# Women's Empowerment in Latin America: The Role of Fertility 

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#### Abstract

This paper studies the role of fertility in empowering women, using data from the Development and Health Survey (DHS) for seven Latin American countries. We use parental preferences for a mixed sibling-sex composition as an instrumental variable to estimate the effect of fertility on a range of outcome measures describing women's empowerment, including measures of labor force participation, decision-making within the household, women's attitudes, trust and control by the husband, and psychological and physical violence. Our findings indicate that childbearing reduces women's labor force participation considerably but creates trust and reduces the experience of intimate partner violence.


JEL-Classification: G02, G11, I31, R21
Keywords: Gender Equality; Instrumental Variables; Domestic Violence

[^0]
## 1 Introduction

Gender equality is smart economics. Gender equality enhances productivity, improves development outcomes for future generations, and makes institutions more representative of the views and values of society (World Bank, 2011a). Empowering women to achieve gender equality also contributes to poverty reduction and economic growth (World Bank, 2006). In spite of large improvements in gender equality in terms of access to education, life expectancy, and labor force participation, several challenges remain, including the unequal access to economic opportunities and the gender difference in voice in household and society.

This papers studies the effect of fertility on women's empowerment in Latin America, a region in which female labor force participation is nearly 12 percentage points lower than in more developed countries (Atal et al., 2012). The position of women in household and society is also constrained by high levels of partner violence against them. More than a quarter of women with a partner in countries such as Bolivia, Colombia, Peru, Nicaragua, and Guatemala have experienced some form of physical violence against them; whilst around 13 percent in countries such as Ecuador, El Salvador, and Dominican Republic have experienced sexual violence by their partners (Flake and Forste, 2006; Bott et al., 2012).

The last four decades in Latin America saw a sharp decline in fertility rates in almost all countries in the region. ${ }^{1}$ Although studies that provide a causal explanation for this sharp reduction are rare, the observed decline in fertility has been attributed to different factors including adjustments in desired fertility of couples, increased access to and use of contraceptives, the availability of more information about the returns to education, and the increase in female labor supply, among others. Some evidence for

[^1]the region suggests that women who receive higher education have between 2 and 3 children, whereas those without education have between 6 and 7 children (Martin and Juarez, 1995). One hypothesis is that fertility rates are typically low among highly educated women because they are more likely to perceive the costs of having children as high than less educated women.

Emerging research shows that fertility has an impact upon social and economic outcomes related to gender equality and women's empowerment. In addition to the ability of women to control their own fertility, empowerment is reflected by the extent to which women can actively participate in social and economic life free of discrimination, coercion, and violence. Empirical studies of the effects of fertility on women's outcomes in Latin America have typically focused on female labor force participation. Cruces and Galiani (2007), for example, provide evidence for a strong negative relationship between fertility and female labor force participation. ${ }^{2}$

Fertility may have an effect on broader indicators of women's empowerment and voice within households. Credible threats of leaving the relationship play an important role in resource allocation within the household in non-cooperative models of the family: more self-reliant women (e.g. due to fewer dependent children, less attachment to the relationship, outside options, etc.) are able to produce credible threats when bargaining for voice and decision power, and as a result, obtain a better deal in terms of empowerment, violence, and voice in their relationships (Farmer and Tiefenthaler, 1997; Tauchen et al., 1991). In general, the conclusion from these types of models is that factors that limit the independence of women, as higher fertility could, will make their threats of leaving the relationship not credible and will reduce her bargaining power in terms of women's empowerment. From this perspective, we would expect to see women in families with more children, ceteris paribus, less empowered, with less control over their lives and environment, suffering from more violence, and having

[^2]a lower chance of participation in the labor market. We know, however, very little about the validity of these hypotheses relating fertility with empowerment. ${ }^{3}$

Fertility has been empirically linked to numerous outcomes, including female labor supply (Angrist and Evans, 1998; Cruces and Galiani, 2007; Ebenstein, 2007), education and earnings (Butcher and Case, 2005), intellectual development (Guo and VanWey, 1999), and the allocation of resources towards children (Black et al., 2005; Baez, 2008). Less is known about the extent to which fertility affects gender equality. Unfortunately, the identification of the causal effect of fertility on measures describing women's empowerment is challenging because it appears likely that fertility and women's empowerment are jointly determined (Schultz, 1981; Goldin, 1990). We address this issue by employing an instrumental variable strategy that exploits variation in fertility from parental preferences for a mixed sibling-sex composition in families with two or more children (Rosenzweig and Wolpin, 1980; Angrist and Evans, 1998) to identify the causal effect of family size on women's empowerment. Our analysis is based on data from the Demographic and Health Surveys (DHS) for seven Latin American countries. The surveys include a range of outcomes measuring women's empowerment and detailed information on fertility and other relevant socioeconomic and demographic characteristics. $\square$
We find that fertility reduces women's labor force participation considerably. On average, having more than two children reduces the probability of female labor force participation by 45 percentage point Ve find that fertility does not have a significant effect on a range of measures describing women's empowerment. However, in cases in which we observe significant effects, we generally find that fertility increases women's participation in household decisions, creates trust, and reduces control by the husband.

Our findings also suggest that childbearing reduces the likelihood of physical partner violence. These findings have important policy implications as they suggest that

[^3]lower fertility does not improve the bargaining power of women in the household and does not seem to contribute to a decline in domestic violence. Instead, labor force participation constitutes a major channel through which lower fertility improves women's empowerment.

The paper is organized as follows. Section 2 explains our empirical strategy. A description of the data is provided in Section Section 4 discusses our empirical findings. Section 5 concludes.

## 2 Data

We use data of all Demographic and Health Surveys (DHS) available for Latin America from 2000 onwards. We focus on surveys collected during the 2000s because these surveys contain a large range of indicators measuring women's empowerment. In addition to gathering the same information across countries, the advantage of using the DHS is the availability of multiple outcomes for women, which are not usually available in census data, such as detailed fertility information for the respondents and other demographic characteristics (such as marital status, education, living conditions, intimate partner violence, and decision making within households). We also use the limited information on labor force participation included in the DHS.

We restrict our analysis sample to women aged 35-49 years because we are interested in studying women who have largely completed their lifetime fertility. Filmer et al. (2009) note that the effect of same-sex children on the fertility of women who have not yet completed fertility may be biased if women who enter childbearing at later ages have different preferences from those who have their children earlier or if birth spacing depends on the sex mix of existing children. The analysis is limited to women below 50 years because DHS does not include yomen who are older than 49 years. We also focus on a sample of married women who have at least two children. Finally, we drop observations if a woman's labor force status or her level of education is missing.

We employ the following sets of variables as measures of women's empowerment: (i) labor force participation (our analysis is limited to a variable indicating if a woman is currently working $Q_{\text {i) women's participation in household decisions (including de- }}^{\text {der }}$ cisions about how to spend money, women's own health care, making large household purchases, making daily household purchases, visits to women's family and relatives, and food to be cooked each day), (iii) women's attitudes towards domestic violence (variables indicating whether the wife think violence is justified if she goes out without telling him, if she neglects the children, if she argues with him, if she refuses to have sex with him, or if she burns the food), (iv) measures of trust and control by the husband (including variables whether the husband is jealous, whether he accuses her of unfaithfulness, whether he does not trust her friends, whether he limits her contact to the family, whether he has no trust in where she is, whether he has no trust in how she manages money, or whether he controls her about other issues), (v) psychological violence (variables indicating whether the husband humiliates her, whether he threatens her, whether he insults her, whether he threatens to take the children away), and (vi) physical violence (variables indicating whether she was pushed, slapped, punched, kicked, strangled, threatened or attacked with a knife, forced to have sex, forced to do anything, bitten, or encountered other forms of physical violence by the husband). Most of these variables are recognized as measures of women's empowerment and self-reliance (Kishor and Subaiya, 2008).

We use data from seven Latin American countries: Bolivia (2003, 2008), Colombia (2000, 2005, 2010), Dominican Republic (2002, 2007), Honduras (2006, 2012), Haiti (2000, 2006, 2012), Nicaragua (2001), and Peru (2000, 2008). It is important to note that not all surveys have exactly the same number and type of indicators to measure women's empowerment. We will combine data from all countries and time periods to form a pool of cross-sectional data for the purpose of increasing statistical power in our analysis, an important issue for research design that relies on an instrumental variable approach.

