant	0.498***	0.581***	8.190***	8.660***
	(0.0443)	(0.0633)	(0.684)	(0.849)
Observations	3705	3705	3700	3700
Hansen_j		35.22		35.31
J_pval		0.00887		0.00566
KPLM		38.89		17.46
KPLM_pval		0.00457		0.0420
KP		3.929		1.196

Note: Independent variable is the number of project-years in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies are included. Standard errors clustered at the EA level.

Table 25: Time use on female tasks, children - Gender projects

	(1) Firewood - OLS	(2) Firewood - IV	(3) Water - OLS	(4) Water - IV	(5) Food - OLS	(6) Food - IV
GenderPrYr	0.0141	-0.625**	0.0627	-0.616	0.00942***	0.0756
	(0.135)	(0.308)	(0.299)	(0.963)	(0.00355)	(0.0492)
GenderPr*F	-0.0912*	-0.229	-0.253	-0.263	-0.0216***	-0.0481
	(0.0472)	(0.242)	(0.157)	(0.546)	(0.00775)	(0.0593)
Female	0.441***	0.457***	0.236	0.250	0.113***	0.118***
	(0.121)	(0.128)	(0.224)	(0.246)	(0.0328)	(0.0359)
HH income	-0.000102***	-0.000121	-0.000210	-0.000843	-0.00000613	-0.0000180
	(0.0000265)	(0.000150)	(0.000160)	(0.000627)	(0.00000856)	(0.0000200)
Constant	1.026***	1.491***	2.958***	3.523***	-0.0450***	-0.0808*
	(0.202)	(0.272)	(0.432)	(0.742)	(0.0155)	(0.0418)
Observations	3701	3701	3701	3701	3701	3701
Hansen_j		27.26		27.67		19.68
J_pval		0.0743		0.0672		0.351
KPLM		38.88		38.88		38.88
KPLM_pval		0.00458		0.00458		0.00458
KP		3.905		3.905		3.905

Note: Independent variable is the number of projects implemented in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies included. Standard errors clustered at the EA level.

Table 26: Time use on neutral or male tasks, children - Gender projects

	(1) Agriculture - OLS	(2) Agriculture - IV	(3) Hunting and Fishing - OLS	(4) Hunting and Fishing - IV
GenderPrYr	-0.196	1.128	-0.00532*	-0.0879
	(0.207)	(1.458)	(0.00291)	(0.0819)
GenderPr*F	0.134	-0.720	0.00620	0.0675
	(0.279)	(1.033)	(0.00496)	(0.0515)
Female	-0.165	-0.0125	-0.0296	-0.0384
	(0.404)	(0.466)	(0.0228)	(0.0291)
HH income	0.0000108	-0.00116	0.000000777	0.00000300
	(0.000330)	(0.00107)	(0.00000307)	(0.0000137)
Constant	2.720***	2.244**	0.0252*	0.0651
	(0.726)	(1.101)	(0.0131)	(0.0511)
Observations	3701	3701	3701	3701
Hansen_j		28.21		7.785
J_pval		0.0589		0.982
KPLM		38.88		38.88
KPLM_pval		0.00458		0.00458
KP		3.905		3.905

Note: Independent variable is the number of projects implemented in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies included. Standard errors clustered at the EA level.

