

# Taking Power

## Women's Empowerment and Household Well-Being in Sub-Saharan Africa

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Africa Region

Gender Innovation Lab

October 2019

## Abstract

This paper examines women's power relative to that of their husbands in 23 Sub-Saharan African countries to determine how it affects women's health, reproductive outcomes, children's health, and children's education. The analysis uses a novel measure of women's empowerment that is closely linked to classical theories of power, built from spouses' often-conflicting reports of intrahousehold decision making. It finds that women's power substantially matters

for health and various family and reproductive outcomes. Women taking power is also better for children's outcomes, in particular for girls' health, but it is worse for emotional violence. The results show the conceptual and analytical value of intrahousehold contention over decision making and expand the breadth of evidence on the importance of women's power for economic development.

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This paper is a product of the Gender Innovation Lab, Africa Region. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions around the world. Policy Research Working Papers are also posted on the Web at <http://www.worldbank.org/prwp>. The authors may be contacted at [adonald@worldbank.org](mailto:adonald@worldbank.org).

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# Taking Power: Women's Empowerment and Household Well-Being in Sub-Saharan Africa

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**Keywords:** gender, power, households, health, education, Sub-Saharan Africa

**JEL Codes:** C8, D1, I00, J1

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## Highlights

1. Nearly half of couples across Sub-Saharan Africa disagree on who makes household decisions.
2. This disagreement has a direction and captures a different facet of power compared to common measures of women's agency.
3. We find that women taking power (vs. being given power) is associated with benefits for women and their children, but also risks.
4. These findings shine new light on our understanding of women's empowerment in quantitative work.

## 1. Introduction

Strengthening women's empowerment has been an area of focus in development practice and theory for over three decades. Underlying this is a recognition of women's rights as human rights and an understanding of women's crucial role in the development process. Indeed, a large and growing literature has identified linkages between women's empowerment and development goals. Empirically, these linkages span a variety of domains and include improvements in maternal health (Bloom et al, 2001; Gupta, 1996), children's education (Hatlebakk & Gurung, 2016) and children's health and nutrition (Carlson et al., 2015; Kishor, 2000; Pratley, 2016).

As development organizations and governments are increasingly focused on gender as a key dimension of policy making (World Bank, 2012), the importance of better understanding what women's empowerment is – and how to conceptualize it and target it in a way that will yield the

largest dividends for women, households, and communities – has become increasingly urgent. While this is globally relevant, it is particularly important in Sub-Saharan Africa, which has both the lowest ranking on the Human Development Index and on the Gender Inequality Index (UNDP, 2018). Moreover, as gender-related data collection efforts expand, there is growing demand for how to capture empowerment in a meaningful way in cross-country surveys without being cost-prohibitive.

In this paper, we build on a classical conceptualization of empowerment which has been discussed across literatures (e.g., Batliwala, 1994; Freire, 1990; Rowlands, 1995), but not operationalized as a common survey measure. Specifically, we argue that women “taking power” (declaring higher decision-making ability for themselves than husbands report about them, when both are separately asked about intrahousehold decision-making) versus the case when they are “given power” (the husband reports higher decision-making for his wife than she does for herself) captures an important dimension of empowerment, prominent in theoretical work but not as well addressed in the empirical empowerment literature.

Using recent Demographic and Health Survey (DHS) data for more than 70,000 couples across 23 countries in Sub-Saharan Africa, we examine patterns of power and their relationship to empowerment proxies. We find that there is substantial contention about decision-making power across households, and that this power is multifaceted. Grounding ourselves in empowerment theory, we compare scenarios where the woman takes power versus is given power, and contrast this with the most studied case of no intra-household contention regarding women’s agency.

We find that the wife taking power (versus being given power) is positively linked to women's health outcomes, prenatal and antenatal services utilization, and measures of girls' and boys' health. Moreover, we find that taking power is more beneficial than uncontested power for transformative or transgressive cases such as termination of pregnancy and reporting of modern contraceptive use, but worse for emotional violence.

Our findings have implications not only for the measurement of women's empowerment, but also for the framing of women's empowerment and women's roles in development debates and programs. This directional contention shines new light on our understanding of women's empowerment in quantitative work. We proceed as follows. Section 2 provides background on the empowerment and bargaining power literature. Section 3 presents the data and empirical strategy. Section 4 presents the results. Section 5 discusses and concludes.

## **2. Literature**

At the center of "empowerment" is the concept of power. Classical theories of power in social and political science stress the importance of an individual's recognition and claiming of their rights and influence. That is, given the same ability to make decisions, a person who recognizes this ability and claims it for themselves is more *empowered* than someone onto whom this ability is merely delegated or assigned by someone else (O'Hara & Clement, 2018).

This concept is fundamental to different strands of the theoretical empowerment literature, with origins spanning from the Enlightenment to Marxism, from Civil Rights to feminist theories (Pollari, 2017). Many of the modern manifestations of these theories are rooted in post-Marxist

critical theory and specifically in Paulo Freire's concept of 'critical consciousness.' Freire argued that a prerequisite for gaining power and freedom is moving from being an object (where others determine how you are defined or what happens to you) to becoming a subject with agency (where you define yourself, your goals, and your actions). This rests on his central argument that the key to change lies with those who are oppressed; it cannot be given by external actors, and in particular not by those who are a part of the oppressive structure (Freire, 1990 p.48). Although Freire does not write about intra-household dynamics in his work, by extension his theory would imply that a true shift in power between a couple would mean a woman claiming decision-making authority, as opposed to a man delegating power to her.

This conception of power has also been expressed in community psychology, education and social work. Rappaport (1987) and Zimmerman (1995) both stress that empowerment is a process that cannot simply be "given". Indeed Robert Adams (1991, p. 208) defined empowerment as "becoming powerful" and explained that it "embodies two dimensions: being given power and taking power", the latter of which he also termed "self-empowerment."

This belief in the importance of claiming one's power is also prominent in feminist theory. One of the most popular conceptualizations is that advanced by Jo Rowlands. She writes that the nature of empowerment is inherently multifaceted, and that empowerment is about more than increasing women's decision-making. Rather, it also encompasses women perceiving themselves as occupying a decision-making space and feeling able and entitled to do so (Rowlands, 1995). She labels this individual conscientization as the now widely-used term *power within*. Moreover, challenging existing social hierarchies that favor men's decision-making roles, contestation of

power, and *perceiving a sense of control* is a central and definitional requirement of empowerment (Kabeer, 1999). This sentiment also permeates the feminist movement. For example, Gloria Steinem wrote, “power can be taken, but not given. The process of the taking is empowerment in itself” (Steinem 2012, p.577).

This dimensionality of taking versus being given power is markedly missing in most empirical work on women’s empowerment. Indeed, most of the literature demonstrating the importance of women’s empowerment for the well-being of women and their children focuses on women’s reports of their own decision-making power. While women’s reports of their own decision-making should not be discounted in and of itself as a measure of empowerment (Kabeer, 1994), the dimensionality of and contention over this power may shed further light on its meaning and deserves more empirical consideration, including the potential positive and negative outcomes in this process.