Table 1 includes the means and standard deviations of instruments and socioeconomic and demographic characteristics. On average, women have between four and six children. About $70-90 \%$ of the women have more than two children. In about $51 \%$ of the cases, the first and the second child was a boy. As a consequence, the first two children were boys in about $26 \%$ of the households, whereas the first two children were girls in about $24 \%$ of the households. The first two children were the same sex in about $50 \%$ of the households. Due to the age restriction, the average age of women in our sample is about 41 years. The mother's age at first birth is around 20 years. Educational attainment varies considerably across countries. We also control for urbanization, which varies between $32.8 \%$ (Haiti) and $69.8 \%$ (Colombia).

Tables 2a-c include descriptive statistics of our measures of women's empowerment. Table 2a reveals that female labor force participation varies from $43.1 \%$ in Honduras to $69.8 \%$ in Bolivia. There is also considerable variation in the participation of women in household decisions. While women are generally less likely to make household decisions autonomously, the majority of women reports to participate in all kinds of household decisions. The numbers in Table 2b indicate that a considerable number of women thinks that domestic violence is justified in certain situation. The numbers are particularly high in Haiti, where $28.0 \%$ of women believes that there are situations in which domestic violence is justified, and Bolivia, where the corresponding share is $20.1 \%$. The majority (between 50 and $70 \%$ ) of women also reports that they have experienced situations in which their husband controlled her. Finally, we observe high levels of psychological and physical violence (Table 2c). About one quarter of women in Colombia report that her husband humiliates her, and one quarter of women in Honduras report that her husband insults her. Colombia and Peru exhibit the highest levels of physical violence (both above 27\%), followed by Honduras (18.4\%), Haiti ( $17.8 \%$ ) , and Dominican Republic ( $11.6 \%$ ) . Most common forms of domestic violence include being pushed, slapped or punched by the husband. In addition, up to $10.5 \%$ of women report that they have been forced to have sex by their husband.

## 3 Empirical Strategy

Our empirical analysis focuses on the effect of fertility on a set of outcome measures describing women's empowerment. We are particularly interested in studying the following relationship:

$$
\begin{equation*}
Y_{i}^{j}=\alpha+\beta F_{i}+X_{i} \gamma+\varepsilon_{i}, \quad i=1, \ldots, N \tag{1}
\end{equation*}
$$

where $Y_{i}$ refers to the $j$ th outcome measure of the $i$ th woman in the sample. Our fertility measure $F_{i}$ is a dummy variable indicating whether or not the total number of children in the household is larger than to nd $X_{i}$ is a set of control variables, including woman's age, age at first birth, and variables indicating her educational attainment (incomplete primary education, complete primary education, incomplete secondary education, complete secondary education, and complete higher education) and whether or not the household is located in an urban area.

We are mainly interested in obtaining an unbiased estimate of the parameter $\beta$, which measures the effect of fertility on the respective outcome. Unfortunately, simple OLS estimates of the regression model will only yield an unbiased estimate of $\beta$ if the conditional expectation of the error term $\varepsilon$ given $F$ is equal to zero. This is unlikely either because fertility and our indicators of women's empowerment may be jointly determined (reverse causality) or because there may be unobservable variables that could confound the effects of fertility on the outcomes of interest.

To solve this endogeneity problem, we follow Angrist and Evans (1998) and employ an instrumental variable (IV) strategy, which exploits the parental preference for mixed sex-sibling composition in families with two or more children. Their IV strategy is based on using the sex-sibling composition of the oldest two born children as an instrument for having more than two children. In other words, it has been observed that families are more likely to have another child if the first two children had the same sex. The validity of this instrument relies on the randomness of the sex composition of
siblings. Evidence for the region is consistent with the hypothesis of parent preferences for the mixed sex composition of siblings (Baez, 2008; Cruces and Galiani, 2007).

The first stage of the IV strategy outlined above relates fertility with a dummy indicator of having children of the same sex, ie.

$$
\begin{equation*}
F_{i}=a+b I V_{i}+X_{i} c+e_{i}, \quad i=1, \ldots, N, \tag{2}
\end{equation*}
$$

where $I V$ is the instrumental variable. Because the instrument is a binary variable, the population analog of the IV estimator is

$$
\begin{equation*}
\rho=\frac{E\left(Y_{i} \mid I V_{i}=1\right)-E\left(Y_{i} \mid I V_{i}=0\right)}{E\left(F_{i} \mid I V_{i}=1\right)-E\left(F_{i} \mid I V_{i}=0\right)} . \tag{3}
\end{equation*}
$$

If a same-sex indicator is used as an instrument for fertility, then the IV estimate of $\rho$ denotes the average effect of fertility on the outcomes measure for households whose fertility has been affected by the gender composition of their children (Angrist and Evans, 1998). Imbens and Angrist (1994) have shown that the IV estimator can be interpreted as a local average treatment effect (LATE) for a given instrument. It is important to note that the LATE obtained by the IV strategy is different from an overall average treatment effect and that different instrumental variables identify different local average treatment effects. Despite this limitation, knowledge about the causal effect of fertility for the group of households who have made a decision about fertility as a result of their children's sex mix is highly relevant because it permits inferences about households in similar situations.

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## 4 Results

This section presents the first and second stage estimates obtained from a two stage least squares (2SLS) approach. We also compare our second stage results to the OLS estimates of equation (1). Because we use pooled cross-sections for most countries
(with exception of Nicaragua), most of our regressions include time fixed effects. We present the estimates of models in which we pool several countries amd time periods, which include both time and country fixed effects.

Table 3 contains the effects of same-sex children on fertility for each country. We find a higher prob ty of having more than two children in households in which the first to children have the same sex than in households in which the first two children have opposite sex. However the effect of same-sex children on fertility is not always highly significant, ie. our instrument for fertility is weak for some countries. To avoid weak instrument problems, our analysis focuses on Colombia, Dominican Republic, and Peru significant. Table 3 also includes estimates of the effects of same-sex boys and samesex girls on fertility. We find that the effects of same-sex boys on fertility are generally larger than those of same-sex girls but that the difference is not statistically significant when we consider a pooled sample of all countries. Consequently, the remainder of our analysis ignores differences between same-sex boys and same-sex girls.

The OLS estimates presented in Tables 4a-c provide evidence for a negative association between fertility and female labor force participation. The relationships between fertility and our measures of women's participation in household decision-making are largely insignificant and rather mixed. We find mixed results for the relationship between fertility and outcomes measuring women's attitudes towards domestic violence and trust and control by the husband (Table 4b), although childbearing in Colombia appears to be positively related to the likelihood of women justifying domestic violence in certain situations. The numbers in Table 4 c indicate a negative association between fertility and domestic violence. It is important to note that the estimates presented in Tables 4a-c have no causal interpretation because they do not take into account endogeneity problems resulting from reverse causality and unobserved heterogeneity.

The second stage estimates in Tables 5a-c reveal that the causal effect of fertility on female labor participation is negative and quite large. When we pool data for
all countries, we find that having more than two children reduces the likelihood of working by 45.0 percentage points. We also find that fertility increases the likelihood of women's participation in making large household purchases when we pool data for Colombia, Dominican Republic, and Peru. At the same time, fertility does not seem to have an effect on other measures of participation in household decisions. In some cases, the effects are positive but only significant at a significance level of $10 \%$. When we pool the data of all countries, we find that fertility reduces women's participation in decisions about how to spend money (again, this effect is only significant at a $10 \%$ level).

The numbers in Table 5b show that childbearing increases the likelihood of women in Colombia to think that domestic violence is justified in some situations. Fertility further reduces jealousy and creates trust. Table 5c reveals that fertility has no effect on psychological violence but reduces domestic violence significantly. In sum, our empirical findings allow us to conclude that lower fertility does not improve the bargaining power of women in the household. We even observe that childbearing increases the likelihood of women being able to make autonomous decisions about large household purchases. Our findings also reveal that childbearing does not increase physical violence. Instead, in cases in which we observe significant effects, we find that fertility reduces the likelihood of domestic violence. Labor force participation turns out to be a major channel through which lower fertility contributes to an improvement in women's empowerment.