Table 27: Time use on female tasks, all - Gender projects

	(1) Firewood - OLS	(2) Firewood - IV	(3) Water - OLS	(4) Water - IV	(5) Food - OLS	(6) Food - IV
Gender Projects	-0.120	-0.328	-0.305	0.809	0.142***	0.467**
	(0.266)	(0.679)	(0.655)	(1.623)	(0.0323)	(0.233)
GenderPr*F	-1.044***	-1.570***	0.213	-1.242	-0.200***	-0.563***
	(0.114)	(0.380)	(1.274)	(1.709)	(0.0718)	(0.215)
Female	1.065***	1.090***	0.923***	0.990***	0.285***	0.303***
	(0.0840)	(0.0821)	(0.197)	(0.191)	(0.0576)	(0.0623)
HH income	-0.0000861***	-0.000195	-0.0000515	-0.000472	-0.0000229***	-0.0000864
	(0.0000238)	(0.000142)	(0.0000884)	(0.000347)	(0.00000663)	(0.0000529)
Constant	0.627***	0.764***	1.754***	1.765***	-0.128***	-0.152***
	(0.158)	(0.213)	(0.302)	(0.442)	(0.0271)	(0.0398)
Observations	7742	7742	7742	7742	7742	7742
Hansen_j		52.75		33.72		27.07
J_pval		0.0000287		0.0136		0.0777
KPLM		36.36		36.36		36.36
KPLM_pval		0.00952		0.00952		0.00952
KP		8.197		8.197		8.197

Note: Independent variable is the number of projects implemented in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies included. Standard errors clustered at the EA level.

Table 28: Time use on neutral or male tasks, all - Gender projects

	(1) Agriculture - OLS	(2) Agriculture - IV	(3) Hunting and Fishing - OLS	(4) Hunting and Fishing - IV
GenderPrYr	-0.364	0.976	-0.0145	-0.267
	(0.453)	(2.099)	(0.0109)	(0.225)
GenderPr*F	-0.177	-1.645*	0.00808	0.0924
	(0.158)	(0.989)	(0.00517)	(0.0875)
Female	0.896**	1.102***	-0.0372	-0.0521
	(0.361)	(0.402)	(0.0238)	(0.0362)
HH income	-0.000310	-0.00162*	-0.00000181	0.0000663
	(0.000244)	(0.000927)	(0.00000352)	(0.0000699)
Constant	4.512***	4.364***	0.0669	0.210
	(0.838)	(1.221)	(0.0511)	(0.165)
Observations	7742	7742	7742	7742
Hansen_j		25.43		15.97
J_pval		0.113		0.595
KPLM		38.60		38.60
KPLM_pval		0.00498		0.00498
KP		9.405		9.405

Note: Independent variable is the number of projects implemented in a location.
Household income is predicted using the same set of instruments as for aid.
Region dummies included. Standard errors clustered at the EA level.

Table 29: Consumption patterns - Gender projects

	(1)	(2)	(3)	(4)	(5)	(6)
	Male goods - OLS	Male goods - IV	School exp - OLS	School exp - IV	Med exp - OLS	Med exp - IV
Gender projects	-0.00189	0.00489	-0.112	2.230	0.409	-0.941
	(0.00337)	(0.0108)	(0.269)	(1.655)	(1.058)	(1.052)
HH income	-0.00000119	0.00000762	-0.000150	-0.000335	-0.0000336	0.00140
	(0.00000124)	(0.0000167)	(0.000324)	(0.00191)	(0.0000874)	(0.00198)
# sons in school age	0.00000885**	0.00000915**	-0.000251	-0.000274	-0.00000159	0.0000461
	(0.00000397)	(0.00000357)	(0.000218)	(0.000231)	(0.000104)	(0.000107)
# sons in school	-0.0000113***	-0.0000117***	0.000432	0.000542	-0.000176	-0.000186
	(0.00000394)	(0.00000352)	(0.000704)	(0.000763)	(0.000241)	(0.000219)
Father's education	0.00263	0.00285*	0.261	0.223	-0.103	-0.0583
	(0.00170)	(0.00146)	(0.176)	(0.136)	(0.263)	(0.230)
HH size	0.000000405*	0.000000314	0.00000718	-0.00000481	0.0000233	0.0000105
	(0.000000241)	(0.000000312)	(0.0000514)	(0.0000498)	(0.0000316)	(0.0000308)
Urban	0.00632	0.00117	0.503	-1.072	2.475	3.313
	(0.00935)	(0.0128)	(0.923)	(1.552)	(2.867)	(2.656)
Constant	0.0135	0.00744	1.065	0.298	3.588*	3.858**
	(0.0130)	(0.0111)	(1.777)	(1.584)	(2.031)	(1.690)
Observations	546	546	311	311	197	197
Hansen_j		13.91		8.935		13.06
J_pval		0.126		0.443		0.160
KPLM		58.30		28.89		27.44
KPLM_pval		7.58e-09		0.00130		0.00222
KP		66.28		28.70		16.22

Note: Independent variable is the number of projects in a location.

