

Sharing Responsibility through Joint Decision Making and Implications for Intimate-Partner Violence

Evidence from 12 Sub-Saharan African Countries

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Abstract

Intimate partner violence affects 36 percent of women in Sub-Saharan Africa. This paper examines the relationship between decision making within couples and the incidence of intimate partner violence across 12 African countries. Using the wife's responses to survey questions, the analysis finds that compared with joint decision making, sole decision making by the husband is associated with a 3.3 percentage point higher incidence of physical intimate partner violence in the last year, while sole decision making by the wife is associated with a 10 percentage point higher incidence. Similar patterns hold for emotional and sexual violence. When the husband's report of decision making is

included in the analysis, joint decision making emerges as protective only when spouses agree that decisions are made jointly. Notably, agreement on joint decision making is associated with lower intimate partner violence than agreement on decision making by the husband. Constructs undergirding common intimate partner violence theories, namely attitudes toward violence, similarity of preferences, marital capital, and bargaining, do not explain the relationship. The results are instead consistent with joint decision making as a mechanism that allows spouses to share responsibility and mitigate conflict if the decision is later regretted.

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Sharing Responsibility through Joint Decision Making and Implications for Intimate-Partner Violence: Evidence from 12 Sub-Saharan African Countries

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1. Introduction

Intimate partner violence (IPV) is a human rights violation and one of the world's leading public health problems. Worldwide, nearly one-third (30%) of all women who have been in a relationship have experienced physical and/or sexual violence by their intimate partner (WHO 2013). According to the same report, lifetime prevalence of physical and/or sexual intimate partner violence in Africa is 36.6, one of the highest regional rates (WHO 2013). Data from the Demographic and Health Surveys (DHS) show similar rates, with 32% of women in Sub-Saharan Africa ever having experienced emotional and physical (including sexual) violence. And 25% of women reported being subject to such abuse during the last 12 months alone (Cools and Kotsadam 2017). Understanding the underlying drivers of IPV so that effective solutions can be formulated and implemented is a pressing policy priority.

A number of theories have been offered to explain when and why husbands perpetrate IPV, with varying empirical support. We categorize these into four broad groups, each with a different focus including: (1) the role of individual beliefs and attitudes in justifying IPV as an acceptable behavior, (2) the misalignment of preferences between husband and wife, with IPV used as a disciplinary tool to ensure the wife does not stray from the husband's wishes, (3) marital capital (such as number of children and years in the relationship) as a factor increasing the cost of exiting the relationship, and (4) IPV as a function of bargaining power within the household.

A fifth, underexplored driver of IPV in the theoretical literature is the level of shared responsibility within couples, which we analyze by considering the mode of decision making within households. We analyze whether decisions are made alone or together, by whom, and whether husband and wife agree on who decides. This is distinct from bargaining power since what is emphasized is the *jointness* of the process

and whether it is perceived in the same way by both parties. Joint decision making has been found to correlate negatively with IPV in several country studies, including Ebrahim and Atteraya (2019), Friedemann-Sánchez and Lovatón (2012), Gage (2005), Hindin and Adair (2002) and Svec and Andic (2018). This literature primarily focuses on the wife's perception of the process of decision making and how egalitarian she thinks this process is. While one analysis included both the husband's and wife's responses (Zegenhagen et al. 2019), we go beyond this and include covariates that reflect not only their responses, but whether or not they give the same responses. This allows us to explore the direction of disagreement and its asymmetric effect on IPV.

A separate body of interdisciplinary research offers a theoretical explanation for why joint decision making may be associated with lower IPV. In the management, political science and conflict resolution literatures, joint decision making is highlighted as a tool for diffusing responsibility and reducing decisional conflict by sharing risk. For example, in her typology of political blame management strategies, McGraw (1991) features 'horizontal diffusion of responsibility', whereby political leaders avoid conflict in the face of a decision gone awry by arguing that their decision was a joint product of a group of individuals. Thompson (1980) discusses the blame-mitigation strategy of emphasizing 'collective responsibility'. Shared decision making between doctors and patients is also highlighted as a tool for reducing decisional conflict—and hence, malpractice lawsuits—in the medical literature (Hoffmann et al. 2014, Kremer et al. 2007).

Our paper builds on existing work by examining the relationship between joint decision making and physical, sexual and emotional IPV across 12 Sub-Saharan African countries, using nationally representative Demographic and Health Surveys (DHS) for 31,243 couples. We find a strong and significant relationship between joint decision making and all three types of IPV. Compared to joint decision making, sole decision making by the husband is associated with a 3.3 percentage point (20.6 percent) increase in

the perpetration of physical IPV in the last year (the most common form of violence), a 3 percentage point (16.7 percent) increase for emotional violence and a 3.4 percentage point (42.5 percent) increase in sexual violence. Sole decision making by the wife, compared to joint decision making, is associated with a 10 percentage (62.5 percent) point increase in physical IPV, a 12 percentage point (66.7 percent) increase in emotional IPV and a 6.7 percentage point (83.7 percent) increase in sexual IPV. Using the same DHS data, we construct indicators representing the four blocks of alternate theories that may constitute important mediators for the relationship: attitudes towards violence, alignment of preferences, marital capital and bargaining. None of these covariates dampens the magnitude of the observed relationship between joint decision making and IPV, and in some cases they even strengthen the association.

Next, we re-run the analysis considering both wives' and husbands' views of who makes decisions. We find that the husband making decisions is associated with increased IPV compared to joint decision making—even when both spouses agree that the husband makes the decisions (i.e., in the absence of any contestation of power by the woman). This empirical finding contrasts with IPV theories emphasizing a divergence of preferences or contestation of power by the woman as a source of violence perpetration by the husband. Overall, we detect three broad categories of decision making patterns and their relationship with IPV. The first category, among which the highest levels of physical, emotional and sexual IPV are observed, are couples where the wife reports that she makes decisions (regardless of the husband's view). The second category, with lower IPV compared to the first, are couples that disagree over decision making roles (but where the wife does not report making sole decisions) and couples that agree that the husband makes decisions. The third category, when spouses both report making joint decisions, is associated with the lowest levels of all forms of IPV. This finding is consistent with existing qualitative research that highlights the importance of shared responsibility for couples' harmony.

Our results have important analytical and policy implications. First, they shed light on how joint decision making (as opposed to sole decision making) should be considered when assessing levels of women's agency. If one considers that women's agency is the capacity to make decisions about one's own life and act on them to achieve a desired outcome, *free from the threat of violence and retribution* (Klugman et al. 2014), then making joint decisions clearly has a role to play in furthering agency. Second, our results underscore the promise of interventions seeking to reduce intimate partner violence by fostering shared accountability and cooperation within couples (Dunkle et al. 2020, Sharma et al. 2020).

Our paper proceeds as follows. Section 2 reviews different strands of the joint decision making literature, while Section 3 discusses the data and empirical strategy. Section 4 presents our main results on the relationship between joint decision making and IPV perpetration, and Section 5 explores mechanisms underlying this result using both quantitative and qualitative data. Section 6 summarizes our findings and discusses their implications.

2. Literature

The literature on the determinants of IPV has been steadily growing. One strand of the literature emphasizes the important role of individual beliefs and attitudes in perpetration of intimate partner violence (Khawaja, Linos and El-Roueiheb 2008, Uthman, Lawoko and Moradi 2009, Sambisa, et al. 2010, Straus 2004, Wang 2016). Attitudes towards violence against women can serve as an indicator of gender norms prevailing in the society along with women's status (Uthman, Lawoko and Moradi 2009). Acceptance of intimate partner violence can both increase the use of IPV by the man (since he might face lower psychological and social costs of doing so) and reduce the probability of the woman resisting or exiting the relationship, leading to higher observed IPV in equilibrium.