## 5 Conclusions

This papers studies the effect of fertility on women's empowerment in Latin America, a region in which female labor force participation is nearly 12 percentage points lower than in more developed countries (Atal et al., 2012). The position of women in household and society is also constrained by high levels of partner violence against them. More than a quarter of women with a partner in countries such as Bolivia,

Colombia, Peru, Nicaragua, and Guatemala have experienced some form of physical violence against them; whilst around 13 percent in countries such as Ecuador, El Salvador, and Dominican Republic have experienced sexual violence by their partners (Flake and Forste, 2006; Bott et al., 2012).

We find that fertility reduces women's labor force participation considerably. On average, having more than two children reduces the probability of female labor force participation by 45 percentage points. We find that fertility does not have a significant effect on a range of measures describing women's empowerment. However, in cases in which we observe significant effects, we generally find that fertility increases women's participation in household decisions, creates trust, and reduces control by the husband. Our findings also suggest that childbearing reduces the likelihood of physical partner violence. These findings have important policy implications as they suggest that lower fertility does not improve the bargaining power of women in the household and does not seem to contribute to a decline in domestic violence. Instead, labor force participation constitutes a major channel through which lower fertility improves women's empowerment.

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## Figures and Tables

Table 1: Descriptive Statistics

|  | Bolivia | Colombia | Dominican <br> Republic | Honduras | Haiti | Nicaragua | Peru |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Children ever born | 5.361 | 3.693 | 4.085 | 5.220 | 5.775 | 5.758 | 4.744 |
|  | $(2.627)$ | $(1.848)$ | $(1.941)$ | $(2.548)$ | $(2.569)$ | $(2.890)$ | $(2.417)$ |
| More than 2 children | 0.869 | 0.708 | 0.829 | 0.880 | 0.906 | 0.901 | 0.818 |
|  | $(0.338)$ | $(0.455)$ | $(0.377)$ | $(0.325)$ | $(0.292)$ | $(0.299)$ | $(0.386)$ |
| First child was a boy | 0.510 | 0.518 | 0.517 | 0.518 | 0.514 | 0.518 | 0.512 |
|  | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ |
| Second child was a boy | 0.506 | 0.511 | 0.509 | 0.507 | 0.514 | 0.512 | 0.510 |
|  | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ |
| First two children were boys | 0.258 | 0.265 | 0.265 | 0.262 | 0.269 | 0.264 | 0.261 |
|  | $(0.437)$ | $(0.441)$ | $(0.441)$ | $(0.440)$ | $(0.443)$ | $(0.441)$ | $(0.439)$ |
| First two children were girls | 0.243 | 0.236 | 0.239 | 0.237 | 0.240 | 0.234 | 0.239 |
|  | $(0.429)$ | $(0.425)$ | $(0.426)$ | $(0.425)$ | $(0.427)$ | $(0.424)$ | $(0.426)$ |
| First two children were the same sex | 0.500 | 0.501 | 0.504 | 0.499 | 0.509 | 0.498 | 0.500 |
|  | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ | $(0.500)$ |
| Age | 41.3 | 41.6 | 41.3 | 41.2 | 41.5 | 41.0 | 41.4 |
|  | $(4.2)$ | $(4.2)$ | $(4.2)$ | $(4.2)$ | $(4.3)$ | $(4.2)$ | $(4.2)$ |
| Mother's age at first birth | 20.7 | 20.9 | 20.2 | 19.8 | 21.5 | 19.2 | 20.8 |
| Incomplete primary education | $(4.2)$ | $(4.3)$ | $(4.2)$ | $(3.8)$ | $(4.5)$ | $(3.8)$ | $(4.2)$ |
|  | 0.514 | 0.237 | 0.463 | 0.420 | 0.301 | 0.335 | 0.332 |
| Complete primary education | $(0.500)$ | $(0.425)$ | $(0.499)$ | $(0.494)$ | $(0.459)$ | $(0.472)$ | $(0.471)$ |
|  | 0.048 | 0.197 | 0.091 | 0.253 | 0.043 | 0.115 | 0.110 |
| Incomplete secondary education | $(0.213)$ | $(0.398)$ | $(0.288)$ | $(0.435)$ | $(0.203)$ | $(0.319)$ | $(0.313)$ |
| Complete secondary education | 0.085 | 0.212 | 0.127 | 0.085 | 0.112 | 0.125 | 0.124 |
| Higher education | $(0.279)$ | $(0.409)$ | $(0.333)$ | $(0.279)$ | $(0.315)$ | $(0.330)$ | $(0.329)$ |
| Household is located in urban area | 0.108 | 0.170 | 0.099 | 0.073 | 0.010 | 0.066 | 0.159 |
| Observations | $(0.311)$ | $(0.376)$ | $(0.298)$ | $(0.259)$ | $(0.098)$ | $(0.248)$ | $(0.366)$ |
|  | 0.119 | 0.127 | 0.135 | 0.046 | 0.015 | 0.069 | 0.170 |
|  | $(0.324)$ | $(0.333)$ | $(0.342)$ | $(0.209)$ | $(0.120)$ | $(0.253)$ | $(0.376)$ |
|  | $(0.493)$ | $(0.459)$ | $(0.494)$ | $(0.483)$ | $(0.470)$ | $(0.500)$ | $(0.493)$ |
|  | 8,361 | 21,441 | 10,915 | 8,750 | 6,959 | 2,606 | 17,745 |

Note: Standard errors in parentheses.

Table 2a: Measures of Women's Empowerment

|  | Bolivia | Colombia | Dominican Republic | Honduras | Haiti | Nicaragua | Peru |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Labor force participation |  |  |  |  |  |  |  |
| Currently working | 0.698 | 0.569 | 0.456 | 0.431 | 0.659 | 0.427 | 0.695 |
|  | (0.459) | (0.495) | (0.498) | (0.495) | (0.474) | (0.495) | (0.460) |
|  | [8,361] | [21,441] | [10,915] | [8,750] | [6,959] | [2,606] | [17,745] |
| Autonomous decisions |  |  |  |  |  |  |  |
| How to spend money | 0.525 | 0.800 | 0.659 | 0.577 | 0.575 | 0.838 | 0.660 |
|  | (0.499) | (0.400) | (0.474) | (0.494) | (0.494) | (0.368) | (0.474) |
|  | [ 5,077$]$ | [16,950] | [ 5,278 ] | [4,122] | [5,020] | [1,094] | [9,218] |
| Own health care | 0.469 | 0.709 | 0.328 | 0.289 | 0.279 | 0.454 | 0.536 |
|  | (0.499) | (0.454) | (0.469) | (0.453) | (0.449) | (0.498) | (0.499) |
|  | [8,356] | [21,441] | [ 5,872$]$ | [8,740] | [6,943] | [2,604] | [17,745] |
| Making large household purchases | 0.135 | 0.255 | 0.153 | 0.197 | 0.302 | 0.141 | 0.210 |
|  | (0.342) | (0.436) | (0.360) | (0.398) | (0.459) | (0.348) | (0.407) |
|  | [8,356] | [21,440] | [ 5,870$]$ | [8,741] | [6,943] | [2,604] | [17,744] |
| Making daily household purchases | 0.625 | 0.456 | 0.359 | 0.387 | 0.395 |  | 0.567 |
|  | (0.484) | (0.498) | (0.480) | (0.487) | (0.489) |  | (0.495) |
|  | [8,353] | [21,441] | [ 5,868 ] | [4,104] | [4,232] |  | [17,741] |
| Visits to family or relatives | 0.379 | 0.299 | 0.253 | 0.113 | 0.165 |  |  |
|  | (0.485) | (0.458) | (0.435) | (0.317) | (0.371) |  |  |
|  | [ 5,037$]$ | [16,660] | [ 5,033$]$ | [8,062] | [6,313] |  |  |
| Food to be cooked each day | 0.828 | 0.775 |  |  | 0.425 | 0.699 | 0.804 |
|  | (0.378) | (0.418) |  |  | (0.494) | (0.459) | (0.397) |
|  | [4,167] | [21,441] |  |  | [2,061] | [2,604] | [17,740] |
| Participation in decisions |  |  |  |  |  |  |  |
| How to spend money | 0.942 | 0.977 | 0.962 | 0.982 | 0.976 | 0.981 | 0.971 |
|  | (0.233) | (0.151) | (0.191) | (0.134) | (0.152) | (0.137) | (0.167) |
|  | [5,077] | [16,950] | [ 5,278$]$ | [4,122] | [5,020] | [1,094] | [9,218] |
| Own health care | 0.894 | 0.887 | 0.872 | 0.789 | 0.734 | 0.888 | 0.791 |
|  | (0.307) | (0.316) | (0.334) | (0.408) | (0.442) | (0.315) | (0.407) |
|  | [8,331] | [21,431] | [ 5,868 ] | [8,736] | [5,900] | [2,602] | [17,735] |
| Making large household purchases | 0.823 | 0.759 | 0.777 | 0.689 | 0.815 | 0.710 | 0.758 |
|  | (0.382) | (0.428) | (0.416) | (0.463) | (0.389) | (0.454) | (0.428) |
|  | [8,324] | [21,374] | [ 5,864$]$ | [8,709] | [5,899] | [2,517] | [17,731] |
| Making daily household purchases | 0.938 | 0.819 | 0.833 | 0.778 | 0.896 |  | 0.883 |
|  | (0.242) | (0.385) | (0.373) | (0.416) | (0.305) |  | (0.321) |
|  | [8,347] | [21,426] | [ 5,865 ] | [4,104] | [3,199] |  | [17,716] |
| Visits to family or relatives | 0.899 | 0.889 | 0.896 | 0.879 | 0.899 | 0.833 | 0.855 |
|  | (0.301) | (0.315) | (0.305) | (0.326) | (0.301) | (0.373) | (0.352) |
|  | [8,225] | [21,070] | [ 5,857$]$ | [8,716] | [ 5,888 ] | [2,564] | [17,676] |
| Food to be cooked each day | 0.962 | 0.948 |  |  | 0.963 | 0.938 | 0.955 |
|  | (0.190) | (0.222) |  |  | (0.189) | (0.242) | (0.207) |
|  | [4,158] | [21,417] |  |  | [1,029] | [2,603] | [17,738] |

