

**The impact of the sex of the first-born child on
attitude towards women within the household**

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Abstract:

Women in developing countries continue to face discrimination on the basis of their sex. This is a consequence of the prevalent gender and social norms in the society which makes women seem like a burden on the household. The sex of the first-born child has historically been associated with significant social and cultural implications for women. This paper thus tries to estimate the impact of having the first-born female on attitude towards women within the household. The linear probability model and the logit model estimates show that women who have their first-born as female enjoy lower say in decision-making within the household by 0.16 and 1.97 percentage points, respectively compared to those who have their first-born as male.

1. Introduction:

In several countries, especially developing nations such as India, the sex ratio usually reported as the number of girls per 1000 boys is skewed towards the male population. These ratios become even more worrying when we look at the sex ratio at birth. Despite increasing literacy rates and education levels, these countries still show high levels of gender inequality. Economic research suggests different explanations for the highly prevalent gender inequalities, which include higher economic returns from a son compared to a daughter, family preference for a specific sex composition of children, and dominant cultural traditions, practices and social norms that require having a son.

In addition to these reasons, a set of literature talks about mother-specific reasons for son preference. Women who give birth to a male child enjoy a higher bargaining power than those who give birth to a female child. The females are considered a burden on the household as they are married off to a different household. In contrast, the boy stays with the family and is responsible for taking care of the family with time. The households want to invest more in the

growth and development of the male child. This implies that women who give birth to a male child are respected more than those who give birth to a female child. The sex of a woman's first-born child can have various social, psychological, and cultural impacts on women's outcomes, although it's essential to note that these effects can vary significantly from one individual to another and are subject to cultural and societal factors. The sex of the first-born child can influence a woman's psychological and emotional well-being. Some women may have a preference for the sex of their first child and may experience disappointment or elation depending on whether their preference is fulfilled. This initial experience can shape their emotional bond with their child. In many societies, gender roles and expectations play a significant role. The sex of the first-born child can influence the expectations placed on the mother and child. For example, having a son might lead to expectations of raising a future breadwinner, while having a daughter might involve expectations related to caregiving and nurturing. The sex of the first-born child can also affect family dynamics. In some cases, having a child of a particular sex might lead to different relationships or expectations within extended families. For instance, grandparents might have different roles or preferences depending on the child's gender.

With this hypothesis in mind, this paper tries to estimate the impact of the sex of the first-born child on the attitude towards women within the household. This hypothesis becomes essential, especially in the context of India, which is a classic example of the case of missing women. The paper is organised as follows: *Section 2* reviews relevant literature on the topic; *Section 3* provides the data description; *Section 4* explains the identification strategy and estimation methodology; *Section 5* presents the results; *Section 6* offers relevant policy suggestions; and *Section 7* provides the conclusion.

2. Literature Review

Women in developing countries are discriminated against since their childhood, where they keep competing for their share of resources within the household vis-à-vis males. They are provided with little or no opportunities in schooling, ultimately leading to their lower living standard in the future. Gender equality is considered to be an indicator of a developed and prosperous society. Empowering women in the economy and closing gender gaps in the labor market are key to achieving the 2030 Agenda for Sustainable Development Goals. This dimension of gender inequality should be taken into account if a nation wants to lead to a path of sustainable development. This can be achieved by increasing the level of bargaining power that women enjoy within and outside the household.

The sex of the first-born child has historically been associated with significant social and cultural implications for women. This literature review explores the impact of the sex of the first-born child on various aspects of women's outcomes, including family dynamics, fertility choices, economic implications, and psychological well-being. Son preference is prevalent in many societies, particularly in South and East Asia (Dyson & Moore, 1983). In these regions, the birth of a son is often celebrated more enthusiastically, leading to differential treatment of male and female children within families (Bongaarts & Guilmoto, 2015).

In patriarchal societies, having a son as the first-born may elevate a woman's status within the family (Das Gupta, 1987). Daughters may be viewed as economic burdens due to dowry expectations, emphasizing the importance of having a son first (Caldwell et al., 1982). Some cultures link the sex of the first-born child to subsequent fertility decisions (Morgan & Niraula, 1995). Families may continue having children until they have a desired number of sons or daughters, which can impact women's reproductive autonomy (Arnold et al., 2002).

Research suggests that the sex of the first-born child can have economic implications, particularly in societies with strong son preference (Duflo, 2003). Differential investment in sons' education and career prospects may affect women's access to resources and opportunities (Jayachandran & Pande, 2017). The sex of the first-born child may influence a woman's psychological well-being. Women who give birth to daughters first in cultures with son preference may face stigma and pressure (Barcellos et al., 2014). Conversely, women who have a son first may experience social approval and improved self-esteem (Dahl et al., 2013).

Research on the impact of the sex of the first-born child on women's labor force participation is mixed. Some studies suggest that having a son may encourage women to work to support their families (Doepke et al., 2012). However, others indicate it may lead to traditional gender roles and women staying at home (Eswaran & Malhotra, 2011).

3. Data

The paper used the National Family Health Survey (NFHS) data. I have used the fourth round of the survey, which was conducted in 2015-2016. The National Family Health Survey (NFHS) programme, initiated in the early 1990s, has emerged as a nationally important data source on population, health, and nutrition for India and its states and union territories. The 2015-16 National Family Health Survey (NFHS-4), the fourth in the series of these national surveys, was preceded by NFHS-1 in 1992-93, NFHS-2 in 1998-99, and NFHS-3 in 2005-06. Like NFHS-1, NFHS-2 and NFHS-3, NFHS-4 was designed to provide estimates of important indicators on family welfare, maternal and child health, nutrition, and other health issues. NFHS-4 covers all 29 states and seven union territories. It includes 640 districts in total. The data collection process involved interviews with households, women of reproductive age (15-49 years), and men aged 15-54. NFHS-4 covered a large sample of households and individuals across India, making it one of the most comprehensive surveys of its kind in the country. It

collected data from over 600,000 households, more than 700,000 women, and over 100,000 men.

The National Family Health Survey-4 (NFHS-4) included a detailed woman's questionnaire to collect comprehensive information about various aspects of women's health and well-being. The paper has used this questionnaire for analysis. Within this questionnaire, the following variables are used to design the dependent variables:

1. *Who decides how your husband's earnings will be used: mainly you, mainly your husband, or you and your husband jointly?*
2. *Is she allowed to go to the health facility: yes or no?*
3. *Whether she is allowed to go to the market: yes or no?*
4. *Whether she is allowed to go to places outside the village: yes or no?*
5. *Would you say that using contraception is mainly your decision, mainly your husband's decision, or did you both decide together?*
6. *Does she have money that she alone can decide how to use?*

Table 1A in the Appendix provides frequency distribution of decision-making by women, by sex of her first-child. Panel 1-7 show how decision-making varies for women by the sex of their first-born child. It can be seen that for all the decision-making indicators, women with their first-born child as male are relatively better-off than those with their first-born as female. Panel 1-4 shows around 58 percent of women have an individual say in household decision making if the sex of the first-born child is male, compared to 42 percent for those with first-born child as female. Panel 5-7 shows the similar distribution when it comes to whether the woman is allowed to go on her own to a health facility, village or market.