Household income is predicted using the same set of instruments as for aid.

Region dummies included. Standard errors clustered at the EA level.

Table 30: Gender projects and attitudes toward wife beating

	(1) Domestic Violence (Men & Women) OLS	(2) Domestic Violence (Men & Women) IV	(3) Domestic Violence (Women) OLS	(4) Domestic Violence (Women) IV	(5) Domestic Violence (Men) OLS	(6) Domestic Violence (Men) IV
Gender project years	-0.00443***	-0.0136*	-0.00573***	-0.0149*	-0.000283	-0.0147
	(0.00108)	(0.00821)	(0.00123)	(0.00862)	(0.00232)	(0.0138)
Wealth index factor score	-0.000136	-0.00860	-0.000943	-0.00428	0.00183	0.000939
	(0.00117)	(0.0215)	(0.00139)	(0.0210)	(0.00240)	(0.0290)
Female	0.151***	0.170***				
	(0.0206)	(0.0399)				
Age	-0.00624***	-0.00562***	-0.00631***	-0.00590***	-0.00600***	-0.00620***
	(0.000710)	(0.00150)	(0.000794)	(0.00161)	(0.00118)	(0.00155)
Urban	-0.0769**	-0.0115	-0.0689**	-0.0463	-0.108**	-0.103
	(0.0327)	(0.182)	(0.0349)	(0.170)	(0.0496)	(0.260)
Currently married	-0.00260	-0.00656				
	(0.0151)	(0.0197)				
Years of education	-0.0149***	-0.00953	-0.0135***	-0.0107	-0.0206***	-0.0196*
	(0.00227)	(0.0116)	(0.00275)	(0.0127)	(0.00391)	(0.0116)
Muslim	0.0605***	0.0667***	0.0659***	0.0697***	0.0465	0.0527
	(0.0173)	(0.0190)	(0.0185)	(0.0201)	(0.0403)	(0.0407)
Speak Luganda, Luo, Runyankole-Rukiga	-0.00732	-0.0211	-0.129***	-0.137***	0.137**	0.129*
	(0.0365)	(0.0427)	(0.0448)	(0.0464)	(0.0623)	(0.0720)
Employed for cash	0.0675***	0.0709***	0.0547**	0.0544**	0.0563	0.0692*
	(0.0201)	(0.0200)	(0.0255)	(0.0251)	(0.0401)	(0.0416)
Ever read newspaper	0.0178	0.0293	-0.00121	0.00848	0.0508	0.0440
	(0.0165)	(0.0250)	(0.0198)	(0.0261)	(0.0330)	(0.0548)
Ever listen to radio	0.0279	0.0355	0.0241	0.0234	0.0524	0.0506
	(0.0193)	(0.0375)	(0.0211)	(0.0347)	(0.0547)	(0.0687)
Ever watch TV	-0.0346*	0.00491	-0.0374	-0.0112	0.00521	0.0254
	(0.0179)	(0.0660)	(0.0244)	(0.0834)	(0.0302)	(0.0448)
Constant	0.729***	1.094**	0.987***	1.382***	0.451***	1.119
	(0.0748)	(0.465)	(0.0835)	(0.472)	(0.145)	(0.699)
Hansen_j		23.41		20.83		18.04
J_pval		0.00145		0.00402		0.0118
KPLM		14.21		15.41		11.96
KPLM_pval		0.0765		0.0516		0.153
KP		2.842		3.081		1.641
Observations	7827	7827	5832	5832	1995	1995