The empirical literature that looks beyond women’s reports of their own decision-making power focuses primarily on scenarios of uncontested power, where the husband and wife agree that women can make decisions. Using the 2001 Nepal DHS, for example, Allendorf (2007) finds that maternal and child health care outcomes can improve significantly when spouses agree that the wife is the main decision-maker. Story and Burgard (2012) also use the 2007 Bangladesh DHS and find that antenatal care use and skilled delivery care improve when couples agree that decision-making is joint and worsen when both agree the husband is solely responsible, or if both disagree. Poutvaara and Schwefer (2018) in Indonesia find that female labor supply and contraception use are higher when both partners perceive female decision-making power in these domains. A recent



paper by Ambler et al. (2017), using the 2011-12 Bangladesh Integrated Household Survey (BIHS), finds that measures of women's well-being across health, employment, and participation in outside programs improve significantly when both spouses agree that decision-making is joint.

The patterns identified in the studies cited above have not been mapped back to a specific theory of how power comes about and influences outcomes. Within the intra-household bargaining power literature, the case of agreement corresponds most closely to the unitary model, which assumes either perfectly aligned preferences or a dictator with complete power and enforcement (Samuelson, 1956; Becker, 1973). The other predominant framework is that of bargaining models, where threat points determine outcomes (Browning & Chiappori, 1998; Manser & Brown, 1980; McElroy & Horney, 1981) and include both cooperative and non-cooperative models. One important distinction between the two is that the bargaining outcome in co-operative models is assumed to be stable in the absence of shifts in spouses' relative bargaining power, while non-cooperative equilibria may change based on new information about the other spouse's power. However, none of these models allows for a state of continued disequilibrium, where partners do not recognize the power of the other in decision-making and have persistently different perceptions.

Yet empirically, a growing number of studies are finding substantial disagreement in reported decision-making roles across spouses, or other household members (Twyman et al., 2015; Seymour & Peterman, 2018). Anderson et al. (2017) conduct a study in rural Tanzania where husbands and wives are asked to depict their relative influence in different domains of decision-making using visual aids, to our knowledge the only study to examine this pattern in Sub-Saharan

Africa. However, the main conceptual focus remains on individual and household predictors of intra-household agreement. Ambler et al. (2017), using the same 2011-12 Bangladesh Integrated Household Survey (BIHS) as Seymour and Peterman (2018), use participation in decision-making in household activities, owned assets and the purchase of new assets to analyze patterns of disagreement, setting up the analysis to distinguish between cases where the woman recognizes *any* degree of decision-making involvement on her part versus cases where the husband recognizes her decision-making involvement. The authors then examine the degree of association with five measures of women's well-being outcomes and find that cases of disagreement where women recognize their involvement, but men do not, are also positively associated with improved outcomes for women, but often to a lesser extent than when men agree that women are involved.

We build on this theoretical and empirical literature in what follows. Using the DHS, we look at intra-household assessments of women's decision-making power in 23 Sub-Saharan African countries. We unpack the multidimensionality of power; not only looking just at agreement, as in the majority of the past literature, or whether the woman acknowledges any degree of decision-making involvement. Instead, we operationalize Adams' "given power" and "taking power" by utilizing survey cross-reporting to build relative measures of power assignment along the spectrum of decision-making responses. To our knowledge, ours is the first paper to link spouses' varying perceptions of decision-making roles to power theory and assess the relationship of this specific facet of power to a range of well-being outcomes for the household, including children's outcomes.

### 3. Data and Methodology

#### 3.1 Data

The DHS is a nationally representative population-based household survey that has been conducted since 1984. The DHS includes data on family planning, maternal and child care, gender, fertility, and nutrition and has been collected in over 90 countries. The DHS also asks married women aged 15-49 about their decision-making roles (“who usually makes decisions over [X]”) across different areas, including family planning, use of one’s own earnings, the respondent’s own health care, ability to visit family and friends, as well as major household purchases.

Our sample consists of married couples in all Sub-Saharan African countries covered by the DHS for which both husband and wife answered the question “*who usually makes decisions about making major household purchases?*” The question is asked about large purchases overall and is not obtained by aggregating different survey questions on decision-making over individual asset purchases. It was introduced in the questionnaire administered to husbands in 2004. The last two phases of the DHS thus include a consistent question on decision-making for both women and men in married couples over making large household purchases. Response options were (a) respondent, (b) husband/wife, (c) respondent and husband/wife jointly, (d) someone else, (e) other.

Women having a say over household assets is closely related to their ability to expand their resource base, and thus empowerment. For this reason, this decision-making variable has frequently been used in the literature (Connelly et al., 2010; Doss et al., 2008; Ting et al., 2014). We use the last available survey round for each of the 23 countries where the decision-making

question was administered to couples, which means our data set covers the years 2010-2016.<sup>1</sup> Restricting to non-missing observations results in a sample of 71,274 couples.<sup>2</sup>

### 3.2 Empirical Strategy

The empirical strategy developed throughout this paper consists of two main parts. In the first part, to understand the relationship between the directionality of intra-household contention over power and common women’s empowerment proxies, we estimate the following OLS specification:

$$y_{ic} = \beta_0 + \beta_1 X_{ic1} + \beta_2 X_{ic2} + \theta_c + \varepsilon_{ic} \quad (1)$$

Where  $y_{ic}$  is the outcome reflecting women’s participation in decision-making in country  $c$ ;  $X_{ic1}$  comprises a set of variables reflecting women’s status and empowerment proxies,<sup>3</sup>  $X_{ic2}$  comprises a set of individual and household characteristics,<sup>4</sup>  $\theta_c$  specifies country fixed effects and  $\varepsilon_{ic}$  indicates the error term.

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<sup>1</sup> Our sample includes Benin (2011), Burkina Faso (2010), Burundi (2016), Cameroon (2011), the Comoros (2012), Côte d'Ivoire (2011), the Democratic Republic of Congo (2013), Ethiopia (2016), The Gambia (2013), Ghana (2014), Kenya (2014), Lesotho (2014), Liberia (2013), Madagascar (2009), Mali (2012-13), Mozambique (2011), Namibia (2013), Nigeria (2013), Rwanda (2014-2015), Senegal (2014), Sierra Leone (2013), Uganda (2016), Zambia (2013), Zimbabwe (2015).

<sup>2</sup> It should be noted that when looking at relationships with outcomes, our sample changes due to data availability and conditionally applicable questions. We re-run our analysis for the most restrictive sample to ensure that our results are not driven by sample selection issues (results available upon request).

<sup>3</sup> The set of women’s status and empowerment proxies includes the following variables: difference in years of schooling between husband and wife, a dichotomous variable for wife not working, for wife works off farm, for wife says she earns more than her husband, for wife says she owns land, for woman condones a husband beating his wife, for wife is aged 15-19, wife is aged 20-34, difference in age of husband and wife, wife was married before age 20, years of marriage, total number of children that the woman has, total number of children who died and a dichotomous variable for couple in a polygamous marriage.

<sup>4</sup> The set of individual and household level characteristics includes a dichotomous variable for husband works in agriculture, for rural area, a variable that indicates the time in minutes to the nearest water source (log). A dummy for household has electricity and wealth quantile dummies.

