Minimum wage and women's decision making power within households: Evidence from Indonesia

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Abstract

We estimate the effects of the minimum wage on women's intrahousehold bargaining power in Indonesia. Using province-specific minimum wage increases in Indonesia from 2000-2014 and a sample of married household heads and their spouses from a panel of Indonesian households, we implement a method that exploits differences in minimum wages between geographically proximate districts located near the border between separate provinces. We exploit survey responses regarding participation in household decisions as a proxy for bargaining power. We find that the minimum wage has a negative and statistically and economically significant effect on married women's bargaining power. We provide evidence that this negative effect is due to a relative improvement in labor market opportunities for married men compared to their wives in response to a minimum wage increase. Consistent with this explanation we find large negative effects of the minimum wage on bargaining power for households where the wife is less educated and positive effects for households where the wife is more educated. We show that these results are robust to various specification choices.

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1. Introduction

Economists and policy makers increasingly agree that reducing gender inequality and empowering women are top priorities in economic development. The World Bank and the United Nations, among other major development institutes, recognize this as a key development goal. Duflo (2012) surveys an extensive literature showing a complex interdependence between gender equity and women's empowerment and economic development. Empowering women and reducing gender inequality has been found to improve development outcomes such as fertility choice, welfare of children, labor force participation and labor productivity. And economic development, in some cases, has been found to promote the empowerment of women. These empirical findings have been supported by renewed interest in the development of theoretical models of household decision making. While the labor market environment plays an important role in these theoretical models, the empirical research is mostly limited to studies of well-targeted social welfare policies that identify causal effects through randomized controlled trial or natural experiments rather than studies of the impact of broad-based labor market policies.[1] This is particularly the case in the context of developing countries.[2]

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[1]See Doss (2001), Duflo and Chattopadhyay (2004), Allendorf (2007), Osmani and Khan (2007), Qian (2008), Anderson and Eswaran (2009), Ashraf (2009), Antman (2014), Jensen (2012), Heath (2014), de Brauw et al. (2014).

[2]An important exception is Majlesi (2016) who finds that shocks to labor demand for female labor have

One of the most widely implemented labor market policies both in developed and developing countries is the minimum wage. There is an extensive literature on the effect of the minimum wage on employment (see Congressional Budget Office, 2014 and Neumark and Wascher, 2015 for surveys) and on the wage distribution (see, for example, Neumark et al. 2004). While this literature focuses more on developed countries, and specifically the U.S., there is also ample evidence regarding the effects of minimum wage increases in developing countries, where the minimum wage is typically not binding for a large proportion of workers employed in the informal sector, and where the minimum wage tends to be closer to the average formal sector wage than it is in the U.S. (see, for example, Lemos, 2009 and Magruder, 2013).

Several studies have found that the minimum wage has a differential impact on men and women in the labor market (Blau and Kahn, 2003; Botero et al., 2004; Rubery and Grimshaw, 2011; Hallward-Driemeier et al., 2015; and Majchrowska and Strawinski, 2018, among others). The majority of the evidence points to a narrowing of the gender wage gap as the minimum wage increases because women's wages are more likely than men's to be at or near the minimum wage. However, the textbook treatment of minimum wages as a price floor under perfect competition suggests that the reduction in the gender wage gap due to the minimum wage is potentially offset by a reduction in full time employment among women. Rubery and Grimshaw (2011) argue instead that employers enjoy monopsonistic power in the labor market and women tend to have less bargaining power for negotiating a higher wage due to various reasons, including their lack of bargaining power within the household, which limits their mobility. According to this argument, the wage gap narrows in response to a minimum wage increase, even accounting for any employment effects. However, wage gap studies tell us little about the impact of minimum wage policies on women who do not participate in the labor market or who work in the informal labor market where the minimum wage is not enforced. This is particularly problematic in countries where there is

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a positive effect of women's intrahousehold bargaining power.

a large informal labor market and/or women's labor force participation is low.