For questions 1 and 2, based on the woman's responses, a binary variable is constructed by the rule that if a woman has a say independently or jointly with her husband, she will get a value of 1 and 0 otherwise. I have restricted the dataset to those women who had at least 1

child at the time of the survey. Figure 1A in the appendix represents the distribution of women as per their say within the household, by the sex of their first-born child. Panel A gives the distribution of women who decide how the sex of the first-born child will use their husband's earnings. Of the total women with at least one child, 58 per cent of those who responded as they are the decision-makers in case of their husband's earnings (herself or jointly with husband) had their first-born as male compared to the 42 per cent who had their first-born as female. Similarly, Panel B to G gives the distribution as per the above-mentioned questions asked in points 2 to 7. In all of these panels, women who had their first-born child as male have a higher say in decision-making than those with their first-born child as female. The proportion ranges from 57 per cent to 61 per cent for women with first-born as male compared to 39 per cent to 43 per cent for women with first-born as female.

4. Empirical Methodology

To study our hypothesis, we estimate the following OLS regression:

$$y_i = \alpha + \beta female_i + \gamma X_i + \varepsilon_i,$$

We also run the following logit regression, as our dependent variable is a binary:

$$\ln\left(\frac{p_i}{1-p_i}\right) = \alpha + \beta female_i + \gamma X_i + \varepsilon_i,$$

where y is the decision-making variable for woman i , and $male_i$ is the indicator variable that takes the value of 1, if the sex of the first-born child is male, else zero. To take into account the intensity of the decision-making by a woman, variable y takes a value of 1, if the woman is the decision-maker in at least four out of six questions mentioned above. For robustness, I have also taken the case where she has responded as the decision-maker in at least three out of six questions. X_i represent all the control variables used in our analysis. These include woman

specific characteristics, such as her caste: whether she belongs to a *caste* or a *tribe* or none of these; religion; highest level of educational attainment: *no education, primary, secondary or higher*; wealth index of her household: *poorest, poorer, middle, richer, richest*; her current age, whether currently working and the type of place of residence: urban or rural. The paper has also controlled for husband characteristics such as his age and educational attainment.

The *caste* and *religion* variables capture social and cultural norms practised within a particular community based on which a woman's bargaining power can be influenced. A woman's *level of education* depicts the intensity of say that she can exercise within the household and her awareness of her rights. The *wealth index* proxies for the household's income as NFHS does not provide income. This important indicator decides how the resources are distributed or allocated among the household members. A woman's *age at first birth* captures her say in her first-birth. She will most likely resist reproducing at a younger age if she has a higher bargaining power. The *type of place of residence* captures the different gender norms prevalent in urban and rural areas. In rural areas, educational and job opportunities are lower for women, which could create a wedge in her bargaining power and decision-making vis-à-vis men. The variable of *currently working* captures the opportunity cost of having children as well as her autonomy. The paper thus estimates the effect of the sex of the first-born child on the woman's position in the household by using a linear probability model.

Table 1 provides the summary statistics for the various characteristics of women as explained in the above paragraph. Column (1) gives the mean value and standard deviation of the variables for women with their first-born child as male whereas column (2) gives the same statistics for women with their first-born child as female. On an average, both the categories of women seem to have similar characteristics. The average age at first marriage of women is around 18 years. The data consists of around 21-22 percent and 9-10 percent of Scheduled caste

(SC) and Scheduled tribe (ST) women. There are around 45 percent of Other Backward caste (OBC) and 20-21 percent of General women. Around 37 percent of women have no education at all. Proportion of women with primary, secondary and higher education is around 15, 40 and 8 percent respectively. This shows that there is not much of a difference in the characteristics of women who have their first-born as male or female. Column (3) gives the difference between column (1) and (2), with stars representing the significance of their differences. There seems to be no significant difference between columns (1) and (2), except for women having higher education.

Table 1. Summary Statistics

	(1) Male	(2) Female	(3) Diff.
Age at first-birth	20.26	20.39	-0.15
SC	0.21	0.22	-0.00
ST	0.09	0.10	-0.02
OBC	0.45	0.45	0.01
General	0.24	0.23	0.02
Hindu	0.82	0.80	0.03
Muslim	0.12	0.14	-0.02
Christian	0.02	0.03	-0.02
No_Edu	0.36	0.35	0.00
Primary	0.15	0.15	0.00
Secondary	0.41	0.41	-0.00
Higher	0.08	0.09	-0.00*
<i>N</i>	278017	198602	476619

Notes: The column 3 gives the difference with the level of significance of a test for the equality of sample means for mothers with sons and mothers with daughters. Dataset: NFHS-4

5. Results

Table 2 shows results from the OLS model stated above. Model 1-3 gives regression results for the decision-making variable, equal to one if a woman has either joint or sole decision-making power in a four out of six questions. Model (1) has controls for women characteristics,

while Model (2) has additional controls for husband's characteristics. Model (3) has similar controls as Model (2) with an additional control of whether she is currently working.

Model (1) shows that if the first-born child is a female, then the likelihood of decision-making for that woman goes down by 0.16 percentage points, on an average, in comparison to those whose first-born is a male, *ceteris paribus*. Similarly, for model (2)-(3), the coefficients show a negative sign and are significant throughout different model specifications. This shows that women who have their first-born child as a female have a lower likelihood of having a say in decision-making within the household when compared to those women who have their first-born child as a male. The detailed results are shown in Table 2A of the appendix.