In the second part, to investigate whether different facets of power assignation – in particular, the woman taking power, being given power or the case of agreement over her power - have dissimilar impacts on women’s and children well-being outcomes, we estimate the following specification:

$$y_{ic} = \alpha_0 + \alpha_1 Wtakes\ power_{ic1} + \alpha_2 Hgivespower_{ic2} + \alpha_3 WHagreement_{ic2} + \beta_2 X_{ic2} + \theta_c + \varepsilon_{ic} \quad (2)$$

The literature on power reviewed above tells us that claiming power for oneself versus being attributed power by someone else is a key distinction; true empowerment requires an awareness and conscientization to one’s own decision-making power. In what follows, we operationalize this classic definition of power by comparing women’s claims about their own power (the power she “takes”) to how they are described by others (the power she is “given.” since we are in an intra-household context, the relevant agent is the husband). We include under the woman taking power all cases where the woman attributes more decision-making power to herself than her husband does, and under the husband giving power all cases where the husband attributes more decision-making power to her than she does to herself.

Due to the emphasis in the empirical literature on cases where both spouses agree that the woman has power (either jointly or alone), we also build a third case for when wife and husband agree she is main decision maker or that decision-making is joint. The omitted category is thus the fourth and final case: that of the wife not having decision-making power at all (wife and husband agree that husband is the main decisionmaker). A detailed mapping of these four categories against different responses to the underlying survey questions is provided in Appendix Box 1.

Thus, in specification (2),  $y_{ic}$  is the relevant well-being outcome of interest (i.e., woman's BMI) in country  $c$ . On the right-hand side,  $Wtakes\ power_{ic1}$  is a dichotomous variable equal to 1 for all the cases where the wife assigns more decision-making power to herself than her husband does and 0 otherwise ('taking power' scenario),  $Hgivespower_{ic2}$  is dichotomous variable equal to 1 grouping all cases where the husband gives more power to the wife than what she claims herself (being 'given power' scenario),  $WHagreement_{ic2}$  is a dichotomous variable equal to 1 if wife and husband agree that wife has some level of power,  $X_{ic2}$  again comprises a set of individual and household level characteristics,<sup>5</sup>  $\theta_c$  specifies country fixed effects and  $\varepsilon_{ic}$  indicates the error term.

## 4. Results

### 4.1 Women's Power

To situate our data against the body of literature that finds links between women's involvement in decision-making and well-being outcomes, we first test whether women's decision-making over large household purchases is associated with commonly used proxies of women's status and empowerment, and how adding her spouse's response alters this association.

To do this, we identify a range of DHS questions that capture information on women's status and are commonly used as proxies of empowerment in the literature (e.g. Thomas & Tymon, 1994; Doss, 2013). In our analysis, we consider variables such as women's education, employment, reported earnings relative to their husband, land ownership, and whether the couple is in a polygamous marriage. Although we do not believe such proxies to be complete measures of

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<sup>5</sup> The set of individual and household level characteristics include a dichotomous variable indicating whether the husband works in agriculture, the woman lives in a rural area and whether the household electricity, as well as a variable indicating the time in minutes to the nearest water source (logged) and wealth quantile dummies.

empowerment, our primary motivation for including them in our analysis is to detect general patterns, particularly across regressions.

To explore this, we follow specification 1 above and present results in Table 1 below. Women reporting that they are either the main decisionmaker (column 1) or the main or joint decisionmaker (column 2) are more likely to work outside the household, report earning more than their husbands, and own land. Women in these groups also tend to be older (aged 35+), have a narrower age gap with their husbands, be married for longer, and with fewer children. Household socioeconomic status tends to be better among women reporting they are joint decisionmakers — column (2) shows that women in households at the higher end of the wealth distribution, as well as those with better access to electricity, are also more likely to report joint decision-making. Although the effects tend to be stronger for the sample where women say they are the main decision-maker (column 1) as opposed to the sample including women who say they are involved as joint decisionmakers (column 2), the results have a similar direction and magnitude.

The patterns change when the husband's response is introduced in the outcome variable. Column 3 examines whether levels of women's empowerment proxies are higher in households where their husbands also agree that the wife has a role — i.e., both agree that the wife is the main decisionmaker or that decision-making is joint — as opposed to all other combinations of spouses' responses. The results in column 3 continue to show a positive association of spousal agreement with empowerment proxies, including the wife working off-farm, being older, and not being in a polygamous marriage, but the coefficients are generally smaller compared to wives' own reporting in columns 1-2. Certain key dimensions of women's economic empowerment (wife earning more

than the husband and owning land) do not show up as significant once the husband's report is introduced.

This tells us that we are getting a qualitatively different signal from the husband's answers, and that women's status can be meaningfully different depending on their spouse's response. That is, intra-household power is multifaceted; there is not just one uncontested dimension of power in the household.



**Table 1. OLS Regressions: Correlations between women's involvement in decision-making and empowerment**

	(1)	(2)	(3)
	Wife says main decision-maker is herself	Wife says decision-making is herself or joint	Wife and husband agree she is the decision-maker / decision-making is joint
<i>Women's Status &amp; Empowerment proxies</i>			
Difference in year of education (Husband-Wife)	-0.002*** (0.00)	-0.002*** (0.00)	-0.001 (0.00)
Wife not working	-0.032*** (0.01)	-0.077*** (0.00)	-0.029*** (0.00)
Wife works off farm	0.038*** (0.01)	0.028*** (0.00)	0.013*** (0.00)
Wife says she earns more than her husband	0.270*** (0.01)	0.109*** (0.01)	0.004 (0.01)
Wife says she owns land	0.149*** (0.01)	0.056*** (0.01)	-0.010 (0.01)
Wife is aged 15-19	-0.048*** (0.01)	-0.112*** (0.01)	-0.074*** (0.01)
Wife is aged 20-34	-0.029*** (0.01)	-0.048*** (0.00)	-0.036*** (0.00)
Age difference: husband- wife	-0.001*** (0.00)	-0.002*** (0.00)	-0.000 (0.00)
Wife was married before age 20	-0.001 (0.00)	0.012*** (0.00)	0.015*** (0.00)
Years of marriage	0.002*** (0.00)	0.001*** (0.00)	0.000 (0.00)
Total number of children	-0.004*** (0.00)	-0.007*** (0.00)	-0.004*** (0.00)
Couple in a polygamous marriage	-0.006 (0.00)	-0.095*** (0.00)	-0.073*** (0.00)
<i>Individual/Household-level characteristics</i>			
Husband works in agriculture	-0.001 (0.01)	0.004 (0.00)	0.004 (0.00)
Rural Area	-0.045*** (0.01)	-0.014*** (0.00)	0.022*** (0.00)
Log time (mins) to the nearest water source	-0.001** (0.00)	0.000 (0.00)	-0.001*** (0.00)
Household has electricity	0.010 (0.01)	0.015*** (0.01)	0.011** (0.01)
Wealth quantile: bottom 20%	-0.003 (0.01)	-0.053*** (0.01)	-0.050*** (0.00)
Wealth quantile: next-to-bottom 20%	0.000 (0.01)	-0.028*** (0.01)	-0.023*** (0.00)
Wealth quantile: second highest 20%	0.012** (0.01)	0.024*** (0.01)	0.027*** (0.01)
Wealth quantile: top 20%	0.038*** (0.01)	0.072*** (0.01)	0.073*** (0.01)
Constant	0.196*** (0.01)	0.634*** (0.01)	0.163*** (0.01)
Observations	37,590	71,274	71,274
R-squared	0.204	0.207	0.155
Adjusted R-squared	0.20	0.21	0.15

(1) For columns (1)-(2), the dependent variable takes the value zero if the respondent says her husband, not herself, is the main decisionmaker. For column (3), the dependent variable takes the value zero if the husband and wife disagree (she claims more responsibility in decision-making, or vice-versa), or if they agree the wife is not the main decisionmaker.