A second strand of the literature highlights how IPV can be wielded by the husband to enforce his will in the case of disparate preferences (Jakobsen 2018). For example, in the models developed in Eswaran and Malhotra (2011), Bloch and Rao (2002) and Bulte and Lensink (2021), a wife trades the cost of IPV against the gains she receives from an allocation of resources which is more closely aligned with her own preferences than her husband's. This body of literature models intra-household decision making using a non-cooperative set-up, where the husband may use violence to influence the allocation of within-household resources. Alternatively, a divergence in preferences can also alter the likelihood of joint decision making and can have direct effects on the incidence of violence which emerges from disagreement.

A third piece of the literature highlights how marital capital and marital dependency can influence intimate partner violence (Kalmuss and Straus 1982, Kim, et al. 2007). Higher marital dependence can have either negative or positive effects on the incidence of violence. On the one hand, some studies suggest that greater marital dependence and capital (e.g. in the form of children) acts as a trap for women in abusive relationships, leading to a higher tolerance on the part of women for physical or emotional abuse from their husbands as they see fewer viable alternatives. This leads to a positive relationship between marital dependency and violence (Farmer and Tiefenthaler 1997, Gelles 1976). On the other hand, a negative relationship may also exist between the two. The proponents of this view suggest that husbands of dependent wives have alternative ways of maintaining dominant positions (e.g. by restricting resource use) without resorting to explicit violence (Kalmuss and Straus 1982).

A fourth strand of literature is related to the third, but instead focuses on the bargaining power of women within households and its implications for IPV. The bargaining power of married women can act as a double-edged sword, with theoretical models suggesting an ambiguous relationship between the

incidence of violence and women's economic standing and access to opportunities (Eswaran and Malhotra 2011, Tauchen, Witte and Long 1991). Women's ownership of assets and their relative share of wealth can increase their bargaining power within the household and hence can act as a deterrent to physical violence against them (Agarwal and Panda 2007; Panda and Agarwal 2005; Oduro, Deere, and Catanzarite 2015). Similarly, cash transfers provided to women and intended to reduce poverty and food insecurity have been shown to decrease physical and sexual violence (Hidrobo, Peterman and Heise 2016). Alternatively, higher bargaining power may attract more violence by threatening the existing male dominance, as suggested by the backlash theory of violence (Koenig et al. 2003, Rocca et al. 2009). The evidence suggests that the association of financial autonomy or higher bargaining power within household with protective role of violence is influenced by context specific factors (Vyas and Watts 2009).

In addition to who makes decisions and has bargaining power, whether decisions are made independently or jointly may also influence IPV. Indeed, empirical papers from demography, development studies and public health have established a relationship between women's responses on joint decision making patterns and IPV. Coleman and Straus (1986) provide the first evidence of this relationship using data on US couples. While the authors expected that families making decisions jointly would have the highest degree of conflict, they found the opposite. Kim and Emery (2003) replicate their study in the Korean population and encountered similar results. Hindin and Adair (2002) use the Philippines Cebu Longitudinal Health and Nutrition Survey (CLHNS) and find that only 6% of women reported IPV when all household decisions were made jointly compared to 25% when no decisions were made jointly. Using the 2000 Haiti DHS, Gage (2005) finds that women who had the final say on major household purchases were almost 2.7 times more likely to experience emotional violence, and 1.7 times more likely to experience physical or sexual violence than women who made such decisions jointly with their partners.

Friedemann-Sánchez and Lovatón (2012) likewise find similar results using the Colombia DHS, as do Svec and Andic (2018) using the Peru DHS. Using the Ethiopia DHS, Ebrahim and Atteraya (2019) find that no decision making by the woman and sole decision making by the woman are similarly linked to IPV, but that women who made decisions jointly with their spouses had lower risk of domestic violence. Finally, Zegenhagen et al. (2019) find that women's reporting of decision making did not predict their experience of IPV, whereas men's reporting on decision making over major household purchases and expenditure of husband's earnings predicted the likelihood of women experiencing IPV. Using husbands' reports, joint decision making and women's decisions alone in both of these domains were associated with a lower probability of IPV compared to husband's making the decisions alone.

However, none of these studies has examined couples' agreement (or disagreement) over who makes the decision, whether sole or joint, and its relationship to violence. Moreover, the theoretical mechanisms underlying the relationship between joint decision making and lower IPV are not systematically explored in this literature—though Svec and Andic (2018) posit that joint decision making may be capturing more equal gender beliefs, while Zegenhagen et al. (2019) discuss how violence may be used when husbands perceive that their status within the household contradicts social norms. We suggest that joint decision making allows spouses to share responsibility and mitigate conflict if the decision is later regretted. Though not explored quantitatively in the context of couples, this link between joint decision making and reduced conflict has been discussed extensively in the management, political science and conflict resolution literature.

Political science has conceptualized joint decision making as a way for politicians to deflect blame and defuse conflict if a chosen strategy is later regretted (Thompson 1980, McGraw 1991). Collective decision making allows these officials to argue that the decision was the joint product of a group of individuals and

avoid electoral consequences. Conflict resolution theory has similarly highlighted the importance of joint decision making, typically analyzed as a process of negotiation (Filley 1975, Zartman 1977). Management and organizational science has stressed the importance of managers employing joint decision making, typically to prevent workplace frustration boiling over into conflict (Greenhalgh and Chapman 1995). Lastly, the medical literature has explicitly advanced ‘Shared Decision Making’ (SDM) as a risk management tool for doctors seeking to avoid potential malpractice lawsuits. This literature highlights how a lack of shared decision making leads to decisional conflict, with risk managers encouraging joint decision making between doctors and patients to enhance a practice’s legal protection (Hoffmann et al. 2014, Kremer et al. 2007).

In what follows, we explore the empirical relevance of this multidisciplinary concept—joint decision making as a conflict-reducing strategy—for women’s experience of intimate-partner violence in Sub-Saharan Africa.

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 childcare, 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 12 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.

In these 12 countries, women were also asked questions about their experience with different forms of violence through the Domestic Violence Module. This module asks eligible women whether they ever experienced emotional, physical, or sexual violence perpetrated by their husband.¹ The answer options are (a) never, (b) often (c) sometimes (d) yes, but not in the last 12 months or (e) yes, but currently widowed/divorced/separated. We consider women as having experienced a particular type of IPV in the last 12 months if they reported (b) or (c) to any of the questions within the category. It is worth noting that we are analyzing women’s reports of IPV, but we cannot tell whether there are systematic biases in the reporting. This would only bias our analysis if there was a systematic pattern of women who live in

¹ To determine a woman’s experience with emotional violence, she was asked “Did your (last) (husband/partner) ever: (a) say or do something to humiliate you in front of others? (b) threaten to hurt or harm you or someone you care about? (c) insult you or make you feel bad about yourself?”.