Table 2: OLS Estimates of Sex of the first-born child

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
sex of child = female	-0.0016* (0.0008)	-0.0132*** (0.0035)	-0.0132*** (0.0035)
Constant	0.0848*** (0.0025)	0.2154*** (0.0135)	0.1922*** (0.0134)
Observations	475,087	78,125	78,125
R-squared	0.0030	0.0598	0.0708
Woman level controls	Yes	Yes	Yes
Husband's age	No	Yes	Yes
Husband's education	No	Yes	Yes
Women currently working	No	No	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

Table 3 provide logit estimates for the same regression. These estimates tell you about the relationship between the independent variables and the dependent variable, where the dependent variable is on the logit scale. These estimates tell the amount of increase in the predicted log odds of dependent variable = 1 that would be predicted by a 1 unit increase in the predictor, holding all other predictors constant. The coefficient (or parameter estimate) for the variable female in model 1 is -0.0197. This means that for a one-unit increase in female (in

other words, going from male to female), we expect 1.97 percentage points decrease in the log-odds of the dependent variable, holding all other independent variables constant. Similarly, for model (2)-(3), the coefficients show a negative sign and are significant throughout different model specifications. This shows that women who have their first-born child as a female have a lower likelihood of having a say in decision-making within the household when compared to those women who have their first-born child as a male. The detailed results are provided in

Table 3: Logit Estimates of Sex of the first-born child

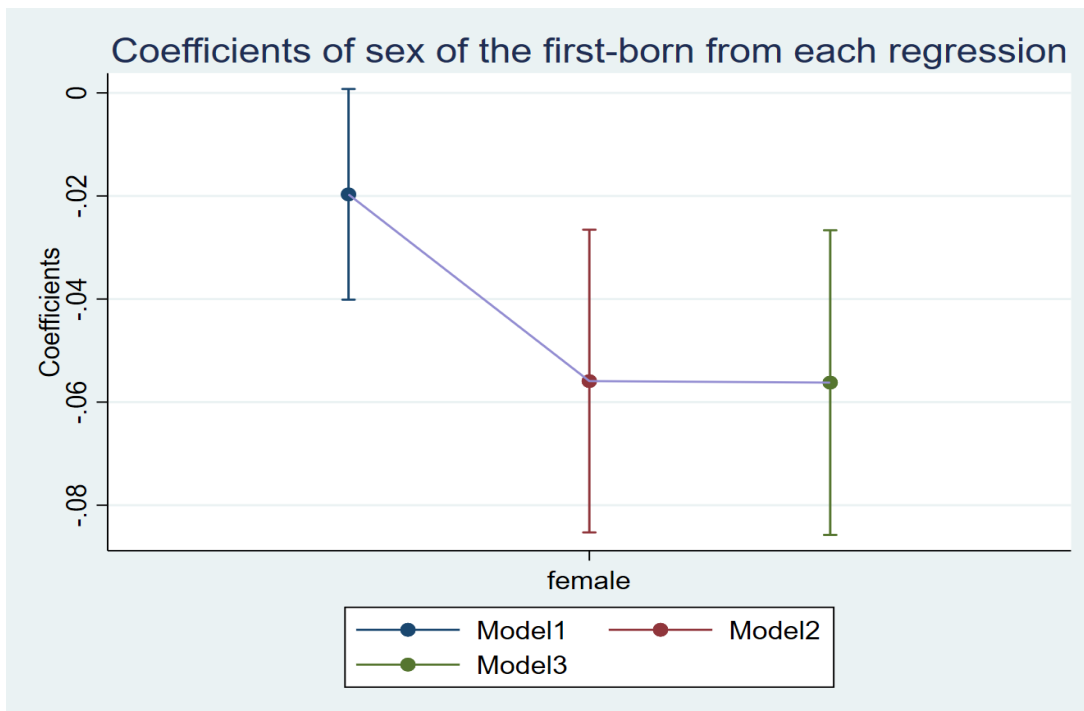
VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
sex of child = female	-0.0197* (0.0104)	-0.0559*** (0.0150)	-0.0562*** (0.0151)
Constant	-2.3931*** (0.0309)	-1.1933*** (0.0572)	-1.3080*** (0.0577)
Observations	475,083	78,125	78,125
Woman level controls	Yes	Yes	Yes
Husband's age	No	Yes	Yes
Husband's education	No	Yes	Yes
Women currently working	No	No	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

Figure 1 shows the coefficient plots from Table 3. The plot indicates that the coefficients are negative and suggests that women who have their first-born child as a female have a lower likelihood of having a say in decision-making within the household when compared to those women who have their first-born child as a male.

Figure 1:



6. Robustness

The paper also looks at robustness results by varying the intensity of decision-making by women. The dependent variable takes the value of one, if the woman responds as the decision-maker in at least three out of six questions, instead of four out of six. The results are presented in Table 4 and 5 for OLS and logit estimates respectively.

Model (1) of Table 4 shows that if the first-born child is a female, then the likelihood of decision-making for that woman goes down by 0.03 percentage points, on an average, in comparison to those whose first-born is a male, *ceteris paribus*. However, the results are not significant at 10% level of significance. Similarly, for model (2)-(3), the coefficients show a negative sign and are significant throughout different model specifications. This shows that women who have their first-born child as a female have a lower likelihood of having a say in decision-making within the household when compared to those women who have their first-born child as a male. The detailed results are shown in Table 3A of the appendix.

Table 4: OLS Estimates of Sex of the first-born child

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
sex of child = female	-0.0003 (0.0009)	-0.0073** (0.0034)	-0.0073** (0.0034)
Constant	0.1027*** (0.0028)	0.3432*** (0.0130)	0.3225*** (0.0129)
Observations	475,087	78,125	78,125
R-squared	0.0025	0.0598	0.0695
Woman level controls	Yes	Yes	Yes
Husband's age	No	Yes	Yes
Husband's education	No	Yes	Yes
Women currently working	No	No	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

Model (1) of Table 5 gives the coefficient (or parameter estimate) for the variable female in model 1 is -0.0032. This means that for a one-unit increase in female (in other words, going from male to female), we expect 0.32 percentage points decrease in the log-odds of the dependent variable, holding all other independent variables constant. However, the coefficients are not significant at 10% level of significance. Similarly, for model (2)-(3), the coefficients show a negative sign and are significant throughout different model specifications. The detailed results are shown in Table 3B of the appendix