Note: Standard errors in parentheses. Number of observations in brackets.

Table 2b: Measures of Women's Empowerment

|  | Bolivia | Colombia | Dominican <br> Republic | Honduras | Haiti | Nicaragua | Peru |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wife thinks violence is justified |  |  |  |  |  |  |  |
| ... if she goes out without telling him | 0.093 | 0.006 | 0.033 | 0.064 | 0.213 | 0.079 | 0.026 |
|  | (0.290) | (0.075) | (0.178) | (0.244) | (0.409) | (0.271) | (0.159) |
|  | [8,282] | [11,014] | [10,887] | [8,654] | [6,894] | [2,604] | [9,299] |
| ... if she neglects the children | 0.151 | 0.033 | 0.065 | 0.116 | 0.185 | 0.109 | 0.047 |
|  | (0.358) | (0.178) | (0.247) | (0.320) | (0.388) | (0.311) | (0.212) |
|  | [8,290] | [11,013] | [10,880] | [8,663] | [6,915] | [2,604] | [9,301] |
| ... if she argues with him | 0.070 | 0.007 | 0.014 | 0.062 | 0.080 | 0.061 | 0.015 |
|  | (0.256) | (0.081) | (0.118) | (0.242) | (0.271) | (0.239) | (0.124) |
|  | [8,284] | [11,018] | [10,881] | [8,600] | [6,900] | [2,604] | [9,292] |
| ... if she refuses to have sex with him | 0.035 | 0.004 | 0.013 | 0.037 | 0.108 | 0.041 | 0.013 |
|  | (0.183) | (0.065) | (0.111) | (0.190) | (0.311) | (0.198) | (0.111) |
|  | [8,262] | [11,006] | [10,880] | [8,625] | [6,872] | [2,603] | [9,271] |
| ... if she burns the food | 0.051 | 0.005 | 0.027 | 0.059 | 0.075 | 0.057 | 0.015 |
|  | (0.220) | (0.068) | (0.163) | (0.235) | (0.264) | (0.232) | (0.120) |
|  | [8,293] | [11,030] | [10,868] | [8,645] | [6,908] | [2,604] | [9,307] |
| Any of the above | 0.201 | 0.035 | 0.081 | 0.144 | 0.280 | 0.150 | 0.064 |
|  | (0.401) | (0.184) | (0.272) | (0.351) | (0.449) | (0.357) | (0.244) |
|  | [8,173] | [10,934] | [10,779] | [8,394] | [6,776] | [2,603] | [9,216] |
| Trust and control |  |  |  |  |  |  |  |
| Husband is jealous |  | 0.458 | 0.338 | 0.341 | 0.471 |  | 0.407 |
|  |  | (0.498) | (0.473) | (0.474) | (0.499) |  | (0.491) |
|  |  | [10,849] | [4,118] | [3,217] | [3,370] |  | [8,240] |
| Husband accuses her of unfaithfullness |  | 0.273 | 0.140 | 0.196 | 0.206 |  | 0.188 |
|  |  | (0.446) | (0.347) | (0.397) | (0.404) |  | (0.391) |
|  |  | [21,036] | [4,135] | [3,220] | [3,472] |  | [8,266] |
| Husband does not trust her friends |  | 0.220 | 0.130 | 0.143 | 0.184 |  | 0.164 |
|  |  | (0.414) | (0.336) | (0.350) | (0.387) |  | (0.371) |
|  |  | [21,036] | [4,140] | [3,223] | [3,471] |  | [8,269] |
| Husband limits her contact to her family |  | $0.146$ | $0.087$ | $0.109$ | $0.091$ |  | $0.138$ |
|  |  | (0.353) | $(0.282)$ | (0.311) | $(0.288)$ |  | (0.345) |
|  |  | [21,036] | [4,150] | [3,225] | [2,673] |  | [8,272] |
| No trust in where she is |  | $0.136$ |  |  |  |  | 0.000 |
|  |  | (0.343) |  |  |  |  | (0.000) |
|  |  | [7,051] |  |  |  |  | [4,295] |
| No trust in how she manages money |  | $0.186$ |  |  |  |  | $0.162$ |
|  |  | $(0.389)$ | (0.268) |  | (0.479) |  | (0.368) |
|  |  | [21,036] | [4,138] |  | [1,554] |  | [8,262] |
| Husband controls her about other issues |  | 0.321 |  |  |  |  |  |
|  |  | (0.467) |  |  |  |  |  |
|  |  | [21,441] |  |  |  |  |  |
| Number of controlled experiences |  | 1.211 | 1.143 | 1.280 | 1.432 |  | 1.414 |
|  |  | (1.485) | (1.313) | (1.425) | (1.455) |  | (1.446) |
|  |  | [21,036] | [4,153] | [3,227] | [3,478] |  | [8,275] |
| Experienced control at least once |  | 0.520 | 0.580 | 0.597 | 0.658 |  | 0.665 |
|  |  | (0.500) | (0.494) | (0.491) | (0.474) |  | (0.472) |
|  |  | [21,036] | [4,153] | [3,227] | [3,478] |  | [8,275] |

Note: See note to Table 2a.