Similarly, a woman is considered to have experienced physical violence if her response to “Did your (last) (husband/partner) ever do any of the following things to you: (a) push you, shake you, or throw something at you? (b) slap you? (c) twist your arm or pull your hair? (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 other weapon?” is “yes” to any of the situations listed above. For determining the incidence of sexual violence, women are asked “Did your (last) (husband/partner) ever do any of the following things to you: (a) physically force you to have sexual intercourse with him when you did not want to? (b) physically force you to perform any other sexual acts you did not want to? (c) force you with threats or in any other way to perform sexual acts you did not want to?”

households where both they and their husbands report that decisions are made jointly also underreporting incidences of IPV.²

We use the last available survey round for each of the 12 countries where the decision making question was administered to couples and the domestic violence module was administered to married women. Hence, our data set covers the years 2010-2016. Restricting to non-missing observations results in a sample of 31,243.³

3.2 Empirical Strategy

The objective of this paper is to understand the importance of joint decision making and agreement between couples over decision making on the incidence of IPV. Thus, the empirical strategy developed throughout this paper consists of two main parts. In the first part, we use the wife's response on who makes the decisions regarding major household purchases to see how it is correlated with incidence of violence. We estimate the following OLS specification:

$$y_{ic} = \beta_0 + \beta_1 DM_{ic}^W + \beta_2 X_{ic1} + \beta_3 X_{ic2} + \theta_c + \varepsilon_{ic} \quad (1)$$

Where y_{ic} is an indicator of whether wife i faced violence (any physical, emotional or sexual) in the last 12 months in country c ; DM_{ic}^W is wife's response on who makes decisions about major household

² Data from Cullen (2020), which analyzes the magnitude and predictors of misreporting on intimate partner and sexual violence in Nigeria and Rwanda, finds no evidence for this pattern of underreporting.

³ The countries are Burkina Faso, Burundi, the Comoros, Côte d'Ivoire, Ethiopia, The Gambia, Kenya, Mali, Nigeria, Rwanda, Zambia, and Zimbabwe. It should be noted that when looking at the relationship between decision making and IPV, our sample changes due to data availability and conditionally applicable questions. We re-run our analysis for our smallest, most restrictive sample where all variables are available to ensure that our results are not driven by sample selection issues (results available upon request).

purchases (=1 if husband, = 2 if joint and =3 if she herself) and X_{ic1} comprises a set of household characteristics.⁴ θ_c specifies country fixed effects and ε_{ic} indicates the error term.

To understand what is driving the negative association between joint decision making and violence, we categorically introduce sets of indicators capturing the four key constructs outlined in Sections 1 and 2, which may underly or mediate the relationship between decision making and conflict. These are introduced into the regressions as X_{ic2} .

Attitudes towards violence are measured using situational questions which ask spouses in which of those situations is beating one's wife justified. We combine the information from these questions to construct a variable =1 if neither husband nor wife condones violence in any situation; =2 when only husband condones violence; =3 when only wife condones violence and =4 when both condone violence.

Alignment of preferences is measured using information about the ideal number of children that husband and wife want. We construct a variable that attempts to capture the preferences of the husband and wife. The preference variable = 0 if both husband and wife report same number of ideal kids, =1 if wife reports higher number of ideal kids than husband, =2 if husband prefers more kids than the wife. In addition, we include a dichotomous variable which controls for whether wife reports not knowing husband's preferences over kids.

Our indicators of marital capital include years of marriage, the total number of children the couple has and whether the couple is in a polygamous marriage. Finally, to proxy for wife's bargaining power in the

⁴ The set of household level characteristics includes a dichotomous variable for rural area, for household has electricity and wealth quantile dummies.

household, we include the following variables: wife’s years of education, difference in years of schooling between husband and wife, and dichotomous variables for wife not working, for wife works off farm, for husband not working, for wife says she earns more than her husband, relative ownership of assets, age when wife was married, and difference in age of husband and wife.

In the second part, to investigate whether different facets of power assignation and agreement between couples on distribution of power have dissimilar impacts on incidence of intimate partner violence, we estimate the following specification:

$$y_{ic} = \alpha_0 + \alpha_1 DM_{ic}^{WH} + \alpha_2 X_{ic1} + \alpha_3 X_{ic2} + \theta_c + \varepsilon_{ic} \quad (2)$$

where the only difference between (1) and (2) is the variable on decision-making. In equation (1) it is just the wife’s response. In equation (2), DM_{ic}^{WH} captures the responses of both the wife and the husband about who makes decisions regarding large purchases in the household. Thus, we have 9 potential responses: spouses agree that decisions are made by the husband, wife, or jointly, or spouses disagree (husband says husband, wife says wife or joint; husband says joint, wife says wife or husband; or husband says wife, wife says husband or joint).

We do not have any exogenous variation in the decision making dynamics within the household in our sample, and so we face the issue of selection on observables. The set of variables included in X_{ic2} serve two purposes: (i) they help in understanding the role of different theories of IPV in our context and (ii) by adding them sequentially and establishing the stability of our estimates, and to the extent that the observable characteristics in our data are representative of unobservables, we can mitigate concerns that our results are biased due to omitted variables (Altonji, Elder, and Taber 2005). As an additional

robustness check, we calculate bounding values for unbiased coefficients using the methodology proposed by Oster (2019).

4. Results

4.1 Wife Reports Decision Making

We follow specification (1) and present results in Table 1. In columns (1), (3) and (5) we only include X_{ic1} (household wealth controls) and country fixed effects. In columns (2), (4) and (6) we introduce all the variables in X_{ic2} , representing the four theoretical dimensions of attitudes, preferences, marital capital and bargaining that may be driving or mediating the observed relationship.

We observe that compared to the couples where women report joint decision making, the likelihood of facing any type of violence is higher when she reports that the decision maker is either the husband or she herself. However, the pattern of deviation from joint decision making matters.

Table 1: Wife's Response on Decision Making and Violence

	(1)	(2)	(3)	(4)	(5)	(6)
	Physical	Physical	Emotional	Emotional	Sexual	Sexual
Wife says DM is husband [A]	0.033*** (0.005)	0.033*** (0.005)	0.030*** (0.005)	0.036*** (0.006)	0.034*** (0.004)	0.038*** (0.004)
Wife says DM is wife [C]	0.100*** (0.009)	0.095*** (0.009)	0.120*** (0.009)	0.119*** (0.010)	0.067*** (0.007)	0.065*** (0.007)
Constant	0.112*** (0.009)	0.180*** (0.026)	0.105*** (0.009)	0.093*** (0.027)	-0.006 (0.006)	-0.010 (0.018)
Observations	31229	27657	31243	27669	31228	27656
R-squared	0.033	0.050	0.029	0.042	0.048	0.059
Mean of sample	.16	.16	.18	.18	.08	.08
p-value ([A]=[C])	0	0	0	0	0	0
Indiv. controls	No	Yes	No	Yes	No	Yes
HH controls	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes

(1) Wife says DM is joint [B] is the reference category.

(2) Indiv. controls include variables like attitude of husband and wife towards violence, knowledge and alignment of preferences of husband and wife for children, years of marriage, total number of children the couple has, whether the couple is in a polygamous marriage and measures of wife's bargaining power like her education, age when she was married, difference in wife and husband's education and age, whether husband and wife work, whether she earns more and relative ownership of assets.

(3) HH controls include whether household is in rural area, it has electricity and wealth quintile to which the household belongs.

(4) Robust standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

For instance, when the husband is the main decision maker, the wife is 3.3 percentage points (26.3 percent) more likely to have faced any physical violence in the last 12 months compared to when decision making was joint. However, when wife is the main decision maker, she is 10 percentage points (62.5 percent) more likely to have faced physical violence. These differences are statistically significant at a 1 percent level, and consistent for the incidence of emotional and sexual violence. Interestingly, these patterns remain unchanged when we include the four theoretical dimensions as explanatory variables in columns (2), (4) and (6), even though these dimensions show a significant relationship with violence on their own.