Note: The independent variable is the total number of aid projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for gender project years. All regressions include indicator variables for region and ethnicity. Regressions 1-2 are estimated using the full sample of women and men. Regressions 3-4 use only women, and regressions 5-6 use only men. Standard errors are clustered at the DHS cluster level.
*significant at 10% **significant at 5% ***significant at 1%

Table 31: Gender projects and negotiation of safe sex

	(1) Wife refuse sex husband other has woman OLS	(2) Wife refuse sex husband has other woman IV	(3) Wife request condom if husband STI OLS	(4) Wife request condom if husband STI IV
Gender project years	0.000628	0.0116**	0.000602	0.00486
	(0.000925)	(0.00547)	(0.000821)	(0.00368)
Wealth index factor score	0.000118	-0.0190	0.000946	-0.00361
	(0.00101)	(0.0151)	(0.000730)	(0.0104)
Age	0.000118	0.00107	0.000715	0.000938
	(0.000617)	(0.00104)	(0.000460)	(0.000759)
Urban	0.0116	0.171	0.00318	0.0417
	(0.0184)	(0.128)	(0.0175)	(0.0897)
Years of education	0.00280	0.0124	0.00458***	0.00681
	(0.00178)	(0.00827)	(0.00122)	(0.00565)
Muslim	0.0148	0.0185	-0.00526	-0.00479
	(0.0167)	(0.0172)	(0.0153)	(0.0156)
Speak Luganda, Luo, Runyankole-Rukiga	-0.0565*	-0.0742**	-0.00662	-0.0103
	(0.0307)	(0.0335)	(0.0247)	(0.0277)
Employed for cash	-0.00740	-0.00855	0.00576	0.00531
	(0.0144)	(0.0157)	(0.0127)	(0.0128)
Ever read newspaper	0.0132	0.0288	0.00456	0.00783
	(0.0140)	(0.0204)	(0.0111)	(0.0139)
Ever listen to radio	0.0579***	0.0856***	0.0717***	0.0790***
	(0.0179)	(0.0275)	(0.0182)	(0.0217)
Ever watch TV	-0.0149	0.0291	0.000770	0.00895
	(0.0159)	(0.0449)	(0.0116)	(0.0302)
Constant	0.704***	0.130	0.723***	0.511**
	(0.0595)	(0.296)	(0.0546)	(0.202)
Hansen_j		12.85		9.474
J_pval		0.0759		0.220
KPLM		13.39		12.70
KPLM_pval		0.0991		0.122
KP		2.570		2.423
Observations	7887	7887	7794	7794

Note: The independent variable is the total number of aid projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for aid project years. All regressions include indicator variables for region and ethnicity, are estimated using a sample of both women and men. Standard errors are clustered at the DHS cluster level.
*significant at 10% **significant at 5% ***significant at 1%