Table 2c: Measures of Women's Empowerment

|  | Dominican |  |  | Haiti | Peru |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Colombia | Republic | Honduras |  |  |
| Emotional violence |  |  |  |  |  |
| Husband humiliates her | 0.254 | 0.117 | 0.152 | 0.066 | 0.128 |
|  | (0.436) | (0.321) | (0.360) | (0.249) | (0.334) |
|  | [2,379] | [4,153] | [3,227] | [3,479] | [8,277] |
| Husband threatens her |  | 0.054 |  | 0.020 | 0.065 |
|  |  | (0.227) |  | (0.138) | (0.247) |
|  |  | [4,153] |  | [3,479] | [8,277] |
| Husband insults her |  | 0.182 | 0.255 | 0.071 |  |
|  |  | (0.386) | (0.436) | (0.258) |  |
|  |  | [2,279] | [3,227] | [2,674] |  |
| Husband threatens to take children away | 0.064 |  |  |  | 0.099 |
|  | (0.244) |  |  |  | (0.299) |
|  | [10,178] |  |  |  | [8,277] |
| Physical violence |  |  |  |  |  |
| Pushed by husband | 0.229 | 0.087 | 0.139 | 0.082 | 0.253 |
|  | (0.420) | (0.282) | (0.346) | (0.275) | (0.435) |
|  | [21,036] | [4,153] | [3,227] | [3,479] | [14,848] |
| Slapped by husband | 0.187 | 0.062 | 0.090 | 0.068 | 0.075 |
|  | (0.390) | (0.241) | (0.286) | (0.252) | (0.264) |
|  | [21,036] | [4,152] | [3,227] | [3,478] | [8,277] |
| Punched by husband | 0.062 | 0.048 | 0.080 | 0.052 | 0.070 |
|  | (0.242) | (0.213) | (0.271) | (0.223) | (0.256) |
|  | [21,036] | [4,153] | [3,227] | [3,479] | [8,277] |
| Kicked by husband | 0.072 | 0.017 | 0.030 | 0.035 | 0.050 |
|  | (0.259) | (0.130) | (0.170) | (0.185) | (0.217) |
|  | [21,036] | [4,152] | [3,227] | [3,479] | [8,277] |
| Strangled by husband | 0.029 | 0.013 | 0.018 | 0.014 | 0.012 |
|  | (0.168) | (0.113) | (0.133) | (0.117) | (0.110) |
|  | [21,036] | [4,151] | [3,227] | [3,479] | [8,277] |
| Threatened with a knife by husband | 0.048 | 0.018 | 0.033 | 0.018 | 0.010 |
|  | (0.213) | (0.133) | (0.179) | (0.132) | (0.099) |
|  | $[21,036]$ | [4,151] | [3,227] | [3,479] | [8,277] |
| Attacked with a knife by husband | $0.022$ | $0.015$ |  | 0.004 | $0.005$ |
|  | $(0.145)$ | (0.121) |  | (0.061) | $(0.071)$ |
|  | [21,036] | [1,874] |  | [ 805] | [8,277] |
| Force to have sex by husband | $0.072$ | 0.038 | $0.057$ | $0.105$ | 0.040 |
|  | $(0.259)$ | (0.191) | $(0.231)$ | $(0.306)$ | (0.195) |
|  | [21,035] | [4,152] | [3,227] | [3,479] | [8,277] |
| Forced to do anything by husband |  | 0.023 | 0.032 | 0.042 | 0.025 |
|  |  | (0.149) | (0.175) | (0.201) | (0.155) |
|  |  | [4,152] | [3,227] | [3,479] | [8,277] |
| Bitten by husband | 0.011 | 0.045 | 0.071 | 0.033 |  |
|  | (0.107) | (0.207) | (0.256) | (0.177) |  |
|  | [10,187] | [2,279] | [3,227] | [2,674] |  |
| Other physical violence | 0.015 |  |  | 0.041 |  |
|  | (0.123) |  |  | (0.197) |  |
|  | [10,849] |  |  | [1,897] |  |
| Any event of physical violence | 0.271 | 0.116 | 0.184 | 0.178 | 0.273 |
|  | (0.445) | (0.321) | (0.388) | (0.383) | (0.445) |
|  | [21,036] | [4,153] | [3,227] | [3,479] | [14,848] |

Note: See note to Table 2a.

Table 3: First Stage Estimates: Effect of Same-Sex Children on Fertility

|  | Same-sex children | Same-sex boys | Same-sex girls |
| :---: | :---: | :---: | :---: |
| Bolivia | 0.011 | 0.014* | -0.000 |
|  | (0.007) | (0.007) | (0.008) |
| F (first stage) | 2.6 | 3.6 | 0.0 |
| Observations | 8,361 | 8,361 | 8,361 |
| Colombia | $0.036^{* * *}$ | 0.015** | $0.033^{* * *}$ |
|  | (0.005) | (0.006) | (0.006) |
| F (first stage) | 42.2 | 6.0 | 27.4 |
| Observations | 21,441 | 21,441 | 21,441 |
| Dominican Republic | 0.025*** | $0.037^{* * *}$ | -0.006 |
|  | (0.007) | (0.007) | (0.008) |
| F (first stage) | 13.6 | 26.5 | 0.6 |
| Observations | 10,915 | 10,915 | 10,915 |
| Honduras | $0.020^{* * *}$ | 0.016** | 0.011 |
|  | (0.006) | (0.007) | (0.007) |
| F (first stage) | 10.6 | 5.4 | 2.3 |
| Observations | 8,750 | 8,750 | 8,750 |
| Haiti | 0.010 | 0.009 | 0.004 |
|  | (0.007) | (0.007) | (0.008) |
| F (first stage) | 2.4 | 1.7 | 0.3 |
| Observations | 6,959 | 6,959 | 6,959 |
| Nicaragua | $0.033^{* * *}$ | 0.024** | 0.021* |
|  | (0.011) | (0.011) | (0.012) |
| F (first stage) | 9.9 | 4.3 | 2.8 |
| Observations | 2,606 | 2,606 | 2,606 |
| Peru | $0.024^{* * *}$ | $0.025^{* * *}$ | 0.007 |
|  | (0.005) | (0.006) | (0.006) |
| F (first stage) | 23.2 | 19.5 | 1.5 |
| Observations | 17,745 | 17,745 | 17,745 |
| Selected countries ${ }^{\dagger}$ | 0.029*** | $0.023^{* * *}$ | $0.015^{* * *}$ |
|  | (0.003) | (0.004) | (0.004) |
| F (first stage) | 77.5 | 40.5 | 15.2 |
| Observations | 50,101 | 50,101 | 50,101 |
| All countries | $0.024^{* * *}$ | $0.020^{* * *}$ | $0.012^{* * *}$ |
|  | (0.002) | (0.003) | (0.003) |
| F (first stage) | 98.1 | 52.5 | 18.5 |
| Observations | 76,777 | 76,777 | 76,777 |

Note: Robust standard errors in parentheses. Control variables: age, age at first birth, and dummy variables indicating educational attainment (incomplete primary education, complete primary education, incomplete secondary education, complete secondary education, and complete higher education) and urban areas. If applicable, the regressions also include time and/or country fixed effects. ${ }^{\dagger}$ Selected countries: Colombia, Dominican Republic, Peru. ${ }^{*} p<0.1,{ }^{* *} p<0.05$, ${ }^{* * *} p<0.01$.

Table 4a: OLS Estimates of Fertility Effects

|  | Colombia | Dominican Republic | Peru | Colombia, <br> Dominican Republic, Peru | All <br> Countries |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Labor force participation |  |  |  |  |  |
| Currently working | -0.005 | -0.018** | -0.011 | -0.011*** | $-0.011^{* * *}$ |
|  | (0.007) | (0.009) | (0.007) | (0.004) | (0.003) |
|  | [21,441] | [10,915] | [17,745] | [50,101] | [76,777] |
| Autonomous decisions |  |  |  |  |  |
| How to spend money | -0.005 | -0.009 | 0.003 | -0.003 | -0.001 |
|  | (0.006) | (0.012) | (0.010) | (0.005) | (0.004) |
|  | [16,950] | [ 5,278$]$ | [9,218] | [31,446] | [46,759] |
| Own health care | 0.002 | 0.001 | 0.003 | 0.003 | 0.000 |
|  | (0.006) | (0.012) | (0.007) | (0.004) | (0.003) |
|  | [21,441] | [ 5,872$]$ | [17,745] | [45,058] | [71,701] |
| Making large household purchases | 0.009 | -0.003 | 0.011* | $0.008^{* *}$ | 0.003 |
|  | (0.006) | (0.009) | (0.006) | (0.004) | (0.003) |
|  | [21,440] | [ 5,870$]$ | [17,744] | [45,054] | [71,698] |
| Making daily household purchases | 0.003 | -0.009 | 0.013* | 0.006 | 0.003 |
|  | (0.007) | (0.012) | (0.007) | (0.005) | (0.004) |
|  | [21,441] | [5,868] | [17,741] | [45,050] | [61,739] |
| Visits to family or relatives | -0.001 | -0.007 |  | -0.002 | -0.003 |
|  | (0.007) | (0.012) |  | (0.006) | (0.004) |
|  | [16,660] | [5,033] |  | [21,693] | [41,105] |
| Food to be cooked each day | -0.004 |  | 0.008 | 0.002 | 0.000 |
|  | (0.006) |  | (0.006) | (0.004) | (0.004) |
|  | [21,441] |  | [17,740] | [39,181] | [48,013] |
| Participation in decisions |  |  |  |  |  |
| How to spend money | 0.001 | -0.007 | -0.005 | -0.002 | $-0.003^{* *}$ |
|  | (0.002) | (0.005) | (0.003) | (0.002) | (0.002) |
|  | [16,950] | [ 5,278$]$ | [9,218] | [31,446] | [46,759] |
| Own health care | 0.009** | 0.003 | -0.001 | 0.005 | 0.002 |
|  | (0.004) | (0.009) | (0.006) | (0.003) | (0.003) |
|  | [21,431] | [ 5,868 ] | [17,735] | [45,034] | [70,603] |
| Making large household purchases | 0.003 | -0.021* | 0.010* | 0.003 | 0.001 |
|  | (0.006) | (0.011) | (0.006) | (0.004) | (0.003) |
|  | [21,374] | [5,864] | [17,731] | [44,969] | [70,418] |
| Making daily household purchases | 0.004 | -0.001 | 0.008* | 0.005 | 0.004 |
|  | (0.005) | (0.010) | (0.005) | (0.003) | (0.003) |
|  | [21,426] | [5,865] | [17,716] | [45,007] | [60,657] |
| Visits to family or relatives | 0.005 | -0.000 | 0.003 | 0.004 | 0.001 |
|  | (0.004) | (0.008) | (0.005) | (0.003) | (0.002) |
|  | [21,070] | [ 5,857$]$ | [17,676] | [44,603] | [69,996] |
| Food to be cooked each day | 0.004 |  | 0.004 | 0.004* | 0.002 |
|  | (0.003) |  | (0.003) | (0.002) | (0.002) |
|  | [21,417] |  | [17,738] | [39,155] | [46,945] |