4.2 Wife and Husband Report Decision Making

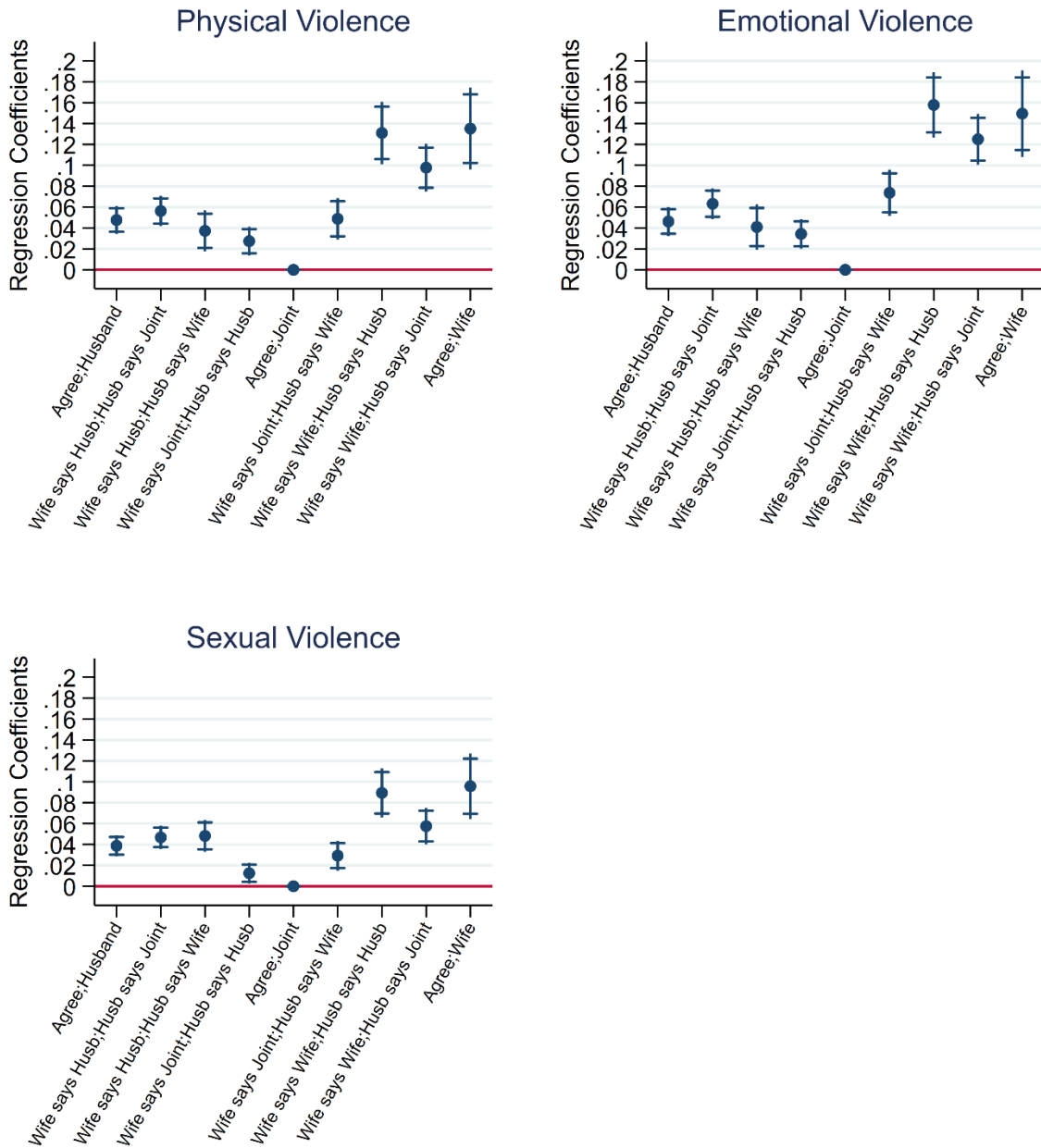
The results discussed in Table 1 resonate with what is already well established in the literature for different countries, confirming a strong and significant association between joint decision making within couples and lower IPV for eleven new countries (Ethiopia was the focus of Ebrahim and Atteraya's 2019 paper). Next, we seek to understand if and how these patterns change when the husband's response about decision making is introduced. This brings us to our second main research question, is there an added signal embedded in the husband's response?

To explore this further, we follow specification (2) for physical, emotional and sexual violence. To begin, we present the results (excluding X_{ic2}) in Figure 1. We discuss the robustness of our results to inclusion of proxies for different models of determinants of IPV in the following section. The results in Figure 1 underscore the importance of including both responses when analyzing the role of decision making within couples and its impact on IPV. The first observation is that if we focus our attention on the scenarios where the wife and husband agree on who makes the decision, we see that the results are consistent with what we observed in Table 1. Jointness in decision making protects women from violence.

However, joint decision making is not necessarily protective if it is only the woman who reports that decisions are joint. The protective role of joint decision making within couples comes from agreement between husband and wife that decision making is joint (the reference category for the coefficients presented in figure 1). When the wife says decision making is joint, in 57% of couples the husband agrees. However, if the wife says that decision making is joint and the husband disagrees, her likelihood of facing violence in the past 12 months is, on average, similar to the case when she says that the husband is the

main decision maker. When she says that she is the main decision maker, even if the husband reports that decisions are made jointly, the incidence of violence is more than 10 percentage points higher than when they both agree that decision making is joint. These patterns hold true for all forms of violence measured in our data—physical, emotional and sexual.

Figure 1: Regression Coefficient



The direction of causality has not been established for the relationships presented above, though two further points are worth mentioning. First, the risk of reverse causality may be mitigated given the specific way in which we conceptualize and construct decision making in our data. The decision making question

we use refers to *usual* patterns, which are less malleable than time-bound outcomes like violence (which is measured in reference to the past 12 months).

Second, joint decision making by couples may be related to the four dimensions of attitudes, preferences, marital capital and bargaining described above. For example, couples who have spent more years in a marriage might see convergence in their preferences which both leads them to make joint decisions and face less conflict. This would bias our estimates. To mitigate concerns that our results are entirely driven by similar unobservable characteristics, in the next section we rerun all the results above, introducing different sets of variables corresponding to different theories of IPV sequentially.

5. Mechanisms

5.1 Common IPV Theories

In this section, we report the results of sequentially including measures of attitudes towards violence, alignment of preferences over children, marital capital and bargaining in specification (2). The results for physical, emotional and sexual violence are presented in Tables 2, 3 and 4 respectively.

The results in column (1) replicate the numbers observed in Figure 1. Columns (1)-(5) present the coefficients on decision making variables when other controls described above are added sequentially.⁵

The results here suggest that the coefficients on the decision making variables are stable to the inclusion of a host of variables representing alternative theories that the literature suggests determine IPV. Full tables showing coefficients for the sets of variables related to each of these theoretical dimensions are

⁵ Details of the variables included in these regressions and the respective coefficients are presented in appendix tables A1, A2 and A3.

included in the Appendix. Many of the findings are consistent with what other theories of IPV predict. For example, in Table A1, both condoning violence (attitudes) and wife not knowing husband's fertility preferences (preference alignment) are associated with higher levels of violence and years of marriage (marital capital) and wife working off farm (bargaining) are associated with lower levels of violence. While these other variables are statistically significant in some cases and might thus explain part of the violence observed in the data, they don't meaningfully change the relationship we observe between decision making and violence.