Table 5: Logit Estimates of Sex of the first-born child

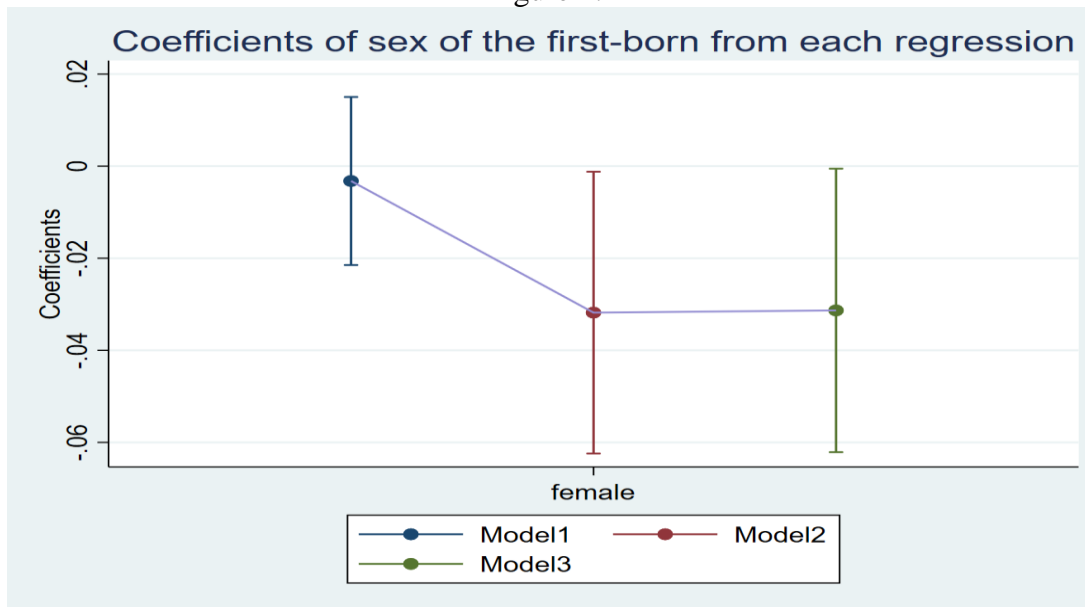
VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
sex of child = female	-0.0032 (0.0093)	-0.0318** (0.0156)	-0.0313** (0.0157)
Constant	-2.1700*** (0.0276)	-0.7414*** (0.0600)	-0.8511*** (0.0604)
Observations	475,083	78,123	78,123
Woman level controls	Yes	Yes	Yes
Husband's age	No	Yes	Yes
Husband's education	No	Yes	Yes
Women currently working	No	No	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

Figure 2 shows the coefficient plots from Table 5. The plot indicates that the coefficients are negative and suggests that women who have their first-born child as a female have a lower likelihood of having a say in decision-making within the household when compared to those women who have their first-born child as a male.

Figure 2:



The paper also incorporates for the fact that the woman might have undergone abortion or terminated her pregnancy before the birth of the first-born if she got to know about the sex of the child. This will then bias our results because the sex of the first-born child will not remain truly exogenous. Thus, I re-run the logit regression by keeping all those woman who never terminated the pregnancy. The results are presented in Table 6. The coefficients are statistically significant and negative, thus reinforcing our previous results. The results thus remain robust even after removing women who ever had a terminated pregnancy.

Table 6: Logit Estimates of Sex of the first-born child

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
sex of child = female	-0.0257** (0.0115)	-0.0549*** (0.0164)	-0.0554*** (0.0165)
Constant	-2.4101*** (0.0339)	-1.2407*** (0.0625)	-1.3583*** (0.0630)
Observations	399,195	65,061	65,061
Woman level controls	Yes	Yes	Yes
Husband's age	No	No	No
Husband's education	No	No	No
Women currently working	No	No	No

Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

7. Heterogeneity

The paper does a heterogeneity analysis for the above results on the basis of woman's highest educational attainment level, her caste and type of place of residence: urban/rural. This is done by running each logit regression for woman in different categories of educational attainment, caste and type of place of residence. Table 7, 8 and 9 provide logit estimates for each of these variables respectively. The different columns of Table 7 provide estimates for woman with different levels of educational attainment. Column 1, 2, 3 and 4 give estimates for woman with no education, primary education, secondary education and higher education respectively. It is clear from the table that woman with primary and secondary education show significantly negative coefficients of the sex of the first-born child. Woman with primary and secondary education have lower likelihood in decision-making by 6.2 to 6.7 percentage points while the estimates though negative, are insignificant even at 10% significance level.

Table 7: Logit Estimates of Sex of the first-born child

VARIABLES	(1) No Education	(2) Primary Education	(3) Secondary Education	(4) Higher Education
sex of child = female	-0.0405 (0.0254)	-0.0672* (0.0394)	-0.0624*** (0.0234)	-0.0642 (0.0532)
Constant	-0.9479*** (0.0923)	-0.7133*** (0.1473)	-1.1880*** (0.0994)	-1.0924** (0.4269)
Observations	27,215	11,601	32,657	6,647
Woman level controls	Yes	Yes	Yes	Yes
Husband's age	Yes	Yes	Yes	Yes
Husband's education	Yes	Yes	Yes	Yes
Women currently working	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

Similarly, column 1 and 2 of Table 8 provide logit estimates for woman residing in urban and rural areas respectively. The results are negative and significant showing that the negative impact of the sex of the first-born child is in urban as well as rural areas. The likelihood in decision-making is lower by 6.9 and 5.01 percentage points for urban and rural areas, respectively.

Table 8: Logit Estimates of Sex of the first-born child

VARIABLES	(1) Urban Area	(2) Rural Area
sex of child = female	-0.0699** (0.0283)	-0.0501*** (0.0179)
Constant	-0.9492*** (0.1077)	-1.7482*** (0.0642)
Observations	22,749	55,374
Woman level controls	Yes	Yes
Husband's age	Yes	Yes
Husband's education	Yes	Yes
Women currently working	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

Table 9 presents logit estimates for women categorised by their caste. Column 1, 2, 3 and 4 give estimates for women belonging to SC, ST, OBC and General categories respectively. The results suggest that for SC and OBC, the likelihood in decision-making is significantly lower for women with their first-born child as female in comparison to women with their first-born child as male.

Table 9: Logit Estimates of Sex of the first-born child

VARIABLES	(1) SC	(2) ST	(3) OBC	(4) General
sex of child = female	-0.0783** (0.0360)	-0.0168 (0.0357)	-0.0579** (0.0241)	-0.0497 (0.0336)
Constant	-1.1879*** (0.1386)	-0.8307*** (0.1317)	-1.0917*** (0.0924)	-1.2059*** (0.1363)
Observations	13,604	13,728	30,688	16,207
Woman level controls	Yes	Yes	Yes	Yes
Husband's age	Yes	Yes	Yes	Yes
Husband's education	Yes	Yes	Yes	Yes
Women currently working	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

8. Discussion & Conclusion

Women in developing countries continue to face discrimination on the basis of their sex. This is a consequence of the prevalent gender and social norms in the society which makes women seem like a burden on the household. Their work is underestimated and their main responsibility is to take care of the household and its members. This attitude begins from the childhood itself when the birth of a boy is celebrated whereas that of a girl is seen as someone else's asset. In some cultures, the sex of the first-born child can have economic implications. For instance, in societies with strong gender biases, having a son might be seen as an advantage for the family's economic stability and inheritance practices.