Note: Robust standard errors in parentheses. Number of observations in brackets. Control variables: age, age at first birth, and dummy variables indicating educational attainment (incomplete primary education, complete primary education, incomplete secondary education, complete secondary education, and complete higher education) and urban areas. If applicable, the regressions also include time and/or country fixed effects. ${ }^{*} p<0.1,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$.

Table 4b: OLS Estimates of Fertility Effects

|  | Colombia | Dominican Republic | Peru | Colombia, Dominican Republic, Peru | All <br> Countries |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Wife thinks violence is justified |  |  |  |  |  |
| ... if she goes out without telling him | 0.003** | -0.001 | -0.001 | 0.000 | 0.002 |
|  | (0.001) | (0.003) | (0.003) | (0.002) | (0.002) |
|  | [11,014] | [10,887] | [9,299] | [31,200] | [57,634] |
| ... if she neglects the children | 0.005 | 0.000 | -0.000 | 0.002 | 0.003 |
|  | (0.003) | (0.005) | (0.004) | (0.002) | (0.002) |
|  | [11,013] | [10,880] | [9,301] | [31,194] | [57,666] |
| ... if she argues with him | $0.005^{* * *}$ | -0.003 | -0.004* | -0.001 | 0.001 |
|  | (0.002) | (0.002) | (0.003) | (0.001) | (0.002) |
|  | [11,018] | [10,881] | [9,292] | [31,191] | [57,579] |
| ... if she refuses to have sex with him | $0.003^{* * *}$ | -0.002 | -0.001 | 0.000 | 0.001 |
|  | (0.001) | (0.002) | (0.002) | (0.001) | (0.001) |
|  | [11,006] | [10,880] | [9,271] | [31,157] | [57,519] |
| ... if she burns the food | 0.002 | 0.002 | -0.001 | 0.001 | 0.001 |
|  | (0.001) | (0.003) | (0.002) | (0.001) | (0.002) |
|  | [11,030] | [10,868] | [9,307] | [31,205] | [57,655] |
| Any of the above | 0.007* | 0.003 | -0.004 | 0.002 | 0.003 |
|  | (0.003) | (0.005) | (0.005) | (0.003) | (0.003) |
|  | [10,934] | [10,779] | [9,216] | [30,929] | [56,875] |
| Trust and control |  |  |  |  |  |
| Husband is jealous | $-0.025^{* * *}$ | 0.008 | -0.007 | -0.012* | -0.013** |
|  | (0.009) | (0.015) | (0.011) | (0.006) | (0.006) |
|  | [10,849] | [4,118] | [8,240] | [23,207] | [29,794] |
| Husband accuses her of unfaithfullness | -0.008 | 0.001 | -0.014* | -0.009* | -0.008* |
|  | (0.006) | (0.011) | (0.009) | (0.005) | (0.004) |
|  | [21,036] | [4,135] | [8,266] | [33,437] | [40,129] |
| Husband does not trust her friends | -0.005 | 0.012 | $-0.022^{* * *}$ | -0.007* | -0.008** |
|  | (0.006) | (0.010) | (0.008) | (0.004) | (0.004) |
|  | [21,036] | [4,140] | [8,269] | [33,445] | [40,139] |
| Husband limits her contact to her family | -0.007 | 0.019** | -0.010 | -0.004 | -0.004 |
|  | (0.005) | (0.009) | (0.008) | (0.004) | (0.003) |
|  | [21,036] | [4,150] | [8,272] | [33,458] | [39,356] |
| No trust in where she is | -0.008 |  | 0.000 | -0.005 | -0.005 |
|  | (0.008) |  | (0.000) | (0.005) | (0.005) |
|  | [7,051] |  | [4,295] | [11,346] | [11,346] |
| No trust in how she manages money | -0.008 | -0.006 | -0.004 | -0.006 | -0.008* |
|  | (0.005) | (0.008) | (0.008) | (0.004) | (0.004) |
|  | [21,036] | [4,138] | [8,262] | [33,436] | [34,990] |
| Husband controls her about other issues | -0.009 |  |  | -0.009 | -0.009 |
|  | (0.006) |  |  | (0.006) | (0.006) |
|  | [21,441] |  |  | [21,441] | [21,441] |
| Number of controlled experiences | -0.026 | 0.035 | -0.055* | -0.026* | -0.026* |
|  | (0.020) | (0.041) | (0.032) | (0.016) | (0.014) |
|  | [21,036] | [4,153] | [8,275] | [33,464] | [40,169] |
| Experienced control at least once | -0.008 | -0.007 | -0.011 | -0.009 | -0.007 |
|  | (0.007) | (0.015) | (0.010) | (0.005) | (0.005) |
|  | [21,036] | [4,153] | [8,275] | [33,464] | [40,169] |

Note: See note to Table 4a.

