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"Couple Agreement on Wife's Autonomy and Reproductive Dynamics in Nigeria"[1]

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The 1994 Cairo Conference on Population and Development (ICPD) focused attention on the role of women's empowerment in shaping reproductive behavior but scholars continue to debate how this concept should be defined and measured and which dimensions of women's lives beyond education influence fertility decline (Presser 1997). Mason initiated this debate with a 1985 report on The Status of Women and continued it in other papers which presented the argument that while fertility regimes do differ across gender systems, scholars should not necessarily expect to find causal relationships between women's autonomy and demographic outcomes at the individual level (Mason 1997; Mason and Smith 2000). Mason reasoned that since spousal differences in fertility preferences are small, most husbands and wives have little disagreement to resolve on reproductive matters and thus authority structures within households should not be an important factor that determines reproductive behavior (Mason and Smith 2000; Mason and Taj (1987). Others, however, have argued that there are significant differences between spouses in fertility preferences and that these differences are resolved by household authority structures (Bankole and Singh 1998; Becker 1996; Dodoo 1998; Dodoo and Seal 1994; Thomson 1997). Mixed evidence emerges from other studies on the relationships between women's authority[2], couple dynamics and reproductive outcomes (Wolff, Blanc and Ssekamatte-Ssebuliba 2000; Kritz 1999).

It is difficult to sort out the merits of arguments regarding the importance of women's authority for reproductive outcomes because relatively few studies have addressed these issues and those that have measure women's authority in varying ways and look at different reproductive outcomes. Mason and Taj (1987), for instance, focus mainly on spousal preferences for no more children whereas Becker focuses on other fertility outcomes such as contraceptive use (Becker 1996 and 1999). Others have looked at family size preferences (Bankole and Singh 1998; Isiugo-Abanihe 1994), births (Bankole 1995) or family planning approval (Ezeh 1993). Many of the studies suggest that husband and wife agreement on reproductive issues depends upon the study outcome. Even for couple disagreement on preferences for more children, recent studies suggest that there may be greater differences between spouses than noted by Mason and Taj (1987). The latter's review of differences between men and women in fertility preferences (1987) was necessarily limited because it was based on studies conducted prior to the mid-1980s, most of which focused on aggregate differences by sex rather than on differences between spouses. Bankole and Singh (1998) recently examined husband-wife fertility preferences using couple data from 17 DHS country surveys and showed that there was substantial disagreement in husband and wife fertility preferences. But another recent study by and Mason and Smith (2000) found very high levels of couple agreement in five Asian countries.

[2] Different terms are used in the literature to refer to the dimensions of women's lives beyond education and work which capture power relationships within families and potentially shape women's reproductive attitudes and behavior. Women's status is no longer in vogue and women's position, women's autonomy, and gender inequality are often used. Women's empowerment was popularized in the 1990s by the 1994 Cairo Conference and surrounding events. I will utilize women's authority in this paper because that is the main dimension I examine.

Since 13 of the 17 countries examined by Bankole and Singh (1998) were from the sub-Saharan Africa region, that study raises a question as to whether couple agreement might be lower in Africa than it is in Asia. Other studies suggest that this might be the case (Becker 1996; Dodoo 1998; Dodoo and Seal 1994; Kritz 1999). Coincidentally, most studies which examine women's empowerment have also focused on the Asian region (Balk 1994; Basu 1992; Hashemi, Schuler and Riley 1996; Mason and Smith 2000; Morgan and Niraula 1995). Thus we must ask whether there are differences between Asia and Africa in women's authority which lead to different outcomes in the two regions. Boserup (1970) and Goody (1976) argue that differences in production and marriage system between the two regions potentially have implications for women's authority and couple relations. Lesthaeghe and Eelens (1989) documented how differences across sub-Saharan Africa in socio-cultural systems are related to distinctive reproductive regimes.

In this paper we address some of these issues by examining how women's authority influences three reproductive outcomes: fertility preferences for no more children, family planning approval and contraceptive use. In contrast to previous studies, we look at several different measures of women's authority in order to determine whether some dimensions have stronger and more robust relationships to reproductive outcomes. In addition, we compare how authority indicators based on wives', husbands' and couples' perceptions differ from each other and look at whether women's authority when based on partner agreement has a stronger relationship to reproductive outcomes than authority measures based on women's reports alone. Finally, we examine whether women's authority influences the contraceptive use of husbands and wives when they approve or disapprove of family planning. To study these issues, we use survey data from five Nigerian ethnic groups that have different gender traditions.

BACKGROUND

Several scholars have advanced arguments regarding why women's authority within households might influence reproductive outcomes (Hollerbach 1980; Beckman, Aizenberg, Forsythe, and Day 1983; Jejeebhoy 1995; Presser 1997; Thomson 1989; Todaro and Fapohunda 1987) but measurement of women's authority and its effects on reproductive outcomes remains problematic. Most scholars concerned with women's household authority have analyzed WFS or DHS survey data. Unfortunately, these surveys do not include data on household decision making and power structures and thus scholars who have used these data to construct measures of women's authority have largely had to use proxy indicators such as spousal age differences or husband/wife differences in education. As more DHS surveys of husbands and wives have become available in recent years, differences between spouses in fertility preferences, contraceptive use and/or other reproductive issues have also been examined. But the implications of household authority structures for reproductive outcomes can only be inferred from such analyses. Another approach to measurement of women's authority utilizes data from surveys explicitly designed to evaluate that dimension. Most of those surveys, however, only include data on women (Balk 1994; Dharmalingam and Morgan 1996; Schuler and Hashemi 1994) or to date, findings have only been reported based on women's self-reports of their authority (Mason and Smith 2000, Kritz 1999; Kritz et al. 2000; Williams, Sobieszczyk and Perez 2000).

To examine the merits of Mason's argument that women's autonomy at the household level is not an important factor that shapes reproduction, it is clear that we need data on both husbands and wives that measure household authority structures. Household decision-making received attention at the Cairo ICPD as a key dimension that could influence reproductive outcomes. The Cairo Plan of Action (United Nations, 1994: Ch. IV, par. 4.1) states that "...improving the status of women also enhances their decision-making capacity in all spheres of life, especially in the area of sexuality and reproduction. This, in turn, is essential for the long-term success of population programmes." Systematic assessment of this proposition, however, remains scanty. Couples do need to make a number of decisions on a recurring basis regarding income expenditures, work for pay inside and outside the home, household maintenance, friendships and childrearing, but we know very little about who makes these decisions or the implications for reproductive outcomes. Thus it is important to determine whether increased household decision making authority on the part of wives has a consistent relationship to reproductive outcomes.