This paper thus tries to estimate the impact of having the first-born male on attitude towards women within the household. The linear probability model and the logit model estimates show that women who have their first-born as female enjoy lower say in decision-making within the household compared to those who have their first-born as male. The logit estimates suggest that for a one-unit increase in female (in other words, going from male to female), we expect 5.62 percentage points decrease in the log-odds of the dependent variable, that is say in at least four out of six variables, holding all other independent variables constant. If the bargaining power is decided by say in at least three out of six questions, then the coefficient is around 3.13 percentage points. This shows that women experience significance differences in their bargaining power when it comes to the sex of the first-born child. These results suggest that the policymakers might face dilemma in framing policies that encourage both female decision-making and discourage son preference simultaneously. Promoting positive behavioral change to support and empower girl children is crucial for their well-being and equal participation in society. Promoting behavioral change and empowering girl children is an ongoing effort that requires collaboration between individuals, families, communities, governments, and organizations. It's essential to tailor initiatives to the specific cultural and social contexts of the communities where these efforts are implemented.

9. Appendix

Table 1A: Distribution showing decision-making by women, by sex of the first-born child

Panel 1: person who usually decides on large household purchases	sex of child		
	male	female	Total
respondent alone	3677.487	2809.459	6486.946
	56.69	43.31	100.00
respondent and husband/partner	29931.03	22021.17	51952.2
	57.61	42.39	100.00
husband/partner alone	9634.902	7085.9	16720.8
	57.62	42.38	100.00
someone else	1356.199	926.3788	2282.578
	59.42	40.58	100.00
other	570.7709	420.6994	991.4704
	57.57	42.43	100.00
Total	45170.39	33263.61	78434
	57.59	42.41	100.00
Panel 2: person who usually decides on visits to family or relatives	sex of child		
	male	female	Total
respondent alone	3899.426	2817.26	6716.687
	58.06	41.94	100.00
respondent and husband/partner	30095.11	22383.86	52478.96
	57.35	42.65	100.00
husband/partner alone	9666.306	6956.812	16623.12
	58.15	41.85	100.00
someone else	1056.332	766.4314	1822.764
	57.95	42.05	100.00
other	453.2205	339.2471	792.4676
	57.19	42.81	100.00
Total	45170.39	33263.61	78434
	57.59	42.41	100.00
Panel 3: person who usually decides what to do with money husband earns	sex of child		
	male	female	Total
respondent alone	3323.925	2358.934	5682.859
	58.49	41.51	100.00
respondent and husband/partner	28503.55	20867.19	49370.74
	57.73	42.27	100.00
husband/partner alone	11683.3	8828.941	20512.24
	56.96	43.04	100.00
other	799.4543	542.6467	1342.101
	59.57	40.43	100.00
husband/partner has no earnings	503.8638	437.2011	941.0649
	53.54	46.46	100.00
Total	44814.09	33034.91	77849
	57.57	42.43	100.00
Panel 4: decision maker for using	sex of child		

contraception	male	female	Total
mainly respondent	12364.97	8253.563	20618.53
	59.97	40.03	100.00
mainly husband, partner	12564.37	7991.623	20555.99
	61.12	38.88	100.00
joint decision	126705	80990.1	207695.1
	61.01	38.99	100.00
other	193.9381	106.4603	300.3984
	64.56	35.44	100.00
Total	151828.3	97341.75	249170
	60.93	39.07	100.00

Panel 5: usually allowed to go to the market	sex of child		
	male	female	Total
not at all	4758.084	3647.334	8405.418
	56.61	43.39	100.00
alone	28487.4	20965.29	49452.69
	57.61	42.39	100.00
with someone else only	14491.78	10689.11	25180.89
	57.55	42.45	100.00
Total	47737.26	35301.74	83039
	57.49	42.51	100.00
Panel 6: usually allowed to go to the health facility	sex of child		
	male	female	Total
not at all	3186.7	2337.605	5524.305
	57.69	42.31	100.00
alone	26869.78	19605.09	46474.87
	57.82	42.18	100.00
with someone else only	17680.78	13359.05	31039.83
	56.96	43.04	100.00
Total	47737.26	35301.74	83039
	57.49	42.51	100.00
Panel 7: usually allowed to go to places outside this village	sex of child		
	male	female	Total
not at all	4480.058	3306.437	7786.495
	57.54	42.46	100.00
alone	25426.68	18675.66	44102.34
	57.65	42.35	100.00
with someone else only	17830.53	13319.64	31150.17
	57.24	42.76	100.00
Total	47737.26	35301.74	83039
	57.49	42.51	100.00

Table 2A: OLS Estimates of Sex of the first-born child

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
sex of child = 2, female	-0.0016* (0.0008)	-0.0132*** (0.0035)	-0.0132*** (0.0035)
age of respondent at 1st birth	0.0006*** (0.0001)	-0.0065*** (0.0005)	-0.0058*** (0.0005)
respondent's current age		0.0130*** (0.0005)	0.0119*** (0.0005)
husband/partner's age		-0.0005 (0.0004)	-0.0002 (0.0004)
highest educational level = 1, primary	0.0035*** (0.0012)	0.0429*** (0.0056)	0.0445*** (0.0056)
highest educational level = 2, secondary	0.0070*** (0.0009)	0.0894*** (0.0047)	0.0945*** (0.0047)
highest educational level = 3, higher	0.0242*** (0.0019)	0.1958*** (0.0076)	0.1893*** (0.0075)
husband/partner's highest year of education (at level in v701) = 1, 1		0.0037 (0.0099)	0.0068 (0.0099)
husband/partner's highest year of education (at level in v701) = 2, 2		-0.0252*** (0.0077)	-0.0235*** (0.0076)
husband/partner's highest year of education (at level in v701) = 3, 3		-0.0126** (0.0061)	-0.0044 (0.0061)
husband/partner's highest year of education (at level in v701) = 4, 4		-0.0125* (0.0066)	-0.0083 (0.0066)
husband/partner's highest year of education (at level in v701) = 5, 5		-0.0014 (0.0058)	0.0056 (0.0058)
husband/partner's highest year of education (at level in v701) = 6, 6		-0.0053 (0.0129)	-0.0013 (0.0128)
husband/partner's highest year of education (at level in v701) = 7, 7		-0.0028 (0.0074)	0.0066 (0.0074)
husband/partner's highest year of education (at level in v701) = 8, 8		0.1268*** (0.0393)	0.1274*** (0.0391)
husband/partner's highest year of education (at level in v701) = 98, don't know		-0.0987*** (0.0341)	-0.0995*** (0.0340)
caste or tribe = 992, tribe	0.0001 (0.0014)	0.0096 (0.0060)	0.0017 (0.0060)
caste or tribe = 993, no caste/tribe	0.0209*** (0.0023)	0.0771*** (0.0092)	0.0792*** (0.0091)
caste or tribe = 998, don't know	-0.0041 (0.0063)	0.0901*** (0.0310)	0.0920*** (0.0313)
religion = 2, muslim	-0.0113*** (0.0012)	-0.0819*** (0.0055)	-0.0684*** (0.0055)
religion = 3, christian	0.0085*** (0.0020)	0.0527*** (0.0083)	0.0459*** (0.0083)
religion = 4, sikh	0.0037 (0.0029)	0.0913*** (0.0123)	0.1027*** (0.0123)
religion = 5, buddhist/neo-buddhist	0.0607*** (0.0047)	0.2098*** (0.0135)	0.2053*** (0.0135)
religion = 6, jain	-0.0112 (0.0113)	0.0107 (0.0474)	0.0187 (0.0474)