(2) Country fixed effects included; robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### *Spousal disagreement*

Table 1 showed us that the household is not unitary, and decision-making is relational. In what follows, we unpack spouses' decision-making reports. As discussed above, recent studies have mostly focused on spousal accord or general disagreement when examining the relationship between intra-household decision-making and empowerment. However, looking at disagreement solely as a binary variable can cloud important differences, as women's agency could vary substantially depending on whether disagreement assigns more or less power to the woman. That is, the direction of the disagreement might be more important for the measurement of agency than simply looking at spousal response discrepancy. Unpacking different disagreement scenarios may also provide greater understanding on why accounting for spouses' responses weakens the association between women's involvement in decision-making and proxies of their empowerment that we saw in Table 1.

**Table 2. Share of couples' responses (averaged across countries)**

<i>Who usually makes decisions about making major household purchases?</i>		<i>Wife's response:</i>		
		Husband	Joint	Wife
<i>Husband's response:</i>	Wife	4.5%	5.1%	1.6%
	Joint	13.6%	26.4%	5.0%
	Husband	24.5%	15.8%	3.4%

Table 2 shows us, similar to other studies from Asia and confirming Anderson et al.'s (2017) results from rural Tanzania at a regional level, that couples commonly and systematically disagree on who is making decisions across Sub-Saharan Africa. Nearly half of couples in our DHS sample, 47.5 percent, disagree on decision-making over large household purchases. Moreover, this disagreement has a direction. The data show that the most prevalent combinations of responses are: (1) wife says decision-making is joint, but the husband says he is solely responsible (husband is “taking power” from the wife); and (2) wife says husband is responsible, but husband says decision-making is joint (husband is “giving power”). Indeed, spousal responses are significantly and systematically different in virtually all countries (21 out of 23, Appendix Table 1).

In Table 3, following specification 1, we explore the directionality of the disagreement and the association with the empowerment proxies. The scenario in which the woman takes power is clearly positively associated with more proxies of power than the case where she does not have power at all (column 1). However, column 2 shows that it is also different from the standard case in the literature of uncontested power by the woman (agreement on her power). Even though agreement on her power, which is generally positively associated with empowerment proxies, is the reference category for this outcome, we see certain positive relationships emerge. Crucially, we see that the wife taking power is more positively correlated than uncontested power with two key economic empowerment proxies: earning more than the husband and owning land. It appears that the wife taking power for herself is picking up different underlying aspects of bargaining power.<sup>6</sup>

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<sup>6</sup> The category of comparison, in column 2, is a restricted sample that does not include all categories of agreement. It excludes the case in which wife and husband agree that the husband is the main decision maker. This group is characterized by having a relatively larger sample of younger, less wealthy women and higher number of polygamous households, which may be driving the direction

**Table 3. OLS Regressions across countries for decision-making over large purchases comparing spouses' responses**

	(1)	(2)	(3)
	Wife takes power vs. wife does not have power at all	Wife takes power vs. wife and husband agree she is DM, or DM is joint	Wife takes power vs. husband gives power
<i>Women's Status &amp; Empowerment proxies</i>			
Difference in year of education (Husband-Wife)	-0.002*** (0.00)	-0.001* (0.00)	-0.003*** (0.00)
Wife not working	-0.085*** (0.01)	0.003 (0.01)	-0.060*** (0.01)
Wife works off farm	0.042*** (0.01)	0.001 (0.01)	0.034*** (0.01)
Wife says she earns more than her husband	0.148*** (0.01)	0.062*** (0.01)	0.132*** (0.01)
Wife says she owns land	0.082*** (0.01)	0.055*** (0.01)	0.089*** (0.01)
Wife is aged 15-19	-0.116*** (0.01)	0.078*** (0.01)	-0.022 (0.01)
Wife is aged 20-34	-0.050*** (0.01)	0.037*** (0.01)	-0.005 (0.01)
Age difference: husband- wife	-0.002*** (0.00)	-0.001 (0.00)	-0.002*** (0.00)
Wife was married before age 20	0.011* (0.01)	-0.019*** (0.01)	0.000 (0.01)
Years of marriage	0.001 (0.00)	0.000 (0.00)	0.001 (0.00)
Total number of children wife has	-0.005*** (0.00)	0.003** (0.00)	-0.002 (0.00)
Couple in a polygamous marriage	-0.085*** (0.01)	0.101*** (0.01)	0.007 (0.01)
<i>Individual/Household-level characteristics</i>			
Husband works in agriculture	0.003 (0.01)	-0.006 (0.01)	0.002 (0.01)
Rural Area	-0.021*** (0.01)	-0.031*** (0.01)	-0.014* (0.01)
Log time (mins) to the nearest water source	-0.000 (0.00)	0.002** (0.00)	0.002** (0.00)
Household has electricity	0.008	-0.013	-0.011

of the observed coefficients. Having noted this, column 2 is included as an illustration of the different cases of interest for the outcome variable, across regressions.

**Table 3. OLS Regressions across countries for decision-making over large purchases comparing spouses' responses**

	(1)	(2)	(3)
	Wife takes power vs. wife does not have power at all	Wife takes power vs. wife and husband agree she is DM, or DM is joint	Wife takes power vs. husband gives power
	(0.01)	(0.01)	(0.01)
Wealth quantile: bottom 20%	-0.054***	0.053***	-0.004
	(0.01)	(0.01)	(0.01)
Wealth quantile: next-to-bottom 20%	-0.025***	0.027***	-0.007
	(0.01)	(0.01)	(0.01)
Wealth quantile: second highest 20%	0.023***	-0.018**	0.012
	(0.01)	(0.01)	(0.01)
Wealth quantile: top 20%	0.070***	-0.068***	-0.002
	(0.01)	(0.01)	(0.01)
Constant	0.603***	0.716***	0.782***
	(0.02)	(0.02)	(0.02)
Observations	34,797	37,280	33,827
R-squared	0.232	0.109	0.049
Adjusted R-squared	0.23	0.11	0.05

Notes: (1) Country fixed effects included; robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Restricting to just cases of disagreement in column 3 gives the clearest case of this. Here we compare our two key scenarios and see that the wife assigning herself more decision-making power compared to what her husband assigns to her is positively related to a smaller age and education gap, higher labor force participation (including off-farm employment), earning more than her husband, and owning land. Interestingly, wives in rural areas are less likely to take power, versus being given power, which is consistent with women in rural areas having to face more entrenched social hierarchies and facing greater obstacles “taking” or assigning greater power to themselves (ILO, 2017). Taken together, these relationships suggest not only that discordance among spouses is nonrandom and systematically related to other measures of power, but that the act of taking power specifically isolates a key facet of bargaining power. This facet is related to proxies of women’s status in ways that uncontested power or discordance where the husband

recognizes the woman's power are not. Thus, results in Table 3 show that directionality matters significantly.