How do we know that women have authority within households? Basically we ask them. As previously noted, the typical approach taken by scholars concerned with these issues is to ask women whether they have authority over one or more issues (Mason and Smith 2000) or to utilize proxy reports of gender inequality within households based on the assumption that age and/or education inequalities between husbands and wives will be associated with reduced authority. It is not necessarily the case, however, that wives' assessments of their authority are reliable. At the very least, the validity of measures based on wives' reports alone should be assessed empirically. One method for doing so would be to compare wives' and husbands' reports of women's authority to determine whether and how they differ. We have not found any study, however, which systematically explores differences between husbands and wives in their assessments of women's authority or that evaluates how measures of women's authority based on couple agreement rather than women's self reports differ. We make that assessment in this paper.

Another dimension that should influence couple agreement on women's authority and potentially the relationships of women's authority to fertility is the socio-cultural context. It is well known that some contexts are more highly gender stratified than others (Mason 1997; Presser 1997; Kritz, Makinwa-Adebusoye and Gurak 2000). Measurement of contexts differentials, however, is also problematic. Separate communities within countries are often treated as distinctive gender systems but differences between community aggregates may stem from socio-economic rather than socio-cultural systems. Gender institutions are most likely to differ in social aggregates that have different histories, languages, and religions in addition to spatial isolation. Gender differentials across countries are sometimes examined based on the assumption that gender systems are culturally homogeneous within countries. But gender systems within countries are not necessarily homogeneous and thus socio-cultural as well as development differentials across countries make cross-country gender comparisons complicated to interpret. Within the African context, ethnicity is often treated as a marker of gender differentiation (Lesthaeghe and Eelens 1989) and we follow in that tradition here by focusing on five Nigerian ethnic groups which have distinctive socio-cultural systems but share a common development experience.

Nigeria is a good African context for this study because men and women have traditionally played very different roles within households and society and held differing levels of authority. Moreover, the five Nigerian groups examined here are highly diverse in their socio-cultural structures and gender systems. Two of the groups, the Hausa and Kanuri, practice seclusion and restrict the access of girls to formal education and that of women to employment outside the home. Yoruba, Ibo, and Ijaw societies, in contrast, have been more open to social change and allow girls to be educated and even encourage women to work outside the home. But the dictates of seclusion largely constrain the income-earning activities of Hausa and Kanuri women to activities that can be carried out within the confines of family compounds (Hill 1972; Imoagene 1990a). As such, food processing and animal tending are the two main types of income-raising activities done by Hausa and Kanuri women. Given the restrictions on women's physical mobility in Hausa and Kanuri societies, children and husbands often act as women's sales agents (Coles and Mack 1991; Callaway 1992; Hill 1972).

Seclusion is not practiced by the Yoruba, Ibo, and Ijaw and, as such, women in those societies tend to participate actively in the informal and formal economies. Traditionally, Yoruba women worked as traders while Ibo women worked as farmers. Indeed, Yoruba women are still acclaimed today to be among the most skilled of West African traders and reputed to have a high degree of economic autonomy that stems from their trading activities (Sudarkasa 1973; Imoagene 1990c). The Ijaw, in contrast, reside in dispersed fishing communities in the Niger Delta and depend upon fishing and trading for a livelihood. Some social structural features of Ijaw society reputedly stem from the high physical mobility associated with fishing and inland trading (Imoagene 1990b:79). For instance, the Ijaw are one of a small number of West African groups that practice a modified form of matrilineal descent. According to Imoagene (1990b:78), work in fishing and coastal trading takes men away for months at a time and many never return to their communities. As such, marital relationships are often unstable in fishing societies and thus women tend to retain stronger links to their own lineages.

DATA AND MEASUREMENT

We use data from a 1991 Nigerian survey of wives and husbands. The data were gathered using a two-stage, stratified, cluster-sampling strategy. At the first stage, stratification was based on ethnicity. To assure coverage of Nigeria's population, we selected the three largest ethnic groups in the country, the Hausa, Ibo, and Yoruba, which together comprise 50-60 percent of the Nigerian population. We then selected two smaller ethnic groups, the Kanuri and Ijaw, in order to introduce further gender differentiation into our data. The Kanuri are one of the most highly gender-stratified groups and the Ijaw are one of the least stratified. States with populations composed largely by one of the ethnic groups were selected for the fieldwork. Within each state, at the second stage, four Local Government Areas (LGAs) were selected, including: the state capital (the largest urbanized area in each state),[3] an intermediate-sized urban area, and two

[3] In the case of the Ijaw, a large metropolitan area was not included because that group did not satisfy the

predominantly rural LGAs. Households were randomly selected in each sampling area drawing upon the 1991 sampling frame developed by the National Population Office. One wife between

condition used in selecting that type of area, namely that the group be the main one that constituted the population of the sampled area. Undoubtedly a large number of Ijaw live in Port Harcourt, Owerri and Aba. However, the largest populations of these cities are Ibos and other peoples of the Cross River Valley, including the Ibibio, Ekoi and Efik. Taking a representative sample of a relatively small population in a large metropolitan area was precluded by our budget. Thus, our sample is not representative of the Ijaw population as a whole because it is restricted to rural and medium-sized towns.

the ages of 15 to 40 was interviewed in each household, along with about half of their husbands.[4] Weights are not used in our analysis because we do not make population estimates. Information was collected on husbands' and wives' reproductive attitudes and behavior, work and family characteristics, perceptions of wives' authority and status within the household, and birth histories. We determined that there was no selectivity differential between wives whose husbands were interviewed and those whose husbands were not interviewed by comparing mean differences in age, education, family size and other measures for the two groups of men.

Variable Measurement

Six measures of women's authority are used and their measurement described in the Appendix. The first two measures assess wives' involvement in household economic decisions and wives' contributions toward household expenses. Schuler and Hashemi (1994) argue that women's participation in household economics is a key component of women's empowerment. Women's status and decision-making power within the household is another component of empowerment identified by Schuler and Hashemi (1994) and we use three measures to capture that dimension. The first measure concerns whether women participated in family decisions related to childrearing and childbearing; the second assesses whether husbands are justified to leave their wives if certain conditions hold; and the third looks at whether husbands and wives talked about family planning in the last year. While the latter could also be treated as a measure of spousal communication measure, we treat it here as a measure of women's authority based on reasoning that husbands who are willing to talk with their wives do so because they accord them some respect and want their opinion. Being able to express an opinion in a traditional society implies a certain degree of authority.