religion = 7, jewish	0.1043 (0.1724)	-0.0489 (0.2758)	-0.0140 (0.2714)
religion = 9, no religion	0.0058 (0.0174)	0.1147 (0.0757)	0.1379* (0.0742)
religion = 96, other	0.0046 (0.0040)	0.0495*** (0.0179)	0.0374** (0.0178)
type of place of residence = 2, rural	-0.0204*** (0.0010)	-0.0712*** (0.0040)	-0.0770*** (0.0040)
religion = 8, parsi/zoroastrian	-0.0985*** (0.0076)		
respondent currently working = 1, yes			0.1255*** (0.0041)
Constant	0.0848*** (0.0025)	0.2154*** (0.0135)	0.1922*** (0.0134)
Observations	475,087	78,125	78,125
R-squared	0.0030	0.0598	0.0708
Woman level controls	Yes	Yes	Yes
Husband's age	No	Yes	Yes
Husband's education	No	Yes	Yes
Women currently working	No	No	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

Table 2B: Logit Estimates of Sex of the first-born child

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
sex of child = 2, female	-0.0197* (0.0104)	-0.0559*** (0.0150)	-0.0562*** (0.0151)
age of respondent at 1st birth	0.0072*** (0.0014)	-0.0275*** (0.0021)	-0.0247*** (0.0021)
respondent's current age		0.0547*** (0.0020)	0.0508*** (0.0020)
husband/partner's age		-0.0020 (0.0017)	-0.0009 (0.0017)
highest educational level = 1, primary	0.0489*** (0.0161)	0.1825*** (0.0238)	0.1915*** (0.0240)
highest educational level = 2, secondary	0.0916*** (0.0123)	0.3805*** (0.0203)	0.4068*** (0.0204)
highest educational level = 3, higher	0.2707*** (0.0201)	0.8356*** (0.0331)	0.8208*** (0.0334)
husband/partner's highest year of education (at level in v701) = 1, 1		0.0164 (0.0422)	0.0296 (0.0424)
husband/partner's highest year of education (at level in v701) = 2, 2		-0.1062*** (0.0325)	-0.1004*** (0.0327)
husband/partner's highest year of education (at level in v701) = 3, 3		-0.0529** (0.0260)	-0.0187 (0.0262)
husband/partner's highest year of education (at level in v701) = 4, 4		-0.0524* (0.0281)	-0.0346 (0.0283)
husband/partner's highest year of education (at level in v701) = 5, 5		-0.0058 (0.0246)	0.0245 (0.0248)
husband/partner's highest year of education (at level in v701) = 6, 6		-0.0236 (0.0553)	-0.0065 (0.0556)
husband/partner's highest year of education (at level in v701) = 7, 7		-0.0129 (0.0313)	0.0277 (0.0315)
husband/partner's highest year of education (at level in v701) = 8, 8		0.6354*** (0.2236)	0.6529*** (0.2249)
husband/partner's highest year of education (at level in v701) = 98, don't know		-0.4288*** (0.1551)	-0.4368*** (0.1572)
caste or tribe = 992, tribe	0.0017 (0.0182)	0.0414 (0.0258)	0.0065 (0.0261)
caste or tribe = 993, no caste/tribe	0.2487*** (0.0253)	0.3318*** (0.0396)	0.3437*** (0.0397)
caste or tribe = 998, don't know	-0.0576 (0.0857)	0.3866*** (0.1346)	0.4011*** (0.1374)
religion = 2, muslim	-0.1427*** (0.0167)	-0.3502*** (0.0240)	-0.2941*** (0.0241)
religion = 3, christian	0.1007*** (0.0237)	0.2225*** (0.0357)	0.1990*** (0.0361)
religion = 4, sikh	0.0460 (0.0344)	0.3905*** (0.0543)	0.4403*** (0.0545)
religion = 5, buddhist/neo-buddhist	0.5999*** (0.0378)	0.9447*** (0.0694)	0.9392*** (0.0701)
religion = 6, jain	-0.1289 (0.1299)	0.0513 (0.2158)	0.0816 (0.2159)
religion = 7, jewish	0.8589 (1.0512)	-0.2110 (1.1494)	-0.0660 (1.1344)
religion = 9, no religion	0.0723 (0.2108)	0.4849 (0.3268)	0.5928* (0.3245)
religion = 96, other	0.0566 (0.0496)	0.2075*** (0.0756)	0.1605** (0.0767)
type of place of residence = 2, rural	-0.2423*** (0.0116)	-0.3027*** (0.0172)	-0.3300*** (0.0172)
religion = 8, omitted	-	-	-
respondent currently working = 1, yes			0.5378*** (0.0178)
Constant	-2.3931*** (0.0309)	-1.1933*** (0.0572)	-1.3080*** (0.0577)
Observations	475,083	78,125	78,125
Woman level controls	Yes	Yes	Yes
Husband's age	No	Yes	Yes
Husband's education	No	Yes	Yes
Women currently working	No	No	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

Table 3A: OLS Estimates of Sex of the first-born child (Robustness);