## **4.2 Well-Being Outcomes**

### *Association of women's power with women's and children's outcomes*

Does this facet of women's bargaining power, identified above, matter for well-being outcomes? We consider how different cases of spousal disagreement are related to women's and children's well-being — across women's health (anemia and BMI), family planning and reproductive outcomes, girls' and boys' health and education outcomes, and women's experience of domestic violence. Specifically compared to the case where both spouses agree that the husband is the main decisionmaker (the base category), we examine cases where the wife “takes power” [A], the husband “gives power” [B], or the husband and wife agree that she is the main decision maker or that decision-making is joint [C] have a significant association with these well-being outcomes, with [C] being the primary case of focus in the cross-reporting literature.

We run OLS regressions, following specification 2, for our set of well-being outcomes, controlling for individual and household characteristics and country fixed effects, and including whether the husband works in agriculture, whether the household is in a rural area, time to the nearest water source, whether the household has electricity, and wealth quantiles. In our analysis, we include DHS indicators that are commonly used as well-being outcomes in the literature, comparable across countries and available across our sample.

Table 4 displays the results of our main categories of interest on women's health outcomes. Here, taking power is *not* significantly better than being given power (the p-value of the test of equality

of coefficients, A=B, is reported at the bottom of the table). However, agreement on women's power lowers the probability of the woman being anemic or underweight more than any other category. Specifically, agreement lowers this likelihood by around 1 and 3 percentage points, respectively, compared to the case where the woman does not have power at all. This makes sense given the emphasis in the public health literature of agreement on women's decision-making as a positive predictor of outcomes (Allendorf, 2007; Story and Burgard, 2012).

**Table 4. Women's anemia and BMI**

	(1)	(2)
	Woman's anemia: severe/moderate	Woman's BMI: underweight
W gives herself more power than H gives her [A]	-0.002 (0.00)	-0.019*** (0.00)
H gives W more power than she gives herself [B]	0.001 (0.00)	-0.017*** (0.00)
W and H agree she is main/joint DM [C]	-0.007** (0.00)	-0.029*** (0.00)
Constant	0.086*** (0.01)	0.054*** (0.01)
<i>Controls</i>		
Individual/Household-level characteristics	Yes	Yes
Country Fixed Effects	Yes	Yes
Observations	65,858	52,306
Adjusted R-squared	0.07	0.05
Mean Control	0.09	0.12
P-value A=B	0.27	0.58
P-value A=C	0.09	0.00
P-value B=C	0.00	0.00

Notes:

(1) Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

(2) W=wife, H=husband, DM=decision-making

(3) Percentage point changes are calculated relative to the mean of the excluded category (coefficient/excluded category mean).

Looking next at family planning and reproductive health, the analysis in Table 5 also shows that the largest positive effects stem from agreement between the wife and husband [C]. However, from

the p-values reported at the bottom of the table, we can see a clear distinction in well-being outcomes between cases where the woman takes power versus is given power.

We find that the wife taking power is associated with a 4.4 percentage point higher probability of using prenatal help and with an average of 0.25 more antenatal care visits during pregnancy than the excluded category. This is equivalent to a one percentage point increase in using prenatal help and a doubling of the number of antenatal care visits compared to when the husband gives power. Moreover, though only borderline significantly different at the 10 percent level, we see that the woman reporting using any type of modern contraceptive is more related to the woman taking power versus being given it. Interestingly, the wife giving herself more power, compared with any other category, has the largest effects on termination of pregnancy. Compared to the control mean, taking power is equivalent to an increase of 6 and 10 percent in this outcome, compared to the category when the husband gives power and the category when they agree she is the main/joint decision maker, respectively.



**Table 5. Family planning and reproductive outcomes**

	Ever had terminated pregnancy	Ever used prenatal help	Received assistance with the delivery	Number of antenatal care visits	Unmet need for family planning	Wife reports use of any type of modern contraceptive	Husbands reports use of any type of modern contraceptive
	(1)	(2)	(3)	(5)	(7)	(8)	(9)
W gives herself more power than H gives her [A]	0.018*** (0.00)	0.044*** (0.00)	0.006* (0.00)	0.242*** (0.07)	-0.019*** (0.01)	0.028*** (0.00)	0.025*** (0.00)
H gives W more power than she gives herself [B]	0.009** (0.00)	0.036*** (0.00)	0.001 (0.00)	0.111 (0.07)	-0.015*** (0.01)	0.020*** (0.00)	0.027*** (0.00)
W and H agree she is main/joint DM [C]	0.004 (0.00)	0.054*** (0.00)	0.007* (0.00)	0.361*** (0.07)	-0.040*** (0.01)	0.036*** (0.01)	0.048*** (0.01)
Constant	0.060*** (0.01)	0.849*** (0.01)	0.984*** (0.01)	4.393*** (0.10)	0.674*** (0.01)	0.092*** (0.01)	0.058*** (0.01)
<i>Controls</i>							
Individual/Household-level characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	66,735	52,736	52,788	45,487	71,274	62,114	58,543
Adjusted R-squared	0.02	0.35	0.24	0.14	0.04	0.17	0.18
Mean of excluded category	0.14	0.65	0.82	4.35	0.62	0.17	0.15
P-value A=B	0.03	0.05	0.15	0.04	0.45	0.10	0.60
P-value A=C	0.00	0.00	0.75	0.03	0.00	0.09	0.00
P-value B=C	0.22	0.00	0.06	0.00	0.00	0.00	0.00

Notes:

(1) Robust standard errors in parentheses. \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

(2) W=wife, H=husband, DM=decision-making

In Table 6, we examine welfare outcomes for children. Within health, outcomes were measured for children in the household younger than five years old. In these cases, when significant, agreement is associated with the best outcomes for boys' stunting and wasting as well as for the probability of girls receiving all four recommended vaccinations: a BCG vaccination against tuberculosis, the DPT vaccine to prevent diphtheria, pertussis, and tetanus, the polio vaccine and a measles vaccination.

When we examine the impacts of the wife taking power, we find that it is associated with a 4.7 percentage point decrease in the likelihood of having a stunted girl, which implies a 2.4 percentage point larger decrease than the case when the husband gives power. Moreover, taking power is associated with an increase of 5.4 percentage points in the probability of a girl receiving all four vaccinations and an increase of 6.7 percentage points in the probability of a boy receiving all vaccinations. Compared to the control mean, these magnitudes are equivalent to a 4 percent increase in both outcomes than when the husband gives power.

Moreover, the woman taking power and agreement appear equally beneficial for girls' stunting and wasting outcomes. Tests of equality of the coefficients, reported at the bottom of the table, show they are not statistically different. In other words, the wife taking power can be as good as agreement, particularly for reducing the likelihood of stunting and wasting among girls. This gendered impact on children's health – that women taking power is comparatively more important for girls' outcomes than for boys' outcomes – underscores the importance of women's power for the sustained development of girls in Sub-Saharan Africa.

Within children's education, agreement comes out on top, as it is larger and significantly different to the wife taking power and the husband giving power for both for girls' and boys' education. When the husband gives power, the impacts on both education outcomes are not significantly different to the scenario where the wife "takes" power.