Our sixth measure of authority assesses whether husbands and wives agree that wives have more authority today than they did in their mother's time. In contrast to our other measures which focus on specific behaviors within the household, this measure can be viewed as a normative one that evaluates husbands' and wives' perceptions regarding directions of gender change within their societies. Husbands and wives may perceive that gender norms are changing even though a restrictive approach toward gender characterizes their own interpersonal power relations. Dummy variables are constructed for each of these six measures and set equal to one if the husband and wife agree that the wife has authority.

[4] The questionnaires were administered by college students who were of the same sex and spoke the same indigenous language as respondents. The National Population Office (NPO) was in the process of developing a sampling frame for the 1991 census during the period when we carried out our survey. We were able to obtain preliminary state counts and maps from the NPO which allowed us to draw representative samples within the cluster areas. We estimated that at least 50% of the population was rural, that an additional 25% lived in semi-rural nucleated settlements of 5-10,000, and that the remainder (25%) lived in urban areas. The NPO has not yet released the 1991 census data.

Since the literature suggests that levels of couple agreement on reproductive issues may depend upon the dimension examined, we look at three outcomes: preferences for no more children; family planning approval; and contraceptive use. Dummy variables of these outcomes for wives', husbands' and couples' are used in different parts of the paper. Preferences for no more children was established if husbands and/or wives responded "no more" to the question "Do you want to give birth to more children." Respondents who said no, God's will, or "don't know" to this question are in the null category. The second dummy measure was specified if husbands and wives said "approve" to the question "In general, do you approve or disapprove of couples using a method to avoid pregnancy?" The third measure evaluates husbands' and wives' willingness to use contraception based on whether they said yes to one of two questions: (1) "have you ever used anything or tried in any way to delay or avoid getting pregnant or having a birth" and "do you intend to use a method to avoid pregnancy at any time in the future?" We utilize this measure because contraceptive use remains low among the Hausa and Kanuri and thus we would have too few cases for analysis if we focused on current or ever use of contraception. Couples could have used or plan to use any method to satisfy the condition. Several studies show significant differences between husbands and wives in contraceptive use (Bankole and Singh 1998; Biddlecom, Casterline and Perez 1997; Ezeh and Mboup 1997; Koenig, Simmons, and Misra 1984) but we do not examine couple disagreement on contraceptive use in this paper.

Several demographic and social characteristics are controlled for in our analysis. While factors such as number of live children, polygyny status and area of residence are clearly joint for the couple, and thus are used as controls in all of our models regardless of whether they are estimated for wives, husbands, and/or couples, others such as age and education are individual characteristics and depend upon the study population. Number of live children is treated as a continuous covariate but all of our other measures are dummy variables. The latter are specified if the husband has more than one wife and if the couple lives in the state's most urbanized area or an intermediate size urban area. Ethnicity is also joint for the couple[5] and dummy variables for ethnicity are used in our adjusted models. The Kanuri, the group with the highest level of gender inequality, are the reference population. We do not control for religion because of the very high overlap between ethnicity and religion in our study groups. The Kanuri and Hausa are predominantly Muslim and the Ibo and Ijaw are Christians. About 20 percent of the Yoruba in our sample are Muslims.

Husbands' and wives' age and education are treated as individual characteristics. In models estimated for wives alone, only wives' education and age characteristics are introduced and we do the same in husbands' models. Models estimated for couples include both the husbands' and wives' indicators. Three education groups are differentiated by dummy variables: whether the partner has some secondary education or higher; and whether the partner has some primary education. No education and koranic education are the referent. Age is measured as a

[5] Rates of intermarriage across ethnic groups are low in Nigeria and basically limited to marriage between partners from one of the three large groups (Hausa, Ibo and Yoruba) and partners from a smaller group. However, our study design did not capture these couples because we focused on areas that were ethnically homogeneous.

continuous variable and separately for husbands and wives. We explore the possibility that older partners may be more traditional in their reproductive outlooks by introducing an exponential term for the husband's or wife's age.

COUPLE DISAGREEMENT ON GENDER AND REPRODUCTIVE ISSUES

Table 1shows the percentages of wives, husbands and couples who indicated that wives have authority on our six authority indicators. These statistics indicate that perceptions of women's household authority vary on different indicators and by ethnicity. The highest authority score occurs for Item VI which assesses whether women have more authority today than their mothers did and the lowest score occurs for Item II which measures wives' financial contribution toward household expenses. Husbands and wives are also more likely to say that wives have authority on family matters – children, family, divorce – than they are on either economic matter (economic purchases and expenditures). The directions of variation by ethnicity are consistent with what we know about gender systems within the groups. For instance, both husbands and wives in the two highly gender-stratified societies, the Kanuri and Hausa, report that wives have very little or almost no authority on household economic and family issues. In contrast, in the three moderately gender-stratified societies – the Yoruba, Ijaw and Ibo -- spouses generally indicate that wives have more authority.

We shift attention now to husband and wife agreement on wives' authority. The last two rows for each item give the percentage of couples who agree that the wife has authority and the percentage of couples who agree overall on women's authority (i.e. those that agree that she has authority plus those who agree that she does not have authority). The statistics in these two rows indicate that Kanuri and Hausa husbands and wives have the highest levels of agreement on women's authority and that these occur mainly because of agreement that the wife has no authority. In contrast, relatively high levels of agreement among Ibo couples on several indicators occur mainly because wives and husbands agree that the wife has authority. These findings imply major differences between these groups in their gender systems and are consistent with what we know about them. The range in overall couple agreement across the groups is smallest on Item VI (wives have more authority today) and largest on Item V (conditions under which husbands would not be justified to divorce wife). In all six groups, husbands are more likely than wives to perceive that wives have more authority today. Also of interest is the finding that wives in all groups except the Kanuri are more likely to say that husbands would <u>not</u> be justified to leave the wife if less than four of seven conditions applied (see Appendix).

We next look at couple agreement on reproductive issues by gender and ethnicity. Table 2 shows wives', husbands' and couple's preferences for no more children, family planning approval, and contraceptive use by ethnicity. The first two rows for each reproductive factor indicate that wives typically hold more antinatalist positions than husbands. Wives are more likely to want no more children, to approve of family planning and to favor contraceptive use than husbands and that pattern holds across groups even as the proportions who have these views change. Levels of couple agreement also vary on the three issues. Whereas all husbands and wives have a very high level of agreement on preferences for no more children – 87 percent agree on that item – only 76.2 percent agree on contraceptive use and 70.1 percent agree on family planning approval. Disagreements among a quarter to a third of couples are similar to those

observed in other studies and deemed of sufficient magnitude to warrant further study (Becker 1996; Bankole and Singh 1998).