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
sex of child = 2, female	-0.0003 (0.0009)	-0.0073** (0.0034)	-0.0073** (0.0034)
age of respondent at 1st birth	0.0009*** (0.0001)	-0.0060*** (0.0005)	-0.0054*** (0.0005)
respondent's current age		0.0126*** (0.0005)	0.0117*** (0.0005)
husband/partner's age		-0.0003 (0.0004)	-0.0001 (0.0004)
highest educational level = 1, primary	0.0035** (0.0014)	0.0384*** (0.0054)	0.0398*** (0.0054)
highest educational level = 2, secondary	0.0067*** (0.0011)	0.0827*** (0.0046)	0.0873*** (0.0046)
highest educational level = 3, higher	0.0218*** (0.0021)	0.1780*** (0.0071)	0.1722*** (0.0070)
husband/partner's highest year of education (at level in v701) = 1, 1		0.0044 (0.0095)	0.0072 (0.0095)
husband/partner's highest year of education (at level in v701) = 2, 2		-0.0176** (0.0074)	-0.0161** (0.0074)
husband/partner's highest year of education (at level in v701) = 3, 3		-0.0151** (0.0059)	-0.0078 (0.0059)
husband/partner's highest year of education (at level in v701) = 4, 4		-0.0091 (0.0064)	-0.0053 (0.0064)
husband/partner's highest year of education (at level in v701) = 5, 5		-0.0042 (0.0056)	0.0020 (0.0056)
husband/partner's highest year of education (at level in v701) = 6, 6		-0.0007 (0.0122)	0.0029 (0.0121)
husband/partner's highest year of education (at level in v701) = 7, 7		-0.0032 (0.0071)	0.0053 (0.0070)
husband/partner's highest year of education (at level in v701) = 8, 8		0.0899*** (0.0332)	0.0904*** (0.0328)
husband/partner's highest year of education (at level in v701) = 98, don't know		-0.1069*** (0.0348)	-0.1076*** (0.0347)
caste or tribe = 992, tribe	0.0026 (0.0016)	0.0204*** (0.0058)	0.0133** (0.0058)
caste or tribe = 993, no caste/tribe	0.0254*** (0.0026)	0.0908*** (0.0088)	0.0927*** (0.0088)
caste or tribe = 998, don't know	-0.0097 (0.0069)	0.0817*** (0.0291)	0.0834*** (0.0293)
religion = 2, muslim	-0.0096*** (0.0014)	-0.0851*** (0.0056)	-0.0729*** (0.0056)
religion = 3, christian	0.0125*** (0.0023)	0.0677*** (0.0077)	0.0616*** (0.0076)
religion = 4, sikh	-0.0023 (0.0031)	0.0703*** (0.0113)	0.0806*** (0.0112)
religion = 5, buddhist/neo-buddhist	0.0604*** (0.0050)	0.1826*** (0.0113)	0.1785*** (0.0113)
religion = 6, jain	-0.0147	0.0015	0.0087

	(0.0123)	(0.0427)	(0.0425)
religion = 7, jewish	0.2812	0.3228***	0.3541***
	(0.2176)	(0.0670)	(0.0710)
religion = 9, no religion	0.0151	0.1572**	0.1780***
	(0.0202)	(0.0635)	(0.0629)
religion = 96, other	0.0064	0.0701***	0.0592***
	(0.0046)	(0.0165)	(0.0164)
type of place of residence = 2, rural	-0.0192***	-0.0567***	-0.0619***
	(0.0011)	(0.0038)	(0.0038)
religion = 8, parsi/zoroastrian	-0.1236***		
	(0.0086)		
respondent currently working = 1, yes			0.1125***
			(0.0037)
Constant	0.1027***	0.3432***	0.3225***
	(0.0028)	(0.0130)	(0.0129)
Observations	475,087	78,125	78,125
R-squared	0.0025	0.0598	0.0695
Woman level controls	Yes	Yes	Yes
Husband's age	No	Yes	Yes
Husband's education	No	Yes	Yes
Women currently working	No	No	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.050, * p<0.10

Table 3B: Logit Estimates of Sex of the first-born child (Robustness)