Table 2: Physical Violence with Both Spouses Reporting

	(1)	(2)	(3)	(4)	(5)
Agree;Husband	0.048*** (0.007)	0.037*** (0.007)	0.042*** (0.007)	0.039*** (0.007)	0.044*** (0.008)
Wife says Husb;Husb says Joint	0.056*** (0.007)	0.049*** (0.007)	0.050*** (0.008)	0.048*** (0.008)	0.051*** (0.008)
Wife says Husb;Husb says Wife	0.037*** (0.010)	0.032** (0.010)	0.031** (0.010)	0.028** (0.010)	0.036*** (0.011)
Wife says Joint;Husb says Husb	0.027*** (0.007)	0.022** (0.007)	0.024** (0.007)	0.022** (0.007)	0.022** (0.007)
Wife says Joint;Husb says Wife	0.049*** (0.010)	0.046*** (0.010)	0.039*** (0.010)	0.038*** (0.010)	0.036*** (0.010)
Wife says Wife;Husb says Husb	0.131*** (0.015)	0.121*** (0.015)	0.123*** (0.016)	0.120*** (0.016)	0.118*** (0.016)
Wife says Wife;Husb says Joint	0.098*** (0.012)	0.094*** (0.012)	0.095*** (0.012)	0.094*** (0.012)	0.094*** (0.012)
Agree;Wife	0.135*** (0.020)	0.128*** (0.020)	0.125*** (0.021)	0.124*** (0.021)	0.123*** (0.021)
Obsv	31229	31229	27890	27890	27657
R-squared	0.034	0.043	0.045	0.046	0.051
Mean of sample	.16	.16	.16	.16	.16
Country FE	Yes	Yes	Yes	Yes	Yes
HH controls	Yes	Yes	Yes	Yes	Yes
Attitudes	No	Yes	Yes	Yes	Yes
Preferences	No	No	Yes	Yes	Yes
Marriage	No	No	No	Yes	Yes
Bargaining	No	No	No	No	Yes

(1) "Agree;Joint" is the reference category for the above table.

(2) Attitudes include attitude of husband and wife towards violence; Preferences include knowledge and alignment of preferences of husband and wife for children; Marriage includes years of marriage, total number of children the couple has, whether the couple is in a polygamous marriage; Bargaining includes wife's education, age when she was married, difference in wife and husband's education and age, whether husband and wife work, whether she earns more and relative ownership of assets.

(3) HH controls include whether household is in rural area, it has electricity and wealth quintile to which the household belongs.

(4) Robust standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Table 3: Emotional Violence with Both Spouses Reporting

	(1)	(2)	(3)	(4)	(5)
Agree;Husband	0.046*** (0.007)	0.038*** (0.007)	0.046*** (0.008)	0.043*** (0.008)	0.053*** (0.008)
Wife says Husb;Husb says Joint	0.063*** (0.008)	0.057*** (0.008)	0.062*** (0.008)	0.060*** (0.008)	0.066*** (0.008)
Wife says Husb;Husb says Wife	0.041*** (0.011)	0.036** (0.011)	0.040*** (0.012)	0.038*** (0.012)	0.048*** (0.012)
Wife says Joint;Husb says Husb	0.034*** (0.007)	0.031*** (0.007)	0.033*** (0.008)	0.032*** (0.008)	0.034*** (0.008)
Wife says Joint;Husb says Wife	0.074*** (0.011)	0.073*** (0.011)	0.073*** (0.012)	0.073*** (0.012)	0.070*** (0.012)
Wife says Wife;Husb says Husb	0.158*** (0.016)	0.151*** (0.016)	0.160*** (0.017)	0.156*** (0.017)	0.154*** (0.017)
Wife says Wife;Husb says Joint	0.125*** (0.012)	0.122*** (0.012)	0.128*** (0.013)	0.126*** (0.013)	0.126*** (0.013)
Agree;Wife	0.149*** (0.021)	0.145*** (0.021)	0.145*** (0.022)	0.143*** (0.022)	0.141*** (0.022)
Obsv	31243	31243	27902	27902	27669
R-squared	0.031	0.037	0.039	0.040	0.044
Mean of sample	.18	.18	.18	.18	.18
Country FE	Yes	Yes	Yes	Yes	Yes
HH controls	Yes	Yes	Yes	Yes	Yes
Attitudes	No	Yes	Yes	Yes	Yes
Preferences	No	No	Yes	Yes	Yes
Marriage	No	No	No	Yes	Yes
Bargaining	No	No	No	No	Yes

(1) "Agree;Joint" is the reference category for the above table.

(2) Attitudes include attitude of husband and wife towards violence; Preferences include knowledge and alignment of preferences of husband and wife for children; Marriage includes years of marriage, total number of children the couple has, whether the couple is in a polygamous marriage; Bargaining includes wife's education, age when she was married, difference in wife and husband's education and age, whether husband and wife work, whether she earns more and relative ownership of assets.

(3) HH controls include whether household is in rural area, it has electricity and wealth quintile to which the household belongs.

(4) Robust standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Table 4: Sexual Violence with Both Spouses Reporting

	(1)	(2)	(3)	(4)	(5)
Agree;Husband	0.039*** (0.005)	0.034*** (0.005)	0.039*** (0.006)	0.038*** (0.006)	0.041*** (0.006)
Wife says Husb;Husb says Joint	0.047*** (0.006)	0.043*** (0.006)	0.047*** (0.006)	0.047*** (0.006)	0.049*** (0.006)
Wife says Husb;Husb says Wife	0.048*** (0.008)	0.045*** (0.008)	0.050*** (0.008)	0.049*** (0.008)	0.052*** (0.008)
Wife says Joint;Husb says Husb	0.012* (0.005)	0.010* (0.005)	0.011* (0.005)	0.011* (0.005)	0.011* (0.005)
Wife says Joint;Husb says Wife	0.029*** (0.007)	0.029*** (0.007)	0.029*** (0.008)	0.029*** (0.007)	0.027*** (0.008)
Wife says Wife;Husb says Husb	0.089*** (0.012)	0.085*** (0.012)	0.084*** (0.013)	0.082*** (0.013)	0.081*** (0.013)
Wife says Wife;Husb says Joint	0.057*** (0.009)	0.056*** (0.009)	0.059*** (0.009)	0.059*** (0.009)	0.058*** (0.009)
Agree;Wife	0.096*** (0.016)	0.093*** (0.016)	0.098*** (0.017)	0.097*** (0.017)	0.096*** (0.017)
Obsv	31228	31228	27889	27889	27656
R-squared	0.049	0.052	0.056	0.056	0.060
Mean of sample	.08	.08	.08	.08	.08
Country FE	Yes	Yes	Yes	Yes	Yes
HH controls	Yes	Yes	Yes	Yes	Yes
Attitudes	No	Yes	Yes	Yes	Yes
Preferences	No	No	Yes	Yes	Yes
Marriage	No	No	No	Yes	Yes
Bargaining	No	No	No	No	Yes

(1) "Agree;Joint" is the reference category for the above table.

(2) Attitudes include attitude of husband and wife towards violence; Preferences include knowledge and alignment of preferences of husband and wife for children; Marriage includes years of marriage, total number of children the couple has, whether the couple is in a polygamous marriage; Bargaining includes wife's education, age when she was married, difference in wife and husband's education and age, whether husband and wife work, whether she earns more and relative ownership of assets.

(3) HH controls include whether household is in rural area, it has electricity and wealth quintile to which the household belongs.