Mason and Smith (2000:300) argue that husband and wife agreement may be higher in more gender-stratified context "either because women's opinions are influenced strongly by their husbands' opinions, or because wives who hold independent opinions may be afraid to voice them." Consistent with that expectation, our analysis indicates that agreement is higher in more highly stratified gender contexts, namely Kanuri and Hausa societies. Kanuri couples have the highest levels of agreement on all three items followed by Hausa couples on two of the items. In contrast, levels of agreement tend to be lower between husbands and wives in the moderately gender stratified contexts -- the Ibo, Ijaw and Yoruba. Our finding that preferences for no more children are lower and contraceptive use higher for the latter also suggest that fertility transitions have begun in those societies, particularly in Ibo society.

THE ROLE OF WOMEN'S AUTHORITY IN SHAPING REPRODUCTION

How is women's authority associated with different reproductive outcomes and which dimensions have the strongest relationships to it? For each of three reproductive outcomes, Table 3 presents coefficients from different logistic regression models: for wives based on wives' assessments of their authority; for husbands based on husbands' reports of wives' authority; and for couples based on agreement between husbands and wives that wives have authority. Each row looks at the relationship for a single indicator of women's authority. In the unadjusted models, all six authority indicators are significantly and positively associated with preferences for no more children, family planning approval, and contraceptive use. After controlling for individual's and/or couple's individual characteristics, including their ethnicity, these relationships are reduced but remain significant for most of the indicators. But relationships do vary for the three reproductive outcomes. For instance, the relationships between most of the wives' authority measures and fertility preferences are no longer significant for couples although half of them are for husbands and wives. In contrast, wives' authority has a strong relationship to contraceptive use that holds up in most of the adjusted models for wives, husbands and couples.

The measures of wives' authority which have the expected positive relationship and are most significantly related to the three outcome measures are: perceptions regarding wives' authority today; husband and wife communication; and wife authority on family decisions. Wives' authority today, for instance, is significant at the .001 level or above for all three reproductive outcomes and in all but one of the adjusted models. Husband-wife family planning talk is also significant at the .05 level or higher in all of the models as is wives' authority on family decisions in the models of family planning approval and contraceptive use. To the extent that negative relationships occur, they mainly do so for the husbands' measures. Among husbands, for instance, wives' authority on family decisions has a negative and significant relationship to husbands' preferences for no more children and the relationship between wives' financial contributions toward household expenses and husbands' family planning approval is also negative and significant. Although a few negative relationships also occur for the couples' adjusted models, they are not significant.

It would be difficult to make a strong case based on the statistics displayed in Table 3 regarding the relative merits of constructing models based on wives' measures alone, as is the typical practice, versus on husbands or couples. On the other hand, had we focused on only one or two indicators of women's authority, or on only one reproductive outcome, we could make such arguments. Since our two indicators of wives' economic authority do not hold up or are significantly weaker in the adjusted models for wives and couples, we could have argued, for instance, that they are not as important as some of the other measures for reproductive outcomes. Similarly, had we focused solely on wives' authority on family decisions, which some previous studies have done (Kritz 1999, Kritz and Makinwa-Adebusoye 1995), we could conclude that wives' authority is important. Our findings also suggest that the study by Mason and Smith (2000) which found no consistent relationships between wives' authority and preferences for no more children might have changed if they had examined more than one reproductive outcome.

WOMEN'S AUTHORITY AND COUPLE AGREEMENT

A key issue that arises when joint indicators are used is what happens in cases of couple disagreement. If husbands and wives agree for example that they approve of family planning, the expectation would be that they would be contraceptive users provided that services are available. For couples who approve of family planning, we should not expect women's authority to make much of a difference for contraceptive use even though we know from Table 3 that authority is closely associated both with family planning approval and use. But for the subsets of husbands and wives who disagree about whether they approve of family planning, differences have to be resolved prior to contraceptive use. The question we now turn to is whether women's authority within the household influences that outcome. We explore that issue in Tables 4-6 by looking at how family planning approval and wives' authority interact to shape contraceptive use. We do so for all couples initially and them examine ethnic differentials.

In Table 4 we show how wives' and husbands' contraceptive use varies by family planning approval and wives'authority. For both wives' and husbands' reports of contraceptive use, we show four sets of 2 by 2 tables. Husbands and wives were sorted according to whether or not they approved of family planning and then by whether the wife had high or low authority. Wives were classified as having high authority if both husbands and wives agreed that the wife has authority on family decisions. The low authority category includes couples who agreed that she does not have authority as well as those who disagreed over wives' authority. We used wives' authority on family decisions rather than one of the other indicators because it has a good distribution (sufficient number of cases) and is significantly related to contraceptive use (Table 3).

The statistics in Table 4 indicate that both wives' and husbands' contraceptive use is strongly related to husband-wife agreement on family planning approval and women's authority. Whereas 45.9 percent of all wives report contraceptive use, 95.2 percent do so if the couple approves of family planning and the wife has high authority (Group D). In contrast, use of contraception drops to 6.8 percent for wives among couples who agree that they disapprove of family planning and if the wife has low authority (Group A). For husbands, couple approval of family planning is also highly associated with contraceptive use – over 99 percent are users if the couple approves of family planning (Group H). The statistics in the wife-disapprove/husband-

approve row (Group F) indicate that even in contexts where the wife disapproves of family planning, husbands are likely to be contraceptive users – over 98 percent of husbands among that set of couples say they are users. Wives in the same approval category (Group C) tend to be users but have higher levels of use if the wife has high authority. Similarly, wives in the other disagree category (Group B) are more likely to use if they have high authority. But one group of husbands – dyads where the wife-approves/husband-disapproves (Group C) -- does show some deference for their wives' views and authority. While only 8.7 percent of husbands in that group use contraception if the wife has low authority, that rises to 43.2 percent if she has high authority. Overall the bivariate tables shown in Table 4 suggest that women's authority is an important dimension for contraceptive use for couples who disagree on family planning approval.

Since we know that there are sharp differences between our five study groups in both levels of women's authority and husband-wife family planning approval, it is conceivable that the findings observed in Table 4 for women's authority stem from the ethnic contexts. To assess whether that is the case, we estimate three sets of logistic regression models for both wives' and husbands' contraceptive use (Table 5). Dummy variables for the joint occurrence of couple agreement on family planning approval and wife's authority are evaluated in those models. Couples who disapprove of family planning are the referent group. Because the statistics in Table 4 indicate that husbands overwhelmingly state that they are contraceptive users if they approve of family planning, the husband-approve/wife-disapprove category (Group F) for husbands cannot be disaggregated by authority because of an insufficient number of cases and thus only a single dummy variable is used in the husbands' models for that group of couples.