**Table 6. Girls' and boys' outcomes**

	Health						Education			
	Girls			Boys			Girls		Boys	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Stunted	Wasted	Received all four vaccinations	Stunted	Wasted	Received all four vaccinations	Max years of schooling among girls (6-15 years)	Proportion enroll in school (6-15 years)	Max years of schooling among boys (6-15)	Proportion of boys enroll in school among (6-15)
W gives herself more power than H gives her [A]	-0.047*** (0.01)	-0.004 (0.01)	0.054*** (0.01)	-0.033*** (0.01)	-0.012** (0.01)	0.067*** (0.01)	0.343*** (0.04)	0.048*** (0.01)	0.226*** (0.04)	0.067*** (0.01)
H gives W more power than she gives herself [B]	-0.023*** (0.01)	0.002 (0.01)	0.034*** (0.01)	-0.031*** (0.01)	-0.009 (0.01)	0.042*** (0.01)	0.328*** (0.04)	0.044*** (0.01)	0.250*** (0.04)	0.062*** (0.01)
W and H agree she is main/joint DM [C]	-0.054*** (0.01)	-0.007 (0.01)	0.074*** (0.01)	-0.047*** (0.01)	-0.020*** (0.01)	0.077*** (0.01)	0.457*** (0.04)	0.065*** (0.01)	0.369*** (0.04)	0.080*** (0.01)
Constant	0.468*** (0.02)	0.152*** (0.01)	0.504*** (0.02)	0.486*** (0.02)	0.166*** (0.01)	0.493*** (0.02)	2.933*** (0.09)	0.454*** (0.01)	3.512*** (0.09)	0.776*** (0.01)
<i>Controls</i>										
Individual/Household-level characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	28,203	28,203	28,203	28,495	28,495	28,495	28,961	32,366	28,539	29,866
Adjusted R-squared	0.06	0.03	0.15	0.06	0.03	0.15	0.13	0.19	0.10	0.20
Mean Control	0.10	0.12	0.55	0.43	0.15	0.54	2.22	0.37	2.47	0.64
P-value A=B	0.00	0.24	0.01	0.82	0.58	0.00	0.71	0.47	0.54	0.37
P-value A=C	0.35	0.45	0.02	0.08	0.07	0.20	0.00	0.00	0.00	0.01
P-value B=C	0.00	0.05	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00

Lastly, in Table 7, we examine the relationship of our main categories of study with domestic violence outcomes. Specifically, we look at the prevalence of emotional, physical, and sexual violence that women reported to have experienced in the last 12 months (perpetrated by her husband).<sup>7</sup> While again, agreement emerges as the category most strongly positively related to well-being outcomes, here we see a change for women taking power vs. being given power. Whereas for women's reproductive health and children's health, women taking power is associated with better outcomes than when the husband gives power, here we are potentially observing the repercussions of this power being taken. The coefficients for less severe violence and severe violence are higher, although not significantly different, and the likelihood of the woman having experienced emotional violence is significantly 8 percent higher than the control mean when she takes power versus when she is given power.

This underscores how taking power could potentially come at a cost, as highlighted in a vast literature on how women face higher risk of violence when claiming their rights and going through the process of empowerment (Kim & Motseib, 2009; Diallo & Voia, 2016; Yount & Li, 2009).

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<sup>7</sup> The DHS domestic violence module is an optional module that is available for some but not all countries. In addition, the population based are all women within the age of 15 and 49 years old and, in our case, it includes only those who are married. In specific, the domestic violence module asks *did your husband do any of the following things to you?*(in the last 12 months): a) Slap you? b) Twist your arm or pull your hair? c) Push you, shake you, or throw something at you? d) Punch you with his fist or with something that could hurt you? e) Kick you, drag you or beat you up? f) Try to choke you or burn you on purpose? g) Threaten or attack you with a knife, gun, or any other weapon? h) Physically force you to have sexual intercourse with him even when you did not want to? i) Force you to perform any sexual acts you did not want to? j) Say or do something to humiliate you in front of others? k) Threaten to hurt or harm you or someone close to you? l) Insult you or make you feel bad about yourself?.

A yes answer to one or more of items (a) to (c) constitutes evidence of any less severe violence. A yes answer to one or more of items (d) to (g) constitutes evidence of any severe violence. A yes answer to one or more of items (h) and (i) constitutes evidence of sexual violence and a yes answer to one or more of items (j) to (l) constitutes evidence of emotional violence.

**Table 7. Domestic Violence**

	(1)	(2)	(3)	(4)
	Experienced emotional violence	Experienced less severe violence	Experienced severe violence	Experienced sexual violence
Wife gives herself more power than husband [A]	0.031*** (0.01)	0.025*** (0.01)	0.010** (0.00)	-0.000 (0.00)
Husband gives herself more power than herself [B]	0.015** (0.01)	0.013** (0.01)	0.004 (0.00)	0.008 (0.00)
Wife and husband agree she is main dm or dm is joint [C]	-0.031*** (0.01)	-0.038*** (0.01)	-0.024*** (0.00)	-0.032*** (0.01)
Constant	0.153*** (0.01)	0.155*** (0.01)	0.022*** (0.01)	0.024*** (0.01)
<i>Controls</i>				
Individual/Household-level characteristics	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes
Observations	31,264	31,267	31,240	31,257
Adjusted R-squared	0.03	0.06	0.03	0.05
Mean Control	0.19	0.20	0.05	0.08
P-value A=B	0.02	0.13	0.21	0.11
P-value A=C	0.00	0.00	0.00	0.00
P-value B=C	0.00	0.00	0.00	0.00

It is important to note that the direction of causality has not been established for the relationships presented above. In addition, three further points are worth mentioning. First, the risk of reverse causality is mitigated given the specific way in which we conceptualize and construct power in our data. The decision-making question we use i) refers to *usual* patterns, which may be less malleable to our outcomes (say, girls' stunting) than specific time-bound occurrences (such as women's savings levels) and ii) is constructed using *discrepancy in cross-reporting* while controlling for agreement on women's decision-making, a very specific facet for the outcomes to affect. While reverse causality cannot be ruled out, the probability of it driving the results is likely

lower than for other more resource-based measures of women's power, such as income or group participation. This may be an advantage of our measure.

Second, an alternative explanation of our results, that women who are more likely to be optimistic about their decision-making power are also more positive about outcomes, is countered by the increase in reported violence. Third, to mitigate concerns that our results are entirely driven by unobservable characteristics, in Appendix Tables 2 to 5 we rerun all the results above, additionally controlling for a set of women's status and empowerment proxies. This lets other dimensions of bargaining power load into our analysis. We note lower significance in our estimates, but the coefficients remain largely unchanged, providing further evidence that examining disagreement is picking up a different facet of power.

## **5. Discussion**

By exploiting cross-reporting by wives and husbands on women's decision-making ability over large purchases in 23 nationally representative surveys in Sub-Saharan Africa, we present a novel measure of women's intra-household power. Through its close conceptual alignment with the power literature and its enduring signal in our analysis even when adjusting for households' and women's resources, we argue that it captures a unique and understudied dimension of women's power.

We show that women's power matters not only for gender equality, but also for other important well-being outcomes at the individual and household level. We find that the case of husbands and wives existing in an uncontested state of women's power appears to matter in particular for health outcomes, which is unsurprising given its link to well-being outcomes in the public health

literature. We also see that it matters for family planning. However, in this case its superiority over women taking power is a little less clear. Agreement on women's power is not significantly better for the likelihood that women received assistance with their delivery.