(4) Robust standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Although we include a comprehensive list of variables, it is possible that there are other variables that might matter but are not available in our data set. Thus, as a robustness check for our results, we employ the test for omitted variable bias described in Oster (2019). This method allows us to estimate identified sets for the parameter of interest in the presence of omitted variable bias, under the assumption that selection on observable controls is proportional to selection of unobservable controls. In Appendix tables A1, A2, and A3 we report these “Oster bounds” for the coefficients estimated in Tables 2, 3 and 4 respectively.⁶ First, we observe that these bounding sets never include the value zero, providing a robustness check for our estimated results. Second, in addition to excluding zero, they are also tightly bound around the estimated coefficient of interest. These results further support our findings and help us in rejecting the hypothesis that there are unobservable factors that are driving the observed relationship between violence and joint decision making.

5.2 Qualitative Evidence on Shared Responsibility as an Alternative Mechanism

Our results show that couples where the wife and husband both report making decisions jointly have the lowest levels of physical, sexual and emotional violence perpetration by the husband. Given that this result is not explained by attitudes towards violence, similarity of preferences, marital capital in the couple, or women’s bargaining power, what can explain it? Recent qualitative work has suggested the importance of joint decision making between spouses and supports the view coming from the management, political science and conflict resolution literature of its value as a way of reducing conflict.

⁶ To calculate the bounds we use the Stata package `psacalc` using `Rmax`, that is 1.3 times the R-squared in specifications that control for observables, the lower bound is estimated using `delta=0` and upper bound is estimated using `delta=1`.

In the Philippines, Arugay et al. (*forthcoming*) conducted 60 interviews in 40 households in the rural areas of Davao Oriental, Davao del Sur, and Davao Occidental in August 2019. The respondents were agrarian reform beneficiaries and their spouses, randomly selected from a larger pool of baseline survey respondents for an impact evaluation on land reform. In 40 of the interviews, spouses were interviewed individually, while in 20 they were interviewed jointly.

These interviews centered on probing spouses about the pros and cons of individual decision making versus joint decision making. On the drawbacks of individual decision making, one husband respondent reported that “is not good to make decisions alone because the time will come when I will be blamed with the decisions I made if the result is not for the good of the family”, while in another couple the wife reported that “it is stressful to make decision by yourself alone; because time will come that there might be pointing fingers later on.”

Commonly stated advantages for joint decision making were that “if the decision fails, then you’ll have someone to help you”, and that “there is an element of fairness since before they decided, the perspectives were balanced so that nobody will be blamed”. When asked whether there is a rationale for joint decision making even when the personal preference would be for individual decision making, a respondent replied that “I involved my wife in the decision for farm development so that I will not be blamed on the consequences of the decision”. In another couple, when asked about the ideal decision making process, a wife answered that “it is ideal that both husband & wife make a decision in order that no one will be blamed for the outcome if it was implemented.” Overall, a clear pattern emerged that joint decision making can be a means to mitigate future conflict, particularly in the event of regret with the outcome of the decision.

Buller et al. (2016) conducted a mixed methods study in Ecuador, combining secondary analysis from a field experiment on the impact of a transfer program on IPV with in-depth interviews and focus group discussions with male and female beneficiaries. The qualitative component aimed to better understand the mechanisms underlying the quantitative results, which showed substantial reductions in physical and sexual violence among beneficiaries of the cash and in-kind food transfer program. These qualitative interviews revealed a similar finding to Arugay et al. (*forthcoming*). Specifically, a core feature of women's reported joint decision making was asking their spouse or partner for input into a decision, so that they would not be blamed if something went wrong.

Similarly, an analysis of qualitative data from eight projects in Africa and Asia focused on understanding women's empowerment finds that joint decision making can be empowering for women. In particular, in focus groups in Ghana, women stressed the importance of family harmony and in the individual interviews, "women indicated that they want more input on decisions, but do not want full responsibility for decisions in case they go wrong (Meinzen-Dick et al, 2019, p. 20).

The qualitative evidence provides one interpretation of our empirical results. Couples who agree that they jointly make decisions may also be sharing responsibility for these decisions. And less IPV results when the responsibility is shared. These results are in line with the literature from management and political science on shared decision making and conflict.

6. Conclusion

We use reporting by wives and husbands on household decision making over large purchases in 12 nationally representative surveys in Sub-Saharan Africa to examine the empirical relationship between the mode of decision making and perpetration of IPV by the husband. Sole decision making by the wife is associated with the highest levels of IPV, followed by sole decision making by the husband.

Our main contribution is to demonstrate the importance of including the responses of both husbands and wives in analyses of household decision-making. They do not necessarily provide the same answer about who decides, and the patterns of agreement and disagreement provide important insights about the household more generally. In particular, we find that IPV is the lowest in households where both the husband and wife reports that they make decisions jointly. Every other combination of responses is associated with higher levels of IPV.

We include a number of additional variables that are associated with other theories regarding IPV: attitudes towards violence, similarity of preferences, marital capital, and women's bargaining power. While some of these variables are themselves significantly related to violence, they do not change our main findings on the importance of agreement that decisions are made jointly for lower levels of IPV.

These results do not causally identify the impacts of agreement that decisions are made jointly on the incidence of IPV. However, the descriptive patterns hold across a wide range of African countries. Shared reports of joint decision making may indicate an underlying level of respect and mutuality within a marriage. Interventions to encourage couples to make decisions jointly may not necessarily impact IPV if they do not help create these deeper relationships. Interventions, however, that build respect and encourage shared responsibility may have a more significant impact. Recognizing that women who live in

households in which individuals make major decisions independently or there is disagreement over who decides are at higher risk of IPV may help in the targeting of interventions.

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Appendix

Table A1: Alternative Hypothesis (Physical Violence)

	(1)	(2)	(3)	(4)	(5)
Agree;Husband	0.048*** (0.007)	0.037*** (0.007)	0.042*** (0.007)	0.039*** (0.007)	0.044*** (0.008)
Wife says Husb;Husb says Joint	0.056*** (0.007)	0.049*** (0.007)	0.050*** (0.008)	0.048*** (0.008)	0.051*** (0.008)
Wife says husb;Husb says Wife	0.037*** (0.010)	0.032** (0.010)	0.031** (0.010)	0.028** (0.010)	0.036*** (0.011)
Wife says joint;Husb says Husb	0.027*** (0.007)	0.022** (0.007)	0.024** (0.007)	0.022** (0.007)	0.022** (0.007)
Wife says Joint;Husb says Wife	0.049*** (0.010)	0.046*** (0.010)	0.039*** (0.010)	0.038*** (0.010)	0.036*** (0.010)
Wife says Wife;Husb says Husb	0.131*** (0.015)	0.121*** (0.015)	0.123*** (0.016)	0.120*** (0.016)	0.118*** (0.016)
Wife says Wife;Husb says Joint	0.098*** (0.012)	0.094*** (0.012)	0.095*** (0.012)	0.094*** (0.012)	0.094*** (0.012)
Agree;Wife	0.135*** (0.020)	0.128*** (0.020)	0.125*** (0.021)	0.124*** (0.021)	0.123*** (0.021)
Household Wealth					
=1 if rural area	-0.024*** (0.006)	-0.025*** (0.006)	-0.027*** (0.006)	-0.028*** (0.006)	-0.029*** (0.006)
Household has electricity	-0.011 (0.007)	-0.007 (0.007)	-0.004 (0.007)	-0.005 (0.007)	-0.005 (0.007)
Wealth quantile: bottom 20%	-0.024*** (0.007)	-0.027*** (0.007)	-0.024*** (0.007)	-0.025*** (0.007)	-0.020** (0.007)
Wealth quantile: next-to-bottom 20%	-0.003 (0.007)	-0.004 (0.007)	-0.003 (0.007)	-0.004 (0.007)	-0.002 (0.007)
Wealth quantile: second highest 20%	-0.019** (0.007)	-0.013 (0.007)	-0.013 (0.007)	-0.012 (0.007)	-0.015* (0.008)
Wealth quantile: top 20%	-0.055*** (0.008)	-0.041*** (0.008)	-0.046*** (0.009)	-0.044*** (0.009)	-0.048*** (0.010)
Attitudes Towards Violence					
No one condones violence		0 (.)	0 (.)	0 (.)	0 (.)
Only husband condones violence		0.048***	0.047***	0.047***	0.046***