Table 32: Gender projects and women's attitudes toward contraceptive use

	(1)	(2)	(3)	(4)
	Woman can refuse sex OLS	Woman can refuse sex IV	Woman can request contraception OLS	Woman can request contraception IV
Gender project years	0.000140	0.00949	-0.00159	0.000684
	(0.000628)	(0.00613)	(0.00112)	(0.00572)
Wealth index factor score	0.00296***	-0.0192	0.00454***	0.00249
	(0.00106)	(0.0171)	(0.00133)	(0.0181)
Age	-0.000799	0.00227	-0.00477***	-0.00451*
	(0.000785)	(0.00258)	(0.000998)	(0.00272)
Urban	-0.00102	0.170	-0.0102	0.00610
	(0.0178)	(0.133)	(0.0231)	(0.140)
Years of education	0.00485**	0.0189*	0.0112***	0.0124
	(0.00206)	(0.0109)	(0.00256)	(0.0118)
Muslim	-0.0114	0.000413	0.0195	0.0202
	(0.0184)	(0.0222)	(0.0202)	(0.0227)
Speak Luganda, Luo, Runyankole-Rukiga	-0.00316	-0.00297	0.00126	0.00238
	(0.0370)	(0.0416)	(0.0478)	(0.0482)
Employed for cash	0.0114	0.0209	0.0394*	0.0401*
	(0.0168)	(0.0202)	(0.0217)	(0.0223)
Ever read newspaper	0.0139	0.0354	0.00817	0.00928
	(0.0137)	(0.0243)	(0.0196)	(0.0277)
Ever listen to radio	-0.00519	0.0310	0.0115	0.0154
	(0.0186)	(0.0327)	(0.0215)	(0.0350)
Ever watch TV	0.0163	0.0824	-0.0112	-0.00667
	(0.0164)	(0.0585)	(0.0261)	(0.0648)
Constant	0.802***	0.192	0.886***	0.767**
	(0.0504)	(0.408)	(0.0775)	(0.388)
Hansen_j		10.41		12.16
J_pval		0.166		0.0955
KPLM		13.38		13.76
KPLM_pval		0.0993		0.0881
KP		1.940		1.964
Observations	3975	3975	4023	4023

Note: The independent variable is the total number of gender projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for gender project years. All regressions include indicator variables for region and ethnicity, and are estimated using only ever married women. Standard errors are clustered at the DHS cluster level.
*significant at 10% **significant at 5% ***significant at 1%

Table 33: Gender projects and men's attitudes toward contraceptive use

	(1) Contraception women's business OLS	(2) Contraception women's business IV	(3) Contraception makes women promiscuous OLS	(4) Contraception makes women promiscuous IV
Gender project years	-0.00219	-0.00570	-0.00498**	-0.0126
	(0.00170)	(0.00988)	(0.00240)	(0.0119)
Wealth index factor score	-0.00109	0.0295	0.00243	-0.00306
	(0.00177)	(0.0195)	(0.00253)	(0.0254)
Age	-0.00312***	-0.00384***	-0.00225*	-0.00224*
	(0.00104)	(0.00127)	(0.00117)	(0.00135)
Urban	0.00204	-0.269	0.0408	0.0886
	(0.0359)	(0.174)	(0.0594)	(0.233)
Years of education	-0.0115***	-0.0236***	-0.0155***	-0.0132
	(0.00277)	(0.00831)	(0.00371)	(0.0104)
Muslim	-0.0206	-0.0331	0.0197	0.0264
	(0.0286)	(0.0363)	(0.0377)	(0.0389)
Speak Luganda, Luo, Runyankole-Rukiga	0.0450	0.0989	0.0764	0.0629
	(0.0397)	(0.0663)	(0.0774)	(0.0851)
Employed for cash	0.000717	0.00470	0.0251	0.0315
	(0.0319)	(0.0356)	(0.0384)	(0.0390)
Ever read newspaper	-0.0500*	-0.0910**	-0.0365	-0.0328
	(0.0267)	(0.0389)	(0.0325)	(0.0481)
Ever listen to radio	0.0661	0.0158	0.124**	0.132**
	(0.0477)	(0.0561)	(0.0484)	(0.0591)
Ever watch TV	0.0353	-0.00603	0.0395	0.0575
	(0.0257)	(0.0394)	(0.0330)	(0.0483)
Constant	0.418***	0.663	0.535***	0.875
	(0.115)	(0.505)	(0.148)	(0.585)
Hansen_j		4.351		14.36
J_pval		0.739		0.0451
KPLM		11.01		12.57
KPLM_pval		0.201		0.127
KP		1.549		1.935
Observations	1923	1923	1817	1817

Note: The independent variable is the total number of gender projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for gender project years. All regressions include indicator variables for region and ethnicity, are estimated using the sample of men. Standard errors are clustered at the DHS cluster level.