Women taking power is associated with the best outcomes for girls' stunting, wasting, and likelihood of receiving a full course of vaccinations. Moreover, two key outcomes linked with a *transformational* or transgressive process of empowerment in stronger conflict with prevailing norms – women terminating a pregnancy and reporting of modern contraception – are most strongly linked to women taking power.

When compared to the case of husbands giving power, taking power is linked to women receiving better antenatal and prenatal care, reduced girls' stunting, and a higher likelihood of receiving all four recommended vaccinations for children of both genders. However, our results on intimate partner violence present a cautionary note: contestation over rights in the household is strongly related to a higher prevalence of violence, and within that, the woman taking power is related to significantly higher emotional violence.

Further work is needed to explore the implications of this facet of power for outcomes not measured by DHS data. Most importantly, more research is needed to understand which interventions move the needle on her taking of power, versus the husband giving her power or couples agreeing. Crucially, recent evidence shows that initiatives to engage men in the process of expanding women's rights can result in a host of beneficial outcomes, including the reduction of intimate partner violence (Doyle et al., 2018). However, the process of shifting and contesting

power, along with both its beneficial effects and potential harms, needs to be better understood by policy makers and practitioners intervening to increase women's empowerment.

Our results show that deep-seated change, where both women themselves recognize and claim their power and where the de facto holders of power are on board with this claim, is generally best for development outcomes. However, we also note an important empirical connection between these outcomes and a specific facet of bargaining power much emphasized in empowerment theory: that of staking a claim over your influence, contesting your rights; in brief – taking your power.



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## 7. Appendix

Appendix Table 1. Person who usually decides on large household purchases

Variable			(1)	(2)	t-test
		N	<i>Wife</i>	<i>Husband</i>	<i>(1)-(2)</i>
Benin	Respondent alone		0.102	0.074	0.028***
	Respondent and husband/partner	2660	0.44	0.197	0.243***
	Husband/partner alone		0.459	0.729	-0.271***
Burkina Faso	Respondent alone		0.019	0.035	-0.015***
	Respondent and husband/partner	4945	0.166	0.155	0.011
	Husband/partner alone		0.815	0.81	0.004
Burundi	Respondent alone		0.055	0.026	0.029***
	Respondent and husband/partner	3580	0.619	0.629	-0.01
	Husband/partner alone		0.326	0.345	-0.019*
Cameroon	Respondent alone		0.126	0.118	0.009
	Respondent and husband/partner	2658	0.381	0.281	0.100***
	Husband/partner alone		0.492	0.601	-0.109***
Comoros	Respondent alone		0.232	0.209	0.023
	Respondent and husband/partner	783	0.301	0.36	-0.059**
	Husband/partner alone		0.466	0.43	0.036
Côte d'Ivoire	Respondent alone		0.078	0.04	0.038***
	Respondent and husband/partner	1924	0.285	0.287	-0.002
	Husband/partner alone		0.637	0.674	-0.036**
Congo, Dem. Rep.	Respondent alone		0.128	0.105	0.023***
	Respondent and husband/partner	4303	0.468	0.487	-0.019*
	Husband/partner alone		0.404	0.408	-0.003
Ethiopia	Respondent alone		0.08	0.09	-0.010**
	Respondent and husband/partner	6009	0.698	0.716	-0.018**
	Husband/partner alone		0.222	0.194	0.028***
Gambia, The	Respondent alone	1282	0.054	0.031	0.023***

**Appendix Table 1. Person who usually decides on large household purchases**

Variable		(1)	(2)	t-test	
		N	<i>Wife</i>	<i>Husband</i>	<i>(1)-(2)</i>
	Respondent and husband/partner		0.443	0.363	0.080***
	Husband/partner alone		0.503	0.606	-0.103***
Ghana	Respondent alone		0.161	0.095	0.066***
	Respondent and husband/partner	1779	0.573	0.574	-0.001
	Husband/partner alone		0.266	0.331	-0.065***
Kenya	Respondent alone		0.164	0.117	0.047***
	Respondent and husband/partner	5118	0.55	0.531	0.019*
	Husband/partner alone		0.286	0.352	-0.066***
Lesotho	Respondent alone		0.098	0.112	-0.014
	Respondent and husband/partner	562	0.813	0.746	0.068***
	Husband/partner alone		0.089	0.142	-0.053***
Liberia	Respondent alone		0.211	0.169	0.043***
	Respondent and husband/partner	1750	0.615	0.585	0.031*
	Husband/partner alone		0.173	0.247	-0.074***
Mali	Respondent alone		0.062	0.093	-0.030***
	Respondent and husband/partner	2852	0.107	0.069	0.038***
	Husband/partner alone		0.831	0.838	-0.008
Mozambique	Respondent alone		0.131	0.11	0.021**
	Respondent and husband/partner	1930	0.493	0.506	-0.013
	Husband/partner alone		0.377	0.384	-0.007
Namibia	Respondent alone		0.251	0.185	0.066***
	Respondent and husband/partner	951	0.593	0.653	-0.060***
	Husband/partner alone		0.156	0.162	-0.006
Nigeria	Respondent alone		0.049	0.226	-0.177***
	Respondent and husband/partner	8367	0.327	0.266	0.061***
	Husband/partner alone		0.624	0.508	0.116***
Rwanda	Respondent alone	2877	0.082	0.044	0.038***
	Respondent and husband/partner		0.647	0.673	-0.025**



**Appendix Table 1. Person who usually decides on large household purchases**

Variable		(1)	(2)	t-test	
		N	<i>Wife</i>	<i>Husband</i>	<i>(1)-(2)</i>
	Husband/partner alone		0.27	0.283	-0.013
	Respondent alone		0.027	0.015	0.012*
Senegal	Respondent and husband/partner	937	0.199	0.296	-0.097***
	Husband/partner alone		0.775	0.689	0.085***
	Respondent alone		0.048	0.17	-0.123***
Sierra Leone	Respondent and husband/partner	3502	0.503	0.377	0.126***
	Husband/partner alone		0.449	0.452	-0.003
	Respondent alone		0.13	0.122	0.008
Uganda	Respondent and husband/partner	2370	0.506	0.427	0.080***
	Husband/partner alone		0.364	0.451	-0.087***
	Respondent alone		0.102	0.081	0.021***
Zambia	Respondent and husband/partner	6756	0.565	0.583	-0.018**
	Husband/partner alone		0.332	0.336	-0.003
	Respondent alone		0.243	0.196	0.047***
Zimbabwe	Respondent and husband/partner	3379	0.635	0.723	-0.088***
	Husband/partner alone		0.123	0.081	0.042***

**Appendix Box 1. Decision-making scenarios, using response categories in DHS**

1. Wife gives herself more power than husband- **“She takes power” [A]**
  - a) Wife says decision-making is joint and husband says decision maker is himself.
  - b) Wife says main decision maker is herself and husband says himself.
  - c) Wife says main decision maker is herself and husband says is joint.
  
2. Husband gives wife more power than herself - **“He gives power” [B]**
  - a) Wife says main decision maker is husband and husband say decision-making is joint.
  - b) Wife says main decision maker is husband and husband say wife.
  - c) Wife says decision maker is joint and husband says decision maker is wife.
  