	(0.007)	(0.007)	(0.007)	(0.007)
Only wife condones violence	0.057***	0.058***	0.057***	0.057***
	(0.005)	(0.005)	(0.005)	(0.005)
Both condone violence	0.101***	0.100***	0.099***	0.099***
	(0.007)	(0.007)	(0.007)	(0.007)
Preference Alignment				
Same number of ideal kids		0	0	0
		(.)	(.)	(.)
Wife prefers more kids than husband		0.010	0.010	0.011
		(0.006)	(0.006)	(0.006)
Husband prefers more kids than wife		0.001	0.000	0.003
		(0.006)	(0.006)	(0.006)
Wife doesn't know husb's pref		0.012*	0.013*	0.013*
		(0.006)	(0.006)	(0.006)
Marriage				
Years of marriage			-0.002***	-0.003***
			(0.000)	(0.000)
Couple in a polygamous marriage			0.032***	0.036***
			(0.007)	(0.007)
Total number of children woman has			0.004***	0.006***
			(0.001)	(0.001)
Bargaining				
Years of schooling: woman				0.002**
				(0.001)
Woman not working				-0.031***
				(0.006)
Woman works off farm				-0.004
				(0.007)
Husband does not work				-0.003
				(0.015)
Age when married (Age - Yrs of marriage)				-0.004***
				(0.001)
Difference in year of education (Husband-Wife)				0.001
				(0.001)
Husband's age in years - Woman's age in years				-0.004***
				(0.001)
Woman says she earns more than her husband				0.018
				(0.012)
Only wife owns assets				0
				(.)
Only husband owns assets				-0.015
				(0.011)
Both own assets				-0.002

No one owns assets					(0.011)
					0.009
					(0.012)
Constant	0.094***	0.059***	0.052***	0.058***	0.164***
	(0.010)	(0.010)	(0.012)	(0.012)	(0.026)
Obs	31229	31229	27890	27890	27657
R-squared	0.034	0.043	0.045	0.046	0.051
Mean of sample	.16	.16	.16	.16	.16
Country FE	Yes	Yes	Yes	Yes	Yes
Oster Bounds					
Beta 1	(.05.09)	(.04.08)	(.04.09)	(.04.08)	(.04.09)
Beta 2	(.06.07)	(.05.06)	(.05.06)	(.05.06)	(.05.06)
Beta 3	(.04.07)	(.03.06)	(.03.06)	(.03.06)	(.04.07)
Beta 4	(.03.05)	(.02.04)	(.02.04)	(.02.04)	(.02.04)
Beta 6	(.05.07)	(.05.06)	(.04.06)	(.04.06)	(.04.05)
Beta 7	(.13.14)	(.12.13)	(.12.13)	(.12.13)	(.12.12)
Beta 8	(.1.1)	(.09.1)	(.1.1)	(.09.1)	(.09.1)
Beta 9	(.14.15)	(.13.14)	(.13.13)	(.12.13)	(.12.13)

Robust standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Table A2: Alternative Hypothesis (Emotional Violence)

	(1)	(2)	(3)	(4)	(5)
Agree;Husband	0.046*** (0.007)	0.038*** (0.007)	0.046*** (0.008)	0.043*** (0.008)	0.053*** (0.008)
Wife says Hub;Husb says Joint	0.063*** (0.008)	0.057*** (0.008)	0.062*** (0.008)	0.060*** (0.008)	0.066*** (0.008)
Wife says husb;Husb says Wife	0.041*** (0.011)	0.036** (0.011)	0.040*** (0.012)	0.038*** (0.012)	0.048*** (0.012)
Wife says joint;Husb says Husb	0.034*** (0.007)	0.031*** (0.007)	0.033*** (0.008)	0.032*** (0.008)	0.034*** (0.008)
Wife says Joint;Husb says Wife	0.074*** (0.011)	0.073*** (0.011)	0.073*** (0.012)	0.073*** (0.012)	0.070*** (0.012)
Wife says Wife;Husb says Husb	0.158*** (0.016)	0.151*** (0.016)	0.160*** (0.017)	0.156*** (0.017)	0.154*** (0.017)
Wife says Wife;Husb says Joint	0.125*** (0.012)	0.122*** (0.012)	0.128*** (0.013)	0.126*** (0.013)	0.126*** (0.013)
Agree;Wife	0.149*** (0.021)	0.145*** (0.021)	0.145*** (0.022)	0.143*** (0.022)	0.141*** (0.022)
Household Wealth					
=1 if rural area	-0.031*** (0.006)	-0.032*** (0.006)	-0.035*** (0.007)	-0.038*** (0.007)	-0.040*** (0.007)
Household has electricity	-0.019** (0.007)	-0.016* (0.007)	-0.014 (0.007)	-0.012 (0.007)	-0.013 (0.008)
Wealth quantile: bottom 20%	-0.016* (0.007)	-0.018* (0.007)	-0.018* (0.007)	-0.018* (0.007)	-0.009 (0.008)
Wealth quantile: next-to-bottom 20%	-0.000 (0.007)	-0.002 (0.007)	-0.002 (0.007)	-0.001 (0.007)	0.002 (0.007)
Wealth quantile: second highest 20%	-0.013 (0.007)	-0.008 (0.007)	-0.007 (0.008)	-0.007 (0.008)	-0.011 (0.008)
Wealth quantile: top 20%	-0.039*** (0.009)	-0.029** (0.009)	-0.032*** (0.009)	-0.029** (0.010)	-0.042*** (0.010)
Attitudes Towards Violence					
No one condones violence		0 (.)	0 (.)	0 (.)	0 (.)
Only husband condones violence		0.018** (0.007)	0.020** (0.007)	0.020** (0.007)	0.022** (0.007)
Only wife condones violence		0.052*** (0.005)	0.054*** (0.006)	0.054*** (0.006)	0.054*** (0.006)
Both condone violence		0.077***	0.072***	0.072***	0.074***

	(0.007)	(0.007)	(0.007)	(0.007)
Preference Alignment				
Same number of ideal kids		0 (.)	0 (.)	0 (.)
Wife prefers more kids than husband		0.016* (0.006)	0.014* (0.006)	0.015* (0.006)
Husband prefers more kids than wife		0.011 (0.006)	0.006 (0.006)	0.009 (0.006)
Wife doesn't know husb's pref		0.005 (0.006)	0.005 (0.006)	0.007 (0.006)
Marriage				
Years of marriage			-0.000 (0.000)	-0.001 (0.000)
Couple in a polygamous marriage			0.030*** (0.007)	0.034*** (0.008)
Total number of children woman has			0.004** (0.001)	0.005** (0.001)
Bargaining				
Years of schooling: woman				0.005*** (0.001)
Woman not working				-0.039*** (0.007)
Woman works off farm				-0.012 (0.007)
Husband does not work				-0.001 (0.016)
Age when married (Age - Yrs of marriage)				-0.002** (0.001)
Difference in year of education (Husband-Wife)				0.002* (0.001)
Husband's age in years - Woman's age in years				-0.002*** (0.001)
Woman says she earns more than her husband				0.042** (0.013)
Only wife owns assets				0 (.)
Only husband owns assets				0.006 (0.012)
Both own assets				0.013 (0.011)
No one owns assets				0.015 (0.012)
Constant	0.083***	0.057***	0.043***	0.030* 0.068*