*significant at 10% **significant at 5% ***significant at 1%

Table 34: Gender projects and women's control over household earnings

	(1) Own Earnings OLS	(2) Own Earnings IV	(3) Husband's Earnings OLS	(4) Husband's Earnings IV
Gender project years	0.0000824	-0.00595	-0.00242*	0.0133*
	(0.00156)	(0.00720)	(0.00126)	(0.00746)
Wealth index factor score	-0.00241	0.0428*	-0.00456***	-0.0360*
	(0.00164)	(0.0218)	(0.00162)	(0.0203)
Age	0.00557***	-0.000895	0.00255***	0.00625**
	(0.00104)	(0.00340)	(0.000982)	(0.00250)
Urban	0.0713***	-0.256	0.0293	0.300*
	(0.0267)	(0.168)	(0.0322)	(0.174)
Years of education	0.0110***	-0.0208	0.0119***	0.0288**
	(0.00257)	(0.0152)	(0.00279)	(0.0116)
Muslim	0.0224	-0.00299	-0.0402*	-0.0109
	(0.0259)	(0.0375)	(0.0238)	(0.0312)
Speak Luganda, Luo, Runyankole-Rukiga	0.00251	0.00784	-0.00262	-0.0181
	(0.0373)	(0.0450)	(0.0382)	(0.0397)
Ever read newspaper	0.0183	-0.0337	0.0765***	0.101***
	(0.0215)	(0.0375)	(0.0234)	(0.0317)
Ever listen to radio	0.0427*	-0.0246	0.0125	0.0695*
	(0.0259)	(0.0439)	(0.0237)	(0.0419)
Ever watch TV	0.0427**	-0.106	0.0557***	0.126**
	(0.0209)	(0.0751)	(0.0189)	(0.0579)
Constant	0.532***	1.172**	0.303***	-0.641
	(0.0873)	(0.468)	(0.0796)	(0.459)
Hansen_j		9.523		2.481
J_pval		0.217		0.929
KPLM		12.54		14.94
KPLM_pval		0.129		0.0604
KP		1.649		2.180
Observations	2860	2860	5930	5930

Note: The independent variable is the total number of gender projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for gender project years. All regressions include indicator variables for region and ethnicity, are estimated using the sample of currently married and employed women. Standard errors are clustered at the DHS cluster level.
*significant at 10% **significant at 5% ***significant at 1%

Table 35: Gender projects and women's participation in household decisions

	(1) Decision Making (Women) OLS	(2) Decision Making (Women) IV	(3) Control over earnings (Women) OLS	(4) Control over earnings (Women) IV
Gender project years	0.00346	0.0181**	-0.00198	0.00651
	(0.00217)	(0.00920)	(0.00178)	(0.00731)
Wealth index factor score	-0.00576***	-0.0162	-0.00372**	0.00403
	(0.00207)	(0.0247)	(0.00148)	(0.0207)
Age	0.0121***	0.0134***	0.00288***	0.00165
	(0.00125)	(0.00360)	(0.000956)	(0.00304)
Urban	0.0880**	0.172	0.0532**	-0.00138
	(0.0373)	(0.189)	(0.0269)	(0.159)
Years of education	0.0106***	0.0162	0.00852***	0.00235
	(0.00353)	(0.0165)	(0.00238)	(0.0135)
Muslim	-0.0793***	-0.0773**	0.00691	-0.000640
	(0.0271)	(0.0300)	(0.0221)	(0.0241)
Speak Luganda, Luo, Runyankole-Rukiga	0.0621	0.0706	-0.0136	-0.00393
	(0.0470)	(0.0464)	(0.0338)	(0.0349)
Employed for cash	0.0378	0.0419	0.389***	0.386***
	(0.0236)	(0.0255)	(0.0241)	(0.0265)
Ever read newspaper	0.0288	0.0326	0.0296	0.0151
	(0.0274)	(0.0377)	(0.0181)	(0.0312)
Ever listen to radio	0.0133	0.0349	0.0461**	0.0390
	(0.0265)	(0.0443)	(0.0231)	(0.0395)
Ever watch TV	0.0914***	0.111	0.0551***	0.0184
	(0.0312)	(0.0874)	(0.0178)	(0.0710)
Constant	-0.273**	-1.021*	0.403***	0.0864
	(0.122)	(0.583)	(0.0922)	(0.439)
Hansen_j		19.61		4.733
J_pval		0.00649		0.692
KPLM		13.61		13.59
KPLM_pval		0.0925		0.0931
KP		1.982		1.935
Observations	4005	4005	4003	4003