Table 4c: OLS Estimates of Fertility Effects

|  | Colombia | Dominican Republic | Peru | Colombia, <br> Dominican Republic, Peru | All <br> Countries |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Emotional violence |  |  |  |  |  |
| Husband humiliates her | -0.023 | $0.021^{* *}$ | $-0.014^{* *}$ | -0.005 | -0.006 |
|  | (0.018) | (0.010) | (0.007) | (0.006) | (0.005) |
|  | [2,379] | [4,153] | [8,277] | [14,809] | [21,515] |
| Husband threatens her |  | -0.000 | -0.008 | -0.005 | -0.005 |
|  |  | (0.007) | (0.005) | (0.004) | (0.004) |
|  |  | [4,153] | [8,277] | [12,430] | [15,909] |
| Husband insults her |  | 0.023 |  | 0.023 | -0.007 |
|  |  | (0.016) |  | (0.016) | (0.008) |
|  |  | [2,279] |  | [2,279] | [8,180] |
| Husband threatens to take children away | 0.001 |  | $-0.013^{* *}$ | -0.005 | -0.005 |
|  | (0.005) |  | (0.007) | (0.004) | (0.004) |
|  | [10,178] |  | [8,277] | [18,455] | [18,455] |
| Physical violence |  |  |  |  |  |
| Pushed by husband | $-0.015^{* * *}$ | 0.007 | -0.004 | -0.009** | $-0.009^{* * *}$ |
|  | (0.006) | (0.009) | (0.007) | (0.004) | (0.004) |
|  | [21,036] | [4,153] | [14,848] | [40,037] | [46,743] |
| Slapped by husband | -0.008 | 0.009 | $-0.016^{* * *}$ | -0.008** | $-0.010^{* * *}$ |
|  | (0.005) | (0.007) | (0.006) | (0.004) | (0.003) |
|  | [21,036] | [4,152] | [8,277] | [33,465] | [40,170] |
| Punched by husband | -0.004 | 0.006 | $-0.015^{* * *}$ | $-0.006^{* *}$ | $-0.006^{* * *}$ |
|  | (0.003) | (0.007) | (0.006) | (0.003) | (0.002) |
|  | [21,036] | [4,153] | [8,277] | [33,466] | [40,172] |
| Kicked by husband | -0.005 | 0.003 | -0.011** | -0.006** | $-0.007^{* * *}$ |
|  | (0.004) | (0.004) | (0.005) | (0.003) | (0.002) |
|  | [21,036] | [4,152] | [8,277] | [33,465] | [40,171] |
| Strangled by husband | -0.002 | 0.000 | 0.003 | -0.001 | -0.000 |
|  | (0.002) | (0.004) | (0.002) | (0.002) | (0.001) |
|  | [21,036] | [4,151] | [8,277] | [33,464] | [40,170] |
| Threatened with a knife by husband | 0.000 | 0.004 | 0.002 | 0.001 | 0.001 |
|  | (0.003) | (0.004) | (0.002) | (0.002) | (0.002) |
|  | [21,036] | [4,151] | [8,277] | [33,464] | [40,170] |
| Attacked with a knife by husband | -0.002 | 0.010* | -0.001 | -0.001 | -0.001 |
|  | (0.002) | (0.006) | (0.002) | (0.001) | (0.001) |
|  | [21,036] | [1,874] | [8,277] | [31,187] | [31,992] |
| Force to have sex by husband | 0.002 | 0.002 | -0.008* | -0.001 | -0.003 |
|  | (0.004) | (0.006) | (0.004) | (0.003) | (0.002) |
|  | [21,035] | [4,152] | [8,277] | [33,464] | [40,170] |
| Forced to do anything by husband |  | 0.000 | -0.005 | -0.003 | -0.004 |
|  |  | (0.005) | (0.003) | (0.003) | (0.002) |
|  |  | [4,152] | [8,277] | [12,429] | [19,135] |
| Bitten by husband | -0.001 | 0.013 |  | 0.002 | 0.002 |
|  | (0.002) | (0.009) |  | (0.002) | (0.002) |
|  | [10,187] | [2,279] |  | [12,466] | [18,367] |
| Other physical violence | 0.003 |  |  | 0.003 | 0.002 |
|  | (0.002) |  |  | (0.002) | (0.002) |
|  | [10,849] |  |  | [10,849] | [12,746] |
| Any event of physical violence | $-0.014^{* *}$ | 0.014 | -0.009 | -0.009** | $-0.011^{* * *}$ |
|  | (0.006) | (0.010) | (0.007) | (0.004) | (0.004) |
|  | [21,036] | [4,153] | [14,848] | [40,037] | [46,743] |

Note: See note to Table 4a.

Table 5a: Second Stage Estimates of Fertility Effects

|  | Colombia | Dominican Republic | Peru | Colombia, <br> Dominican Republic, Peru | All <br> Countries |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Labor force participation |  |  |  |  |  |
| Currently working | -0.138 | -0.736* | -0.436 | $-0.382^{* *}$ | $-0.450^{* * *}$ |
|  | (0.186) | (0.420) | (0.295) | (0.153) | (0.147) |
|  | [21,441] | [10,915] | [17,745] | [50,101] | [76,777] |
| Autonomous decisions |  |  |  |  |  |
| How to spend money | -0.121 | -0.321 | 0.100 | -0.074 | -0.018 |
|  | (0.154) | (0.451) | (0.287) | (0.133) | (0.135) |
|  | [16,950] | [5,278] | [9,218] | [31,446] | [46,759] |
| Own health care | 0.050 | 0.057 | 0.112 | 0.087 | 0.016 |
|  | (0.170) | (0.479) | (0.297) | (0.147) | (0.141) |
|  | [21,441] | [5,872] | [17,745] | [45,058] | [71,701] |
| Making large household purchases | 0.246 | -0.107 | 0.448* | $0.278{ }^{* *}$ | 0.141 |
|  | (0.171) | (0.371) | (0.267) | (0.136) | (0.124) |
|  | [21,440] | [ 5,870$]$ | [17,744] | [45,054] | [71,698] |
| Making daily household purchases | 0.075 | -0.352 | 0.547* | 0.189 | 0.132 |
|  | (0.190) | (0.507) | (0.320) | (0.157) | (0.151) |
|  | [21,441] | [ 5,868 ] | [17,741] | [45,050] | [61,739] |
| Visits to family or relatives | -0.023 | -0.262 |  | -0.075 | -0.128 |
|  | (0.198) | (0.458) |  | (0.184) | (0.177) |
|  | [16,660] | [ 5,033$]$ |  | [21,693] | [41,105] |
| Food to be cooked each day | -0.111 |  | 0.343 | 0.057 | 0.014 |
|  | (0.160) |  | (0.254) | (0.135) | (0.134) |
|  | [21,441] |  | [17,740] | [39,181] | [48,013] |
| Participation in decisions |  |  |  |  |  |
| How to spend money | 0.020 | -0.257 | -0.143 | -0.060 | -0.101* |
|  | (0.058) | (0.204) | (0.107) | (0.051) | (0.052) |
|  | [16,950] | [ 5,278 ] | [9,218] | [31,446] | [46,759] |
| Own health care | 0.243* | 0.128 | -0.024 | 0.158 | 0.062 |
|  | (0.125) | (0.343) | (0.243) | (0.112) | (0.108) |
|  | [21,431] | [5,868] | [17,735] | [45,034] | [70,603] |
| Making large household purchases | 0.097 | -0.836 | 0.435 | 0.105 | 0.026 |
|  | (0.163) | (0.523) | (0.276) | (0.134) | (0.126) |
|  | [21,374] | [5,864] | [17,731] | [44,969] | [70,418] |
| Making daily household purchases | 0.120 | -0.051 | 0.328 | 0.163 | 0.154 |
|  | (0.147) | (0.384) | (0.207) | (0.115) | (0.107) |
|  | [21,426] | [ 5,865 ] | [17,716] | [45,007] | [60,657] |
| Visits to family or relatives | 0.144 | -0.008 | 0.136 | 0.126 | 0.060 |
|  | (0.127) | (0.316) | (0.216) | (0.107) | (0.099) |
|  | $[21,070]$ | [ 5,857$]$ | [17,676] | [44,603] | [69,996] |
| Food to be cooked each day | 0.108 |  | 0.158 | 0.124* | 0.087 |
|  | (0.087) |  | (0.132) | (0.073) | (0.070) |
|  | [21,417] |  | [17,738] | [39,155] | [46,945] |

Note: Robust standard errors in parentheses. Number of observations in brackets. Control variables: age, age at first birth, and dummy variables indicating educational attainment (incomplete primary education, complete primary education, incomplete secondary education, complete secondary education, and complete higher education) and urban areas. If applicable, the regressions also include time and/or country fixed effects. ${ }^{*} p<0.1,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$.