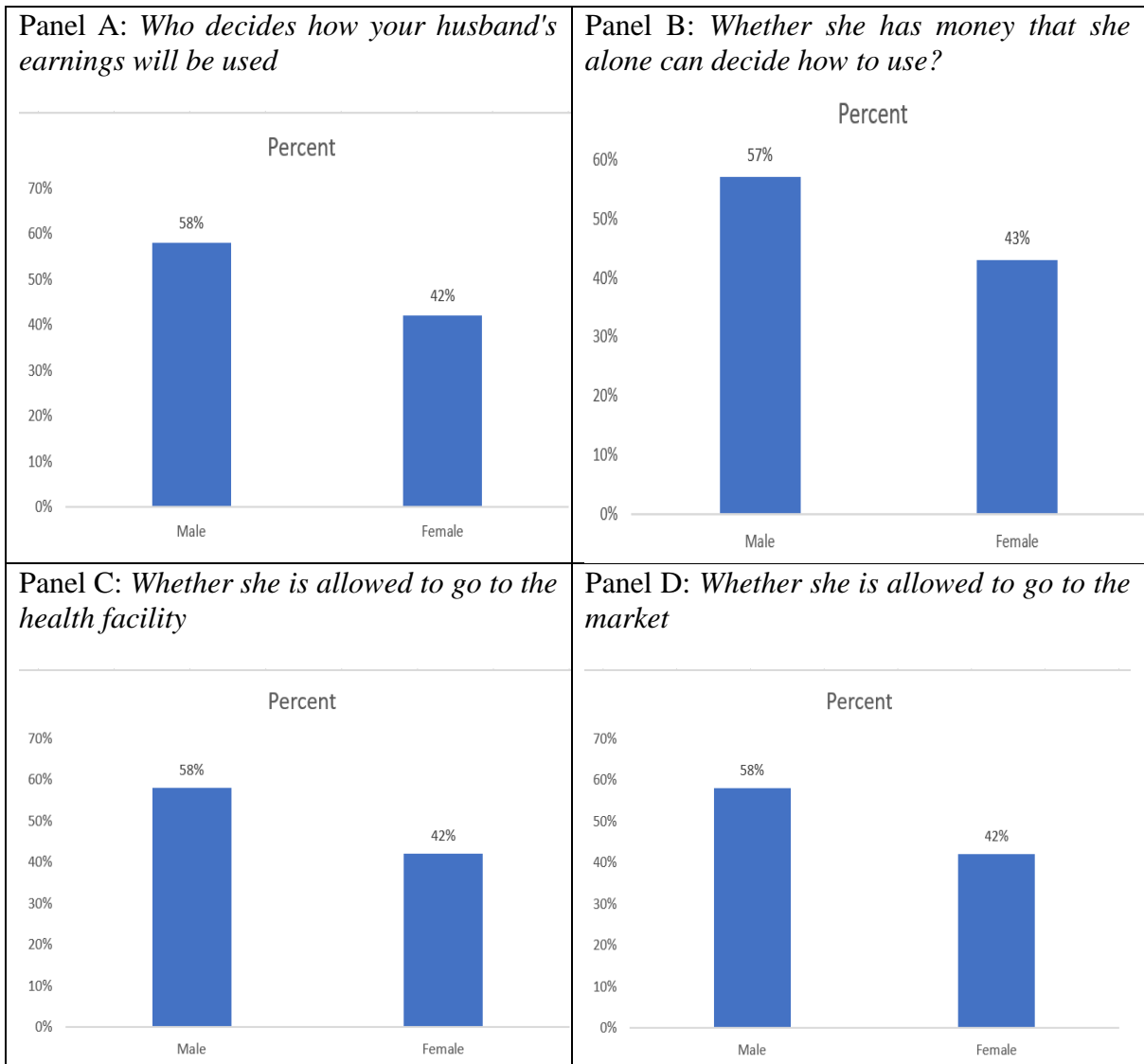
VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
sex of child = 2, female	-0.0032 (0.0093)	-0.0318** (0.0156)	-0.0313** (0.0157)
age of respondent at 1st birth	0.0083*** (0.0012)	-0.0287*** (0.0022)	-0.0256*** (0.0023)
respondent's current age		0.0584*** (0.0022)	0.0545*** (0.0022)
husband/partner's age		-0.0016 (0.0018)	-0.0006 (0.0018)
highest educational level = 1, primary	0.0380*** (0.0143)	0.1775*** (0.0246)	0.1858*** (0.0248)
highest educational level = 2, secondary	0.0700*** (0.0109)	0.3821*** (0.0209)	0.4073*** (0.0211)
highest educational level = 3, higher	0.2005*** (0.0183)	0.8519*** (0.0359)	0.8388*** (0.0360)
husband/partner's highest year of education (at level in v701) = 1, 1		0.0241 (0.0441)	0.0367 (0.0444)
husband/partner's highest year of education (at level in v701) = 2, 2		-0.0787** (0.0335)	-0.0726** (0.0337)
husband/partner's highest year of education (at level in v701) = 3, 3		-0.0659** (0.0269)	-0.0331 (0.0271)
husband/partner's highest year of education (at level in v701) = 4, 4		-0.0408 (0.0290)	-0.0228 (0.0293)
husband/partner's highest year of education (at level in v701) = 5, 5		-0.0166 (0.0255)	0.0125 (0.0257)
husband/partner's highest year of education (at level in v701) = 6, 6		-0.0001 (0.0587)	0.0169 (0.0590)
husband/partner's highest year of education (at level in v701) = 7, 7		-0.0156 (0.0327)	0.0235 (0.0329)
husband/partner's highest year of education (at level in v701) = 8, 8		0.6192** (0.2656)	0.6349** (0.2656)
husband/partner's highest year of education (at level in v701) = 98, don't know		-0.4550*** (0.1503)	-0.4612*** (0.1526)
caste or tribe = 992, tribe	0.0271* (0.0162)	0.0929*** (0.0271)	0.0581** (0.0275)
caste or tribe = 993, no caste/tribe	0.2409*** (0.0228)	0.4202*** (0.0423)	0.4316*** (0.0424)
caste or tribe = 998, don't know	-0.1060 (0.0777)	0.3919*** (0.1464)	0.4058*** (0.1485)
religion = 2, muslim	-0.0961*** (0.0148)	-0.3791*** (0.0244)	-0.3245*** (0.0246)
religion = 3, christian	0.1169*** (0.0211)	0.3436*** (0.0395)	0.3234*** (0.0398)
religion = 4, sikh	-0.0223 (0.0316)	0.3450*** (0.0592)	0.3917*** (0.0593)
religion = 5, buddhist/neo-buddhist	0.5001*** (0.0353)	1.0450*** (0.0843)	1.0395*** (0.0850)
religion = 6, jain	-0.1384 (0.1195)	0.0381 (0.2414)	0.0640 (0.2408)

religion = 7, omitted		-	-
religion = 9, no religion	0.1430 (0.1820)	0.8036** (0.3813)	0.9142** (0.3815)
religion = 96, other	0.0630 (0.0439)	0.3328*** (0.0825)	0.2905*** (0.0837)
type of place of residence = 2, rural	-0.1849*** (0.0105)	-0.2722*** (0.0182)	-0.2975*** (0.0183)
religion = 7, jewish	1.6042* (0.9097)		
religion = 8, omitted	-		
respondent currently working = 1, yes			0.5508*** (0.0194)
Constant	-2.1700*** (0.0276)	-0.7414*** (0.0600)	-0.8511*** (0.0604)
Observations	475,083	78,123	78,123
Woman level controls	Yes	Yes	Yes
Husband's age	No	Yes	Yes
Husband's education	No	Yes	Yes
Women currently working	No	No	Yes

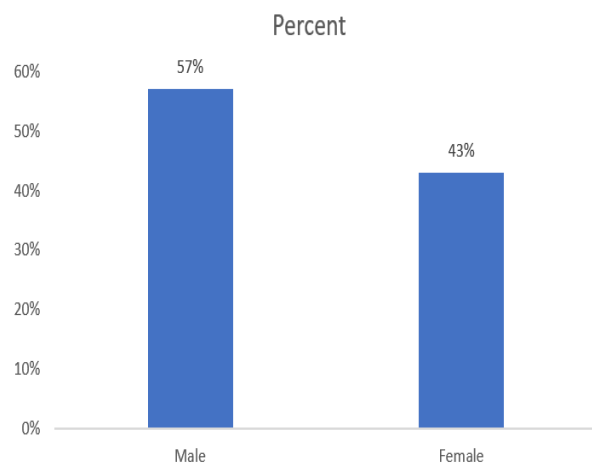
Robust standard errors in parentheses

*** p<0.01, ** p<0.050, * p<0.10

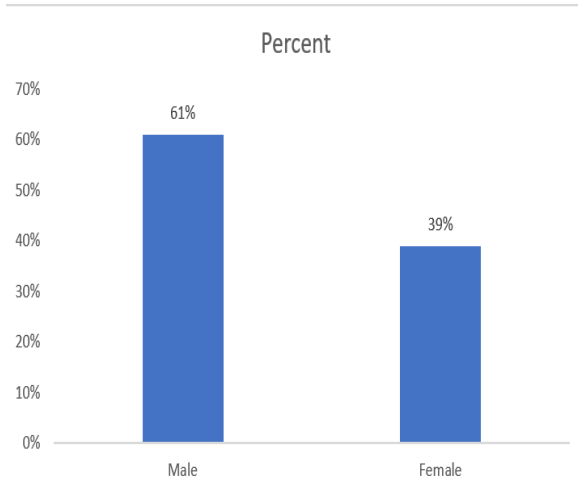
Figure 1A



Panel E: *Whether she is allowed to go to places outside the village*



Panel F: *Who decides on contraception?*



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