The unadjusted models summarize the bivariate relationships already described based on the tabular statistics in Table 4 and thus are not discussed here. The first set of adjusted models (Column B) control for ethnicity and show that it is an important dimension which conditions several of the relationships between husbands' or wives' contraceptive use and the joint occurrence of couple approval of family planning and women's authority. A comparison of the low and high wives' authority rows for the same approval pattern indicates that family planning approval is the main dimension that affects the magnitude of the coefficients. There is one exception. Among couples in the husband-disapprove/wife-approve category, husbands are significantly more likely to be users if the wives has authority (1.25*** versus 0.33). That relationship remains significant for husbands after controlling for husbands' joint and individual characteristics in Column C.[6]

Most of the other joint relationships show no major change between the Column B and Column C models except for a reduction in the significance of ethnicity differentials among wives. Net of wives' age, education and number of live births, the only significant remaining ethnic difference in contraceptive use is between Kanuri and Ibo wives. This finding is consistent with our argument that gender systems differ significantly across these groups and that women's authority is a key component of ethnic differentiation. Women usually get increased authority through formal education and access to income-generating work outside the home. In

[6] Using STATA, we performed Wald tests to assess whether the estimated parameters for the same approval categories differ are significantly different for low versus high women's authority.

Kanuri and Hausa societies, however, girls receive little or no education because of normative dictates which hold that education is not proper for girls. Thus most adult Kanuri and Hausa women have considerably less education than Ibo, Yoruba, and Ijaw women (Kritz et al. 2000). Formal education is known to be a strong correlate of women's authority at the household level (Jejeebhoy 1995).

We carried these explorations a step further by examining whether there might be interactions between ethnicity and our joint measures of family planning/women's authority. In order to make those assessments directly, we specify separate models for Kanuri/Hausa, Ibo, Ijaw, and Yoruba wives' and husbands' contraceptive use. Kanuri and Hausa couples were combined in order to augment the number of cases in some of the categories. For husbands in all of the groups, the number of cases for most of the joint approval-authority categories was too small to include these indicators in our models. Thus the referent group for husbands includes both couples who approve of family planning and those who disapprove of it, as well as the Group F disagree category shown in Table 4. As such, the coefficients in the husbands' models take on a different meaning than they did in Table 5. Since there are more contraceptive users among husbands in the referent group than there are in the two analytic categories specified in Table 6 (husband-disapprove-wife-approves), we are now comparing which authority group – the high or low one – is less negative. Thus, a finding of a smaller negative coefficient in the husbands' models for the high authority group compared to the low authority group, if significant, supports the interpretation that women's authority plays an important role in shaping how couples resolve disagreements about family planning.

The unadjusted models for husbands' contraceptive use show that among Kanuri/Hausa, Ibo, and Ijaw couples, when the husband disapproves of family planning but the wife does not, husbands are more likely to use contraception if the wife has high authority. Wald tests indicate that those differences are significant for Ibo and Ijaw couples. Women's authority, however, does not make a difference for Yoruba husbands' contraceptive use. After controlling for number of live births, and husbands' or wives' age and education, the adjusted models show some reduction in the strength of these relationships but the directions remain the same for the Kanuri/Hausa, Ibo and Ijaw and are significant for the Ijaw.

The models for wives include dummy variables for all of the husband-wife family planning approval and disapproval outcomes and the referent group consists of couples who disapprove of family planning. A comparison of the authority level coefficients for the family planning approval/disapproval combinations for wives' contraceptive use indicates that most of them fall in the expected direction, i.e. increased contraceptive use if the wife has authority. That pattern, however, does not hold for the Yoruba and few of the authority contrasts are significant at the .05 level or higher. Since we are dealing with a relatively small number of cases in several cells, the fact that the relationships fall in the expected direction for most of the family planning approval/disapproval combinations is consistent with theoretical expectations which suggests that women's authority may be an important dimension which influences out couple disagreements are resolved. However, we would need a larger sample size in order to confirm.

DISCUSSION

In this paper we examined the relationship between women's reproductive authority and reproductive outcomes among married women of reproductive age and their husbands in five Nigerian ethnic groups. The first question we addressed is whether women's authority plays a role in shaping wives' and husbands' preferences for no more children, family planning approval and contraceptive use. We did this by comparing the relationships of these three reproductive outcomes to different measures of women's authority. We found that the most robust relationships occurred for three measures, namely whether wives have: more authority today than they did in their mother's time; authority over family decisions; and communications with husbands about family planning. Wives' authority on economic matters showed the weakest relationships to the three reproductive measures examined. That section of our analysis suggests that scholars ideally should compare several different indicators of women's authority rather than a single one. Our analysis also indicates that women's authority is more closely related to family planning approval and contraceptive use than it is to preferences for no more children.

We then shifted our attention to couple disagreement on family planning approval and examined whether its relationship to contraceptive use changed if wives have low versus high authority. In this part of our analysis, we used a measure of women's authority that was based on agreement between husbands and wives that the wife has authority. Previous studies have not looked at the reliability of measures of wives' authority based on wives' self reports. Our analysis of disagreement between husbands and wives over women's household authority indicated that levels of couple disagreement are quite high on several of our measures. Thus utilizing a measure based on couple agreement that the wife has authority enhances the reliability that she actually does have authority but does reduce the overall level of women's authority. Based on spousal agreement that the wife has authority on family decisions, we classified couples into high or low authority and then looked at how this measure interacted with family size approval to shape contraceptive use.

Several interesting findings emerge. First, we determined that husbands are more likely than wives to be contraceptive users if they approve of family planning regardless of whether their wife approves of it. Among one set of couples who disagree, we found a robust relationship for husbands' contraceptive use, namely that family planning approval and women's authority. If the husband disapproves of family planning and the wife approves of it, husbands are significantly more likely to be contraceptive users if the wife has authority. That relationship remained significant even after controlling for ethnicity and husbands' characteristics and provides strong support for the argument that women's authority makes a difference at the household level for contraceptive use. We also found a consistent pattern for wives, namely that women's authority was associated with how couples resolved their disagreements about family planning. However, many of those relationships were not significant after controlling for ethnicity, which is not surprising given the small sample size within most of the family planning approval-authority categories after we disaggregate by ethnicity.

What conclusions can be draw about Mason's (1997; Mason and Taj 1987) arguments that women's authority is probably not an important determinant of reproductive outcomes at the individual level because there is not much husband-wife disagreement on reproductive issues and that women's authority structures are attributes of aggregates which have considerable

homogeneity within them and thus yield little differentiation at the individual/household level in women's authority? While some of our findings raise questions about parts of Mason's argument, others are consistent. Our analysis clearly shows that there is more disagreement between husbands and wives on reproductive issues than Mason's work shows. But that is largely because Mason has focused mainly on preferences for no more children. While we also find relatively low disagreement between husbands and wives on that issue, we find twice as much disagreement on family planning approval and contraceptive use.