Note: The independent variable is the total number of gender projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for gender project years. All regressions include indicator variables for region and ethnicity, are estimated using the sample of currently married women. Regressions 3-4 further restricted to employed women. Standard errors are clustered at the DHS cluster level.

*significant at 10% **significant at 5% ***significant at 1%

Table 36: Gender projects and women's participation in different household decisions

	(1) Own Health Care OLS	(2) Own Health Care IV	(3) HHD Purchase OLS	(4) HHD Purchase IV	(5) Family Visits OLS	(6) Family Visits IV
Gender project years	-0.00171	0.00190	0.00144	0.00377	-0.000864	0.0133
	(0.00134)	(0.00671)	(0.00142)	(0.00707)	(0.00178)	(0.00917)
Wealth index factor score	-0.00663***	-0.00586	-0.00355*	0.00366	-0.00487**	-0.0105
	(0.00195)	(0.0200)	(0.00188)	(0.0231)	(0.00200)	(0.0300)
Age	0.0127***	0.0126***	0.0106***	0.00964***	0.0117***	0.0127***
	(0.00111)	(0.00293)	(0.00112)	(0.00333)	(0.000991)	(0.00416)
Urban	0.0804**	0.0780	0.0839**	0.0311	0.0717**	0.129
	(0.0329)	(0.161)	(0.0363)	(0.184)	(0.0362)	(0.238)
Years of education	0.0170***	0.0160	0.0117***	0.00663	0.0121***	0.0140
	(0.00295)	(0.0130)	(0.00330)	(0.0145)	(0.00319)	(0.0187)
Muslim	-0.0193	-0.0206	-0.0599**	-0.0680**	-0.0894***	-0.0853**
	(0.0252)	(0.0310)	(0.0280)	(0.0343)	(0.0271)	(0.0379)
Speak Luganda, Luo, Runyankole-Rukiga	0.00878	0.0122	0.0446	0.0506	0.0301	0.0391
	(0.0368)	(0.0371)	(0.0464)	(0.0458)	(0.0438)	(0.0443)
Ever read newspaper	0.0170	0.0139	0.0154	0.00498	0.0337	0.0323
	(0.0228)	(0.0322)	(0.0262)	(0.0374)	(0.0220)	(0.0417)
Ever listen to radio	0.0143	0.0160	0.0363	0.0272	0.00502	0.0249
	(0.0221)	(0.0396)	(0.0237)	(0.0469)	(0.0244)	(0.0539)
Ever watch TV	0.0959***	0.0864	0.0130	-0.0196	0.0467*	0.0440
	(0.0259)	(0.0744)	(0.0247)	(0.0849)	(0.0245)	(0.107)
Constant	0.0609	-0.0979	0.0610	0.0141	0.215**	-0.479
	(0.0831)	(0.453)	(0.0896)	(0.491)	(0.105)	(0.627)
Hansen_j		16.58		2.451		17.55
J_pval		0.0203		0.931		0.0142
KPLM		16.87		16.72		16.70
KPLM_pval		0.0314		0.0332		0.0334
KP		2.481		2.437		2.438
Observations	5021	5021	5021	5021	5009	5009

Note: The independent variable is the total number of gender projects in a location multiplied by the number of years each project have been ongoing during 2006-2011. The wealth index factor score is predicted using the same set of instruments as for gender project years. All regressions include indicator variables for region and ethnicity, and are estimated using the sample of currently married women. Standard errors are clustered at the DHS cluster level.

*significant at 10% **significant at 5% ***significant at 1%