3. Wife and husband agree she is main decision maker/decision-making is joint **“Agree” [C]**
  - a) Wife and husband say decision-making is joint.
  - b) Wife and husband say decision maker is wife.
  
4. Wife does not have decision-making power at all.

**Appendix Table 2. Health Care-Individual/HH characteristics and empowerment proxies**

	(1)	(2)
	Woman's anemia: severe/moderate	Woman's BMI: underweight
Wife gives herself more power than husband [A]	0.000 (0.00)	-0.015*** (0.00)
Husband gives herself more power than herself [B]	0.002 (0.00)	-0.014*** (0.00)
Wife and husband agree she is main dm or dm is joint [C]	-0.004 (0.00)	-0.024*** (0.00)
Constant	0.079*** (0.01)	0.047*** (0.01)
<i>Controls</i>		
Women's status and empowerment proxies	Yes	Yes
Individual/Household-level characteristics	Yes	Yes
Country Fixed Effects	Yes	Yes
Observations	65,858	52,306
Adjusted R-squared	0.07	0.05
Mean Control	0.09	0.12
P-value A=B	0.51	0.95
P-value A=C	0.08	0.01
P-value B=C	0.02	0.01

**Appendix Table 3. Family planning and reproductive outcomes**

	Ever had terminated pregnancy	Ever used prenatal help	Received assistance with the delivery	Received any antenatal care visit	Number of antenatal care visits	Total number of children who died	Unmet need for family planning	Wife reports use of any type of modern contraceptive	Husbands reports use of any type of modern contraceptive
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Wife gives herself more power than husband [A]	0.009** (0.00)	0.036*** (0.00)	0.006* (0.00)	0.025*** (0.01)	0.155** (0.07)	-0.025*** (0.01)	-0.010* (0.01)	0.019*** (0.00)	0.019*** (0.00)
Husband gives herself more power than herself [B]	0.004 (0.00)	0.031*** (0.00)	0.001 (0.00)	0.024*** (0.01)	0.056 (0.07)	-0.031*** (0.01)	-0.011** (0.01)	0.014*** (0.00)	0.023*** (0.00)
Wife and husband agree she is main dm or dm is joint [C]	-0.006 (0.00)	0.044*** (0.00)	0.005 (0.00)	0.027*** (0.01)	0.248*** (0.07)	-0.029*** (0.01)	-0.028*** (0.01)	0.026*** (0.01)	0.041*** (0.01)
Constant	0.080*** (0.01)	0.928*** (0.01)	1.024*** (0.01)	0.591*** (0.01)	4.900*** (0.13)	-0.526*** (0.02)	0.423*** (0.01)	0.117*** (0.01)	0.095*** (0.01)
<i>Controls</i>									
Women's status and empowerment proxies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual/Household-level characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	66,735	52,736	52,788	66,735	45,487	71,274	71,274	62,114	58,543
Adjusted R-squared	0.04	0.36	0.25	0.21	0.15	0.33	0.09	0.17	0.19
Mean Control	0.14	0.65	0.82	0.68	4.35	0.55	0.62	0.17	0.15
P-value A=B	0.29	0.18	0.10	0.90	0.12	0.41	0.75	0.30	0.34
P-value A=C	0.00	0.02	0.89	0.56	0.08	0.53	0.00	0.13	0.00
P-value B=C	0.01	0.00	0.09	0.49	0.00	0.80	0.00	0.01	0.00

#### Appendix 4. Girls' and boys' outcomes

	Health						Education			
	Girls			Boys			Girls		Boys	
	(1)	(2)	(3)	(5)	(6)	(7)	(9)	(11)	(12)	(13)
	Stunted	Wasted	Received all four vaccinations	Stunted	Wasted	Received all four vaccinations	Max years of schooling among girls (6-15 years)	Proportion of girls enroll in school (6-15 years)	Max years of schooling among boys (6-15)	Proportion of boys enroll in school among (6-15)
Wife gives herself more power than husband [A]	-0.043*** (0.01)	-0.001 (0.01)	0.041*** (0.01)	-0.028*** (0.01)	-0.010* (0.01)	0.055*** (0.01)	0.237*** (0.04)	0.038*** (0.01)	0.159*** (0.04)	0.058*** (0.01)
Husband gives herself more power than herself [B]	-0.021** (0.01)	0.004 (0.01)	0.026*** (0.01)	-0.027*** (0.01)	-0.008 (0.01)	0.033*** (0.01)	0.260*** (0.04)	0.036*** (0.01)	0.185*** (0.04)	0.054*** (0.01)
Wife and husband agree she is main dm or dm is joint [C]	-0.049*** (0.01)	-0.004 (0.01)	0.056*** (0.01)	-0.039*** (0.01)	-0.018*** (0.01)	0.060*** (0.01)	0.336*** (0.04)	0.052*** (0.01)	0.266*** (0.04)	0.068*** (0.01)
Constant	0.395*** (0.02)	0.132*** (0.01)	0.610*** (0.02)	0.431*** (0.02)	0.121*** (0.02)	0.606*** (0.02)	2.678*** (0.11)	0.644*** (0.01)	2.935*** (0.10)	0.872*** (0.02)
<i>Controls</i>										
Women's status and empowerment proxies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual/Household-level characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	28,203	28,203	28,203	28,495	28,495	28,495	28,961	32,366	28,539	29,866
Adjusted R-squared	0.06	0.03	0.16	0.07	0.03	0.16	0.22	0.22	0.21	0.21
Mean Control	0.39	0.12	0.55	0.43	0.15	0.54	2.22	0.37	2.47	0.64
P-value A=B	0.00	0.38	0.07	0.90	0.68	0.01	0.55	0.68	0.49	0.56
P-value A=C	0.49	0.49	0.06	0.17	0.11	0.49	0.01	0.01	0.00	0.05
P-value B=C	0.00	0.11	0.00	0.14	0.05	0.00	0.04	0.00	0.03	0.01

**Appendix Table 5. Domestic Violence**

	(1)	(2)	(3)	(4)
	Experienced emotional violence	Experienced less severe violence	Experienced severe violence	Experienced sexual violence
Wife gives herself more power than husband [A]	0.024*** (0.01)	0.017** (0.01)	0.007 (0.00)	-0.004 (0.01)
Husband gives herself more power than herself [B]	0.013* (0.01)	0.011* (0.01)	0.003 (0.00)	0.007 (0.00)
Wife and husband agree she is main dm or dm is joint [C]	-0.035*** (0.01)	-0.042*** (0.01)	-0.025*** (0.00)	-0.034*** (0.01)
Constant	0.154*** (0.01)	0.155*** (0.02)	0.015 (0.01)	0.029*** (0.01)
<i>Controls</i>				
Women's status and empowerment proxies	Yes	Yes	Yes	Yes
Individual/Household-level characteristics	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes
Observations	31,264	31,267	31,240	31,257
Adjusted R-squared	0.03	0.07	0.03	0.05
Mean Control	0.19	0.20	0.05	0.08
P-value A=B	0.13	0.41	0.45	0.03
P-value A=C	0.00	0.00	0.00	0.00
P-value B=C	0.00	0.00	0.00	0.00