	(0.010)	(0.011)	(0.012)	(0.012)	(0.028)
Obs	31243	31243	27902	27902	27669
R-squared	0.031	0.037	0.039	0.040	0.044
Mean of sample	.18	.18	.18	.18	.18
Country FE	Yes	Yes	Yes	Yes	Yes
Oster Bounds					
Beta 1	(.05.09)	(.04.09)	(.05.09)	(.04.09)	(.05.11)
Beta 2	(.06.08)	(.06.08)	(.06.08)	(.06.08)	(.07.09)
Beta 3	(.04.06)	(.04.06)	(.04.06)	(.04.06)	(.05.07)
Beta 4	(.03.06)	(.03.05)	(.03.06)	(.03.06)	(.03.06)
Beta 6	(.07.09)	(.07.09)	(.07.09)	(.07.09)	(.07.08)
Beta 7	(.16.17)	(.15.16)	(.16.17)	(.16.17)	(.15.16)
Beta 8	(.12.13)	(.12.13)	(.13.13)	(.13.13)	(.13.13)
Beta 9	(.15.16)	(.14.15)	(.15.15)	(.14.15)	(.14.15)

Robust standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Table A3: Alternative Hypothesis (Sexual Violence)

	(1)	(2)	(3)	(4)	(5)
Agree:Husband	0.039*** (0.005)	0.034*** (0.005)	0.039*** (0.006)	0.038*** (0.006)	0.041*** (0.006)
Wife says Husband;Husband says Joint	0.047*** (0.006)	0.043*** (0.006)	0.047*** (0.006)	0.047*** (0.006)	0.049*** (0.006)
Wife says husband;Husband says Wife	0.048*** (0.008)	0.045*** (0.008)	0.050*** (0.008)	0.049*** (0.008)	0.052*** (0.008)
Wife says joint;Husband says Husband	0.012* (0.005)	0.010* (0.005)	0.011* (0.005)	0.011* (0.005)	0.011* (0.005)
Wife says Joint;Husband says Wife	0.029*** (0.007)	0.029*** (0.007)	0.029*** (0.008)	0.029*** (0.007)	0.027*** (0.008)
Wife says Wife;Husband says Husband	0.089*** (0.012)	0.085*** (0.012)	0.084*** (0.013)	0.082*** (0.013)	0.081*** (0.013)
Wife says Wife;Husband says Joint	0.057*** (0.009)	0.056*** (0.009)	0.059*** (0.009)	0.059*** (0.009)	0.058*** (0.009)
Agree;Wife	0.096*** (0.016)	0.093*** (0.016)	0.098*** (0.017)	0.097*** (0.017)	0.096*** (0.017)
Household Wealth					
=1 if rural area	-0.001 (0.004)	-0.001 (0.004)	-0.000 (0.005)	-0.001 (0.005)	-0.004 (0.005)
Household has electricity	-0.016*** (0.005)	-0.014** (0.005)	-0.014** (0.005)	-0.014** (0.005)	-0.011* (0.005)
Wealth quantile: bottom 20%	-0.012* (0.005)	-0.013* (0.005)	-0.014** (0.006)	-0.014** (0.006)	-0.011 (0.006)
Wealth quantile: next-to-bottom 20%	0.000 (0.005)	-0.001 (0.005)	-0.001 (0.006)	-0.001 (0.006)	-0.000 (0.006)
Wealth quantile: second highest 20%	-0.007 (0.005)	-0.004 (0.005)	-0.002 (0.006)	-0.002 (0.006)	-0.003 (0.006)
Wealth quantile: top 20%	-0.025*** (0.006)	-0.018** (0.006)	-0.017** (0.006)	-0.017** (0.006)	-0.018** (0.007)
Attitudes Towards Violence					
No one condones violence		0 (.)	0 (.)	0 (.)	0 (.)
Only husband condones violence		0.016*** (0.005)	0.015** (0.005)	0.015** (0.005)	0.014** (0.005)
Only wife condones violence		0.032*** (0.004)	0.033*** (0.004)	0.033*** (0.004)	0.032*** (0.004)
Both condone violence		0.046*** (0.005)	0.044*** (0.005)	0.044*** (0.005)	0.043*** (0.005)
Preference Alignment					

Same number of ideal kids	0	0	0
	(.)	(.)	(.)
Wife prefers more kids than husband	0.014**	0.013**	0.014**
	(0.004)	(0.004)	(0.005)
Husband prefers more kids than wife	0.009*	0.007	0.008*
	(0.004)	(0.004)	(0.004)
Wife doesn't know husb's pref	0.002	0.002	0.002
	(0.004)	(0.004)	(0.004)
Marriage			
Years of marriage		-0.000	-0.000
		(0.000)	(0.000)
Couple in a polygamous marriage		0.015**	0.016**
		(0.005)	(0.005)
Total number of children woman has		0.001	0.001
		(0.001)	(0.001)
Bargaining			
Years of schooling: woman			0.001
			(0.001)
Woman not working			-0.032***
			(0.005)
Woman works off farm			-0.007
			(0.005)
Husband does not work			0.008
			(0.011)
Age when married (Age - Yrs of marriage)			-0.001**
			(0.000)
Difference in year of education (Husband-Wife)			-0.000
			(0.000)
Husband's age in years - Woman's age in years			-0.001***
			(0.000)
Woman says she earns more than her husband			0.021*
			(0.010)
Only wife owns assets			0
			(.)
Only husband owns assets			0.005
			(0.008)
Both own assets			0.011
			(0.007)
No one owns assets			0.005
			(0.008)
Constant	-0.014*	-0.030***	-0.044***
	(0.007)	(0.007)	(0.008)
			-0.047***
			(0.008)
			(0.018)

Obs	31228	31228	27889	27889	27656
R-squared	0.049	0.052	0.056	0.056	0.060
Mean of sample	.08	.08	.08	.08	.08
Country FE	Yes	Yes	Yes	Yes	Yes
Oster Bounds					
Beta 1	(.04.08)	(.03.07)	(.04.08)	(.04.08)	(.04.08)
Beta 2	(.05.06)	(.04.05)	(.05.06)	(.05.05)	(.05.06)
Beta 3	(.05.07)	(.05.06)	(.05.07)	(.05.07)	(.05.07)
Beta 4	(.01.03)	(.01.02)	(.01.03)	(.01.02)	(.01.02)
Beta 6	(.03.04)	(.03.04)	(.03.04)	(.03.04)	(.03.04)
Beta 7	(.09.1)	(.09.09)	(.08.09)	(.08.09)	(.08.09)
Beta 8	(.06.06)	(.06.06)	(.06.06)	(.06.06)	(.06.06)
Beta 9	(.1.1)	(.09.1)	(.1.11)	(.1.11)	(.1.1)

Robust standard errors in parentheses; * p<0.05, ** p<0.01, *** p<0.001