Our finding that women's authority is mainly important in shaping how couples resolve their disagreement for our combined sample but becomes weakened at the ethnic group level is consistent with Mason's argument that authority structures are largely attributes of socio-cultural aggregates such as ethnic groups. Although Mason's argument is technically correct if we examine small segments of societies that are very homogenous, this is not likely to be the case in the vast majority of studies. The typical demographic survey focuses on the national level and fails to gather comprehensive data on dimensions such as women's authority or ethnicity. In many societies, however, particularly those in Africa, there exists considerable heterogeneity within countries and the research literature shows that there are large differences between husband and wives in reproductive outcomes (Becker 1996 and 1999; Dodoo 1998; Bankole and Singh 1998). Our work in this paper also suggests that husband-wife authority at the individual level is a very important factor in accounting for how couples resolve their disagreements over these issues. Although the effect is weakened when separate analyses are conducted within relatively homogenous ethnic groups, it is still possible to observe the impact of individual differences in wife authority on contraceptive use. Would it be necessary to go the village level to eliminate this effect?

Another way of looking at this issue of women's authority and ethnicity would be to say that much of what makes ethnic groups distinct from each other, at least with regard to contraceptive behavior is in how women's authority is articulated within them. This is important to know but it is not the same as arguing that authority at the individual level is not important. Given a choice the analyst should probably opt for seeking ways to understand better how women's authority operates (and what determines variations in levels/types of authority) beyond simply noting that it is an ethnic or aggregate phenomenon. Ethnicity is something of a "black box" category. It is real but it tells us nothing of what is going on. Authority structures, on the other hand, focus our attention on tangible processes and mechanisms. So we can note that authority and ethnicity are isomorphic or measures of the same thing and ask which is better. If the goal is to understand the determinants of behavior and what might change behavior, clearly we should seek ways to tease out information about the operation and determinants of authority at the individual level.

Table 1: Gender Indicators by ethnicity for wives, husbands and couples (percentages)

% who say:	Total	Kanuri	Hausa	Yoruba	Ijaw	Ibo
I. Wife or both decided 3 or 4 household economic decisions						
Wife	22.4	4.9	7.1	26.2	20.6	48.0
Husband	18.5	6.7	5.9	36.2	5.4	36.6
Wife-Husband difference	3.9	-1.8	1.2	-10.0	15.2	11.4
Spouses agree wife has authority	7.9	2.0	0.7	10.3	3.5	21.0
Overall couple agreement[a]	74.9	92.5	88.4	58.2	81.0	57.4
II. Wife or both pay for 1 or more of 4 household expenses						
Wife	16.4	4.1	10.0	10.3	24.4	29.2
Husband	7.9	3.5	8.2	6.1	7.7	13.4
Wife-Husband difference	8.5	0.6	1.8	4.2	16.7	15.8
Spouses agree wife has authority	3.9	1.6	2.6	0.6	3.9	9.7
Overall couple agreement	73.8	90.6	82.5	73.4	59.2	90.6
III. Wife or both decided 3 or more of 4 family decisions						
Wife	47.8	18.8	27.5	58.6	43.6	83.7
Husband	44.9	15.7	43.1	50.8	30.2	81.7
Wife-Husband difference	3.8	3.1	-15.6	7.8	13.4	2.0
Spouses agree wife has authority	28.5	3.5	10.2	30.1	21.3	70.4
Overall couple agreement	64.4	72.5	49.8	50.8	68.7	75.5
IV. Spouses talked about family planning in last year						
Wife	33.9	19.4	20.1	29.3	34.3	60.8
Husband	27.3	6.3	6.6	28.0	33.2	54.8
Wife-Husband difference	6.6	13.1	13.5	1.3	1.1	6.0
Spouses agree wife has authority	17.6	3.9	3.3	15.7	17.4	42.1
Overall couple agreement	73.9	82.0	79.9	74.1	67.3	68.6
V. Husband not justified to divorce wife if < 4 of 7 conditions hold						
Wife	54.8	20.6	56.6	48.1	51.1	92.8
Husband	46.3	35.9	28.4	35.8	28.6	95.9
Wife-Husband difference	8.5	-15.3	28.2	12.3	22.5	-3.1
Spouses agree wife has authority	25.8	4.5	7.3	10.7	9.1	88.5
Overall couple agreement	58.5	58.6	41.0	51.3	46.6	90.2
VI. Wives in general have more authority today						
Wife	58.1	22.0	39.3	64.4	77.9	78.3
Husband	67.0	43.9	50.5	69.5	83.0	81.5
Wife-Husband difference	-8.9	-21.9	-11.2	-5.1	-5.1	-3.2
Spouses agree wife has authority	43.9	11.6	26.1	45.0	65.0	63.3
Overall couple agreement	62.7	57.3	62.3	56.1	69.3	66.7

[a] "Spouses agree wife has authority" row gives the % of partners who agree that wife has authority. "Overall couple agreement" row gives the % who agree wife has authority plus those who agree she has no authority.

Table 2: Wives', husbands' and couple's positions on demand for children and family planning approval and use, by ethnicity (percentages)

	Total	Kanuri	Hausa	Yoruba	Ijaw	Ibo
Preferences for no more children						
Wife wants no more	19.0	6.5	6.4	18.0	25.0	34.1
Husband wants no more	14.6	0.4	1.7	10.3	18.6	36.4
Couple wants no more	10.3	—	0.5	5.4	13.7	27.2
% couples who agree	87.0	93.1	92.9	82.6	83.8	84.1
Approve of family planning						
Wife approves	48.0	21.6	25.8	60.9	52.0	72.8
Husband approves	34.5	4.3	8.8	45.8	43.9	61.1
Couple approves	26.3	3.3	3.8	34.1	32.5	50.5
% couples who agree	70.1	80.6	73.0	61.5	69.1	67.2
Ever used or will use family planning						
Wife says ever/will use	45.8	16.7	21.6	53.6	49.7	79.2
Husband says ever/will use	40.9	5.1	12.1	49.6	47.5	79.9
Couple says ever/will use	31.5	3.5	5.2	34.5	33.9	70.8
% couples who agree	76.2	85.1	76.8	65.9	70.7	82.4
Number of couples	2,517	490	422	478	569	558

Table 3: Logistic regression models of women's authority on fertility preferences family planning approval and contraceptive use for Nigerian wives, husbands and couples