Table 5b: Second Stage Estimates of Fertility Effects

|  | Colombia | Dominican Republic | Peru | Colombia, <br> Dominican Republic, Peru | All <br> Countries |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Wife thinks violence is justified |  |  |  |  |  |
| ... if she goes out without telling him | 0.098** | -0.046 | -0.051 | 0.009 | 0.102 |
|  | (0.048) | (0.137) | (0.129) | (0.058) | (0.087) |
|  | [11,014] | [10,887] | [9,299] | [31,200] | [57,634] |
| ... if she neglects the children | 0.153 | 0.002 | -0.008 | 0.057 | 0.148 |
|  | (0.105) | (0.187) | (0.169) | (0.086) | (0.104) |
|  | [11,013] | [10,880] | [9,301] | [31,194] | [57,666] |
| ... if she argues with him | 0.157*** | -0.120 | -0.167 | -0.019 | 0.056 |
|  | (0.058) | (0.096) | (0.108) | (0.043) | (0.068) |
|  | [11,018] | [10,881] | [9,292] | [31,191] | [57,579] |
| ... if she refuses to have sex with him | 0.095** | -0.071 | -0.051 | 0.002 | 0.046 |
|  | (0.043) | (0.088) | (0.091) | (0.039) | (0.062) |
|  | [11,006] | [10,880] | [9,271] | [31,157] | [57,519] |
| ... if she burns the food | 0.046 | 0.092 | -0.035 | 0.038 | 0.054 |
|  | (0.040) | (0.127) | (0.095) | (0.050) | (0.068) |
|  | [11,030] | [10,868] | [9,307] | [31,205] | [57,655] |
| Any of the above | 0.209* | 0.125 | -0.138 | 0.079 | 0.125 |
|  | (0.117) | (0.205) | (0.198) | (0.096) | (0.115) |
|  | [10,934] | [10,779] | [9,216] | [30,929] | [56,875] |
| Trust and control |  |  |  |  |  |
| Husband is jealous | $-0.715^{* *}$ | 0.670 | -0.429 | -0.531* | -0.586** |
|  | (0.322) | (1.415) | (0.727) | (0.299) | (0.287) |
|  | [10,849] | [4,118] | [8,240] | [23,207] | [29,794] |
| Husband accuses her of unfaithfullness | -0.229 | 0.107 | -0.866 | -0.302* | -0.293* |
|  | (0.173) | (0.872) | (0.659) | (0.170) | (0.164) |
|  | [21,036] | [4,135] | [8,266] | [33,437] | [40,129] |
| Husband does not trust her friends | -0.144 | 0.897 | -1.316 | -0.251 | -0.315** |
|  | (0.159) | (1.033) | (0.804) | (0.158) | (0.156) |
|  | [21,036] | [4,140] | [8,269] | [33,445] | [40,139] |
| Husband limits her contact to her family | -0.190 | 1.433 | -0.615 | -0.157 | -0.148 |
|  | (0.138) | (1.352) | (0.547) | (0.135) | (0.130) |
|  | [21,036] | [4,150] | [8,272] | [33,458] | [39,356] |
| No trust in where she is | -0.340 |  | 0.000 | -0.224 | -0.224 |
|  | (0.352) |  | (0.000) | (0.235) | (0.235) |
|  | [7,051] |  | [4,295] | [11,346] | [11,346] |
| No trust in how she manages money | -0.207 | -0.400 | -0.254 | -0.228 | -0.277* |
|  | (0.152) | (0.619) | (0.518) | (0.148) | (0.149) |
|  | [21,036] | [4,138] | [8,262] | [33,436] | [34,990] |
| Husband controls her about other issues | -0.244 |  |  | -0.244 | -0.244 |
|  | (0.183) |  |  | (0.183) | (0.183) |
|  | [21,441] |  |  | [21,441] | [21,441] |
| Number of controlled experiences | -0.716 | 2.675 | -3.368 | -0.913 | -1.008* |
|  | (0.565) | (3.815) | (2.528) | (0.576) | (0.568) |
|  | [21,036] | [4,153] | [8,275] | [33,464] | [40,169] |
| Experienced control at least once | -0.210 | -0.558 | -0.661 | -0.302 | -0.273 |
|  | (0.190) | (1.292) | (0.706) | (0.196) | (0.190) |
|  | [21,036] | [4,153] | [8,275] | [33,464] | [40,169] |

Note: See note to Table 5a.

Table 5c: Second Stage Estimates of Fertility Effects

|  | Colombia | Dominican Republic | Peru | Colombia, <br> Dominican Republic, Peru | All <br> Countries |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Emotional violence |  |  |  |  |  |
| Husband humiliates her | -0.587 | 1.649 | -0.875 | -0.276 | -0.345 |
|  | (0.520) | (1.593) | (0.608) | (0.317) | (0.269) |
|  | [2,379] | [4,153] | [8,277] | [14,809] | [21,515] |
| Husband threatens her |  | -0.008 | -0.470 | -0.349 | -0.382 |
|  |  | (0.544) | (0.400) | (0.332) | (0.302) |
|  |  | [4,153] | [8,277] | [12,430] | [15,909] |
| Husband insults her |  | 1.103 |  | 1.103 | -0.364 |
|  |  | (1.102) |  | (1.102) | (0.465) |
|  |  | [2,279] |  | [2,279] | [8,180] |
| Husband threatens to take children away | 0.015 |  | -0.790 | -0.186 | -0.186 |
|  | (0.126) |  | (0.550) | (0.146) | (0.146) |
|  | [10,178] |  | [8,277] | [18,455] | [18,455] |
| Physical violence |  |  |  |  |  |
| Pushed by husband | $-0.411^{* *}$ | 0.555 | -0.194 | -0.311** | $-0.356^{* *}$ |
|  | (0.169) | (0.821) | (0.309) | (0.146) | (0.142) |
|  | [21,036] | [4,153] | [14,848] | [40,037] | [46,743] |
| Slapped by husband | -0.232 | 0.703 | -0.980* | -0.287** | $-0.370^{* * *}$ |
|  | (0.149) | (0.798) | (0.586) | (0.139) | (0.137) |
|  | [21,036] | [4,152] | [8,277] | [33,465] | [40,170] |
| Punched by husband | -0.116 | 0.491 | -0.907 | -0.198** | $-0.241^{* *}$ |
|  | (0.093) | (0.657) | (0.552) | (0.099) | (0.099) |
|  | [21,036] | [4,153] | [8,277] | [33,466] | [40,172] |
| Kicked by husband | -0.151 | 0.200 | -0.688 | -0.211** | $-0.251^{* * *}$ |
|  | (0.100) | (0.352) | (0.438) | (0.097) | (0.094) |
|  | [21,036] | [4,152] | [8,277] | [33,465] | [40,171] |
| Strangled by husband | -0.058 | 0.031 | 0.164 | -0.022 | -0.011 |
|  | (0.065) | (0.273) | (0.167) | (0.058) | (0.056) |
|  | [21,036] | [4,151] | [8,277] | [33,464] | [40,170] |
| Threatened with a knife by husband | 0.012 | 0.308 | 0.109 | 0.045 | 0.035 |
|  | (0.080) | (0.398) | (0.142) | (0.070) | (0.068) |
|  | [21,036] | [4,151] | [8,277] | [33,464] | [40,170] |
| Attacked with a knife by husband | -0.043 | 1.632 | -0.048 | -0.022 | -0.025 |
|  | (0.056) | (4.411) | (0.098) | (0.051) | (0.050) |
|  | [21,036] | [1,874] | [8,277] | [31,187] | [31,992] |
| Force to have sex by husband | 0.050 | 0.179 | -0.502 | -0.022 | -0.111 |
|  | (0.098) | (0.478) | (0.356) | (0.092) | (0.094) |
|  | [21,035] | [4,152] | [8,277] | [33,464] | [40,170] |
| Forced to do anything by husband |  | 0.037 | -0.323 | -0.224 | -0.234 |
|  |  | (0.354) | (0.259) | (0.210) | (0.174) |
|  |  | [4,152] | [8,277] | [12,429] | [19,135] |
| Bitten by husband | -0.024 | 0.617 |  | 0.045 | 0.064 |
|  | (0.056) | (0.608) |  | (0.067) | (0.085) |
|  | [10,187] | [2,279] |  | [12,466] | [18,367] |
| Other physical violence | 0.084 |  |  | 0.084 | 0.066 |
|  | (0.070) |  |  | (0.070) | (0.084) |
|  | [10,849] |  |  | [10,849] | [12,746] |
| Any event of physical violence | -0.389** | 1.091 | -0.412 | $-0.330^{* *}$ | $-0.430^{* * *}$ |
|  | (0.176) | (1.188) | (0.338) | (0.155) | (0.156) |
|  | [21,036] | [4,153] | [14,848] | [40,037] | [46,743] |

Note: See note to Table 5a.


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[^1]:    ${ }^{1}$ Adsera and Menendez (2011) show a substantial decline in total fertility rates in some of the most populated countries in the region between the 1970s and the mid 1990s. In the sample of 18 countries considered in their study, the average total fertility rate declined from 5.5 in the 1970s to 3.4 in 1995. These trends are set to continue as implied by projections of the United Nations, which estimate that the total fertility rate in the region is around 2.4 for the period 2005-2010 (CEPAL, 2008).

[^2]:    ${ }^{2}$ They conclude that the reduction in fertility over the last three decades in Argentina explains 18 percent of the increase of women's participation in the labor market. They observe a similar decline of 16 percent in Mexico over the same period.

[^3]:    ${ }^{3}$ Limited and descriptive evidence suggests a positive association between intimate partner violence and family size (see Flake and Forste, 2006, and references herein). Studies that look at other forms of empowerment, such as gender attitudes and joint decision making, have not been able to estimate the causal relationship (Kishor and Subaiya, 2008).