	Wife		Husband		Couple	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
			A. Preference for No More Children			
Wife authority on economic decisions	.90*** (.11)	.47** (.15)	.85*** (.13)	.17 (.07)	.89*** (.19)	-.15 (.25)
Wife contributions toward household expenses	.99*** (.12)	.24 (.15)	.65*** (.18)	.15 (.23)	1.22*** (.24)	.27 (.30)
Wife authority on family decisions	.73*** (.10)	.11 (.15)	.69*** (.11)	-.48*** (.17)	1.08*** (.13)	-.29 (.20)
Husband/wife talked about family planning	.67*** (.10)	.34* (.14)	1.45*** (.12)	.77*** (.16)	1.38*** (.14)	.54** (.20)
Husband not justified to divorce wife	.78*** (.19)	.22 (.16)	1.06*** (.12)	.30 (.20)	1.70*** (.14)	.37 (.28)
Wives have more authority today	1.04*** (.12)	.41** (.16)	1.12*** (.15)	.61*** (.19)	1.12*** (.14)	.45 (.18)
			B. Family Planning Approval			
Wife authority on economic decisions	.79*** (.14)	.05 (.14)	.91*** (.10)	.34** (.13)	1.15*** (.15)	.39* (.17)
Wife contributions toward household expenses	1.45*** (.11)	.29 (.16)	.00 (.16)	-.34** (.18)	.46* (.22)	.04 (.25)
Wife authority on family decisions	1.45*** (.11)	.91*** (.12)	1.08*** (.09)	.58*** (.11)	1.58*** (.10)	.81*** (.12)
Husband/wife talked about family planning	2.90*** (.14)	2.86*** (.16)	2.66*** (.11)	2.17*** (.12)	2.68*** (.12)	2.15*** (.15)
Husband not justified to divorce wife	.49*** (.10)	-.31* (.13)	.81*** (.09)	.19 (.12)	1.22*** (.10)	.32 (.17)
Wives have more authority today	1.00*** (.11)	.56*** (.13)	1.31*** (.10)	.75*** (.12)	1.39*** (.10)	.77*** (.12)
			C. Contraceptive Use			
Wife authority on economic decisions	1.04*** (.10)	.15 (.12)	.96*** (.11)	.14 (.14)	1.31*** (.15)	.22 (.19)
Wife contributions toward household expenses	.69*** (.11)	.34*** (.13)	.16 (.15)	-.25 (.19)	.51* (.21)	-.20 (.26)
Wife authority on family decisions	1.46*** (.09)	.75*** (.10)	1.32*** (.09)	.67*** (.11)	1.86*** (.10)	.75*** (.13)
Husband/wife talked about family planning	2.33*** (.10)	2.07*** (.12)	3.47*** (.14)	2.99*** (.16)	3.65*** (.17)	3.08*** (.20)
Husband not justified to divorce wife	.65*** (.08)	-.19 (.11)	1.11*** (.08)	.31** (.12)	1.80*** (.10)	.36* (.18)
Wives have more authority today	1.23*** (.09)	.59*** (.11)	1.11*** (.09)	.40*** (.12)	1.32*** (.09)	.51*** (.12)

* $p < .05$; ** $p < .01$; *** $p < .001$. Each cell of the table shows the coefficient and standard error (in parentheses) from separate logit models. Unadjusted models include only a single independent variable for each gender measure. The adjusted models models include control variables for number of live births, polygyny, area of residence, and ethnicity (Kanuri = referent group). The wife adjusted models also include wife's age and age squared and education. The husband adjusted models include corresponding variables for husband's age and education. The couple models include both the wives' and husbands' indicators.

Table 4: Wives' & Husbands' Contraceptive Use by Couple Agreement on Family Planning and Wives' Authority on Family Decisions

Family Planning Approval	Wife Authority	Wife Contraceptive Use		
		No Use	Use	N
A. Couple disapproves	Low	93.2	6.8	959
	High	84.7	15.3	144
	Total	92.1	7.9	1103***
B. Wife disapproves, Husband approves	Low	77.1	22.9	144
	High	59.7	40.3	62
	Total	71.8	28.2	206*
C. Wife approves, Husband disapproves	Low	32.5	67.5	391
	High	18.1	81.9	155
	Total	28.4	71.6	546***
D. Couple approves	Low	8.9	91.2	305
	High	4.8	95.2	357
	Total	6.7	93.4	662*
Level of Wives' Contraceptive Use		54.2	45.9	2517

Family Planning Approval	Wife Authority	Husband Contraceptive Use		
		No Use	Use	N
E. Couple disapproves	Low	95.8	4.2	959
	High	83.3	16.7	144
	Total	94.2	5.8	1103***
F. Wife disapproves, Husband approves	Low	—	100.0	144
	High	—	98.4	62
	Total	—	99.5	206
G. Wife approves, Husband disapproves	Low	91.3	8.7	391
	High	56.8	43.2	155
	Total	81.5	18.5	546***
H. Couple approves	Low	—	99.3	305
	High	—	99.7	357
	Total	0.5	99.6	662
Level of Husbands' Contraceptive Use		59.1	40.9	2517

*** $p < .001$, ** $p < .01$, * $p < .05$ (indicated by sub-table total for each 4 cell cross tab of contraceptive use by wife's authority and couple agreement). High wife's authority is the situation where both spouses agree that the wife has the final

say in at least 3 of 4 household decision making areas (list). All other cases are coded as low wife authority.

Table 5: Logistic regression of wives' and husbands' contraceptive use by joint occurrence of couple agreement on family planning approval and wife's authority

	Wives			Husbands		
	Unadjusted	Adjusted		Unadjusted	Adjusted	
	Col. A	Col. B	Col. C	Col. A	Col. B	Col. C.
Couple disapproves of family planning (referent)	–	–	-	–	–	-
Husband approves, Wife disapproves & has low authority	1.24*** (.23)	1.02*** (.24)	0.83*** (.25)	8.11*** (1.01)	8.12*** (1.02)	8.32*** (1.03)
Husband approves, Wife disapproves & has high authority	2.07*** (.28)	1.08*** (.31)	0.91*** (.31)			
Husband disapproves, Wife approves & has low authority	3.19*** (.16)	3.29*** (.16)	3.33*** (.17)	0.44* (.22)	0.33 (.24)	0.32 (.25)
Husband disapproves, Wife approves & has high authority	3.97*** (.24)	3.39*** (.25)	3.36*** (.26)	2.51*** (.21)	1.25*** (.25)	0.97*** (.26)
Couple approves and Wife has low authority	4.79*** (.23)	4.59*** (.24)	4.49*** (.24)	7.81*** (.72)	7.92*** (.73)	7.76*** (.26)
Couple approves and Wife has high authority	5.45*** (.27)	4.81*** (.28)	4.53*** (.28)	8.66*** (1.01)	8.07*** (1.02)	7.89*** (1.02)
Hausa	–	0.23 (.22)	0.41 (.23)	–	1.30* (.51)	1.75*** (1.02)
Yoruba	–	0.55** (.21)	0.30 (.23)	–	1.81*** (.49)	1.73*** (.52)
Ijaw	–	0.73*** (.21)	0.26 (.23)	–	1.84*** (.48)	1.17* (.51)
Ibo	–	1.99*** (.23)	1.51*** (.27)	–	4.06*** (.46)	3.96*** (.50)
number of live births			0.16 (.04)			0.10* (.05)
wives' or husbands' age			-0.03 (.01)*			-0.01 (.01)
primary education			0.76*** (.18)			.51 (.34)
secondary education			1.33*** (.19)			1.78*** (.33)
Log likelihood	-903.06	-855.90	-818.64	-491.09	-396.09	-368.39
Chi^2	1665.82***	1760.12***	1821.70***	2422.96***	2612.96***	2668.35***

* p < .05; ** p < .01; *** p < .001

Table 6: Logistic regression of wives' and husbands' contraceptive use by ethnicity and joint occurrence of couple agreement on family planning approval and wife's authority

	Kanuri/Hausa		Ibo		Yoruba		Ijaw	
	Husbands							
	unadjusted	adjusted	unadjusted	adjusted	unadjusted	adjusted	unadjusted	adjusted
Couple or husband approves of family planning (referent) [a]	–	-	–	-	–	-	–	
Husband disapproves, Wife approves & has low authority	-1.48** (.52)	-1.66** (.53)	-1.87*** (.36)	-1.67*** (.39)	-2.72*** (.35)	-2.85*** (.37)	-3.74*** (.59)	-3.74*** (.60)
Husband disapproves, Wife approves & has high authority	-0.48 (1.04)	1.25 (1.07)	-1.04*** (.30)	-1.28*** (30)	-2.88888 (.62)	-3.14*** (.64)	-1.55** (.58)	-1.73 (.58)
Log likelihood	-255.40	-229.43	-262.21	-226.53	-270.72	-240.91	-335.18	-313.96
Chi^2	12.38.**	64.33***	35.13***	106.49***	121.18***	180.79***	116.96***	159.40***
	Wives							
Couple disapproves of family planning (referent)	–	-	–	-	–		–	
Husband approves, Wife disapproves & has low authority	1.50** (.58)	1.42* (.60)	1.10* (.53)	0.96 (.55)	.66 (.46)	0.45 (.48)	1.29** (.49)	1.10* (.51)
Husband approves, Wife disapproves & has high authority	2.37 (1.24)	1.97* (1.28)	0.69 (.38)	.60 (.39)	-.26 (1.08)	-0.61 (1.10)	2.07* (.90)	1.93* (.94)
Husband disapproves, Wife approves & has low authority	3.41*** .24)	3.41*** (.25)	2.47*** (.53)	2.42*** (.54)	2.77*** (.35)	2.83*** (.36)	4.16*** (.41)	4.52*** (.44)
Husband disapproves, Wife approves & has high authority	4.53*** (.67)	4.31*** (.69)	2.59*** (.39)	2.48*** (.40)	2.74*** (.46)	2.79*** (.48)	4.60*** (.71)	4.67*** (.74)
Couple approves & Wife has low authority	4.75*** (.52)	4.62*** (.54)	3.19*** (.51)	3.02*** (.53)	4.12*** (.42)	3.83*** (.43)	5.86*** (.53)	5.83*** (.55)
Couple approves & Wife has high authority			4.03*** (.44)	3.77*** (.45)	4.14*** (.48)	3.76*** (.50)	6.14*** (.67)	6.21*** (.69)
Log likelihood	-269.90	-256.69	-196.69	-192.62	-210.11	-200.36	-164.22	-152.59
Chi^2	346.26***	372.68***	177.05***	185.21***	240.01***	259.52***	460.34***	483.59***

* p < .05; ** p < .01; *** p < .001

a) The referent category includes all couples who approve of family planning and all couples who disapprove of it. It also includes the disagree dyads in which the husband approves of family planning but the wife disapproves. The unadjusted models include only the joint family planning approval variables shown in the table. The adjusted models control for number of live births, husbands' or wives' age and education.

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APPENDIX: MEASURES OF WOMEN'S AUTHORITY

Women's Authority in Economic Decision Making: A dummy variable was set equal to "1" if wives and husbands agreed that the wife or both had the final say on 3 or 4 of the following decisions:

1. What to purchase for the household?
2. When to buy and sell land?
3. How to spend the husband's income?
4. How to spend the wife's income?

Wives' Financial Contribution toward Household Expenses: A dummy variable was set equal to "1" if wives and husband agreed that the wife paid more for one or more of four household expenses: food, children's clothes, school fees, and/or health. Respondents were asked "Who pays more, you or your wife (or you and your husband on wives' questionnaire) for the following expenses: food, children's clothes, school fees, and health?"

Women's Authority in Family Decision Making: A dummy variable was set equal to "1 if wives and husbands agreed that the wife or both had the final say on 3 or 4 of the following decisions:

1. How many children you should have?
2. Whether to send children to school?
3. Whether to take a sick child for medical care?
4. Who should take responsibility for upkeep and rearing of children?

Husband and Wife Talked about Family Planning in Last Year: A dummy variable was set equal to "1" if wives and husbands agreed that they talked more than once about family planning in the last year. The question asked was: "How often have you talked to your wife (or husband) a bout family planning in the past year?" Although respondent were asked whether they talked once or twice or more than twice, we only differentiate between no talk and talk in our measure. Disagreement increases considerably among couples if amount of talk is considered.

Husband's Authority to Divorce Wives: Husbands and wives were asked whether a husband would be justified in leaving his wife if she:

1. Was unable to give him children?
2. Neglected her household duties?
3. Was disrespectful to her husband?
4. Was disrespectful to his parents or relatives?
5. Did not contribute financial support?
6. Went out with another man?
7. Did not provide for her children?

We assume that women have more authority if husbands and wives agree that husbands would not be justified to leave his wife if the above conditions hold. A dummy variable was set equal to "1" if husbands and wives said "No" to fewer than four of the above conditions.

Women's Authority Today Compared to their Mother's Time: A dummy variable was set equal to "1 if husbands and wives responded "More" to the question: "Compared to your mother's time, do you think that wives now have more authority, less authority, or the same authority in the decision making in the family?"