To address this problem, in this paper we study the effect of the minimum wage on married women's intrahousehold bargaining power in Indonesia. In models of household decision making the spouses' threat points – defined as a counterfactual utility outside of the marriage – determine their intrahousehold bargaining power; see Manser and Brown (1980), McElroy and Horney (1981), Browning and Chiappori (1998), Pollak (2005), and Heath and Tan (2015), among others. Thus, married women may be affected by the minimum wage even if they do not participate in the labor force because the minimum wage affects their threat points, and their husbands' threat points, through its impact on labor market opportunities. In Indonesia, the labor force participation rate for women is substantially lower than for men. Moreover, women who work are more likely than men to work in the informal sector. Therefore, it is plausible that, even if the average wage gap narrows in response to a minimum wage increase (Hallward-Driemeier et al., 2015), the average married woman still loses bargaining power at home as her threat point is not substantially changed relative to her husband's if taking a job in the formal sector is not a real threat. The impact of the minimum wage, or other labor market policies, on intrahousehold bargaining power is important to the extent that increased bargaining power for married women represents increased women's empowerment, which is a policy goal itself. But it also matters because this increased empowerment could impact other outcomes, such as improving children's health (Duflo, 2003, among others) and reducing domestic violence (Aizer, 2010).

We measure women's intrahousehold bargaining power using decision making indicators that consist of responses when asked who in the household makes decisions regarding different activities. This survey instrument has been used by several others to proxy for household bargaining power (Antman, 2014; Atkin, 2009; Friedberg and Webb, 2006; Majlesi, 2016). Friedberg and Webb (2006) find that for women in the US intrahousehold decision making is positively impacted by their current and past earnings and negatively affected by their husbands' current and past earnings. Using panel data from the Mexican Family Life Survey,

Antman (2014) shows that married women's work status increases their probability of being involved in household decisions regarding large purchases. Majlesi (2016) finds that exogenous shifts to women's labor market opportunities in Mexico increase women's participation in a range of intrahousehold decisions.

Our main identification strategy exploits variation over time in differences in the minimum wage between geographically proximate districts located near province borders in Indonesia, where minimum wages are set regionally. The difference in spatial differences (DSD) estimator that we use generalizes the more common difference in differences estimator by focusing on relative changes over time locally at province borders. We adopt the DSD methodology in this study in part because Magruder (2013) found that DSD estimates were not always consistent with difference-in-differences estimates. Using the DSD estimator and minimum wage data from Indonesia, Magruder (2013) found evidence of a positive effect of the minimum wage on formal sector employment and argued that difference-in-differences estimates were biased because minimum wages are set endogenously at the province level in Indonesia.

Indonesia provides a fruitful testing ground to investigate the effect of the minimum wage on intrahousehold decision making. We use a sample of married couples from waves 3, 4 and 5 of the Indonesian Family Life Survey (IFLS), a household level panel dataset, which contain data from the years 2000, 2007, and 2014. During this period in Indonesia, the minimum wage is set at the province level each year, resulting in wide variation over time and across provinces. Furthermore, as noted above, this is a setting in which the effect on women's empowerment and gender equity is likely not fully captured by the effect on the gender wage gap, due to the low labor force participation rates, and low rates of employment in the formal sector, of women relative to men in Indonesia

Our main finding is that the minimum wage has a negative effect on married women's intrahousehold bargaining power. The minimum wage has a negative and significant effect on their role in several dimensions of household decision making – decisions about sending

money to parents, and buying clothes, and the use of contraception. We argue that this can be explained by a positive effect of the minimum wage on married men's labor market opportunities relative to labor market opportunities for their wives. Thus, at least on average, women's bargaining power decreases as their relative threat point is diminished. To the best of our knowledge, this is the first paper that studies the empirical relationship between minimum wage policy and household decision making.

We also find, using the same DSD strategy, that earnings of men increase in response to a minimum wage increase while women's earnings do not. We further find a change in the type of work men and women do in response to a minimum wage increase. These findings have two important implications. First, they are consistent with the explanation that married women lose bargaining power because their outside option does not improve as much as their husbands'. Second, they provide additional evidence – beyond the evidence regarding decision making – that the minimum wage does not universally improve women's empowerment or gender equity, despite previous findings that it reduces the wage gap, at least in the manufacturing sector in Indonesia (Hallward-Driemeier et al., 2015). This is in line with Duflo (2012) who argues that economic development policies do not necessarily bring about gender equity as a side effect.

We find substantial heterogeneity across households in the effect of the minimum wage, which is not suprising given the nature of the labor market in Indonesia. In our data, 37% of women do not work and only 20% of working women work full time in the formal sector.[3] By contrast, 96% of men work and 36% of those work full time in the formal sector. We find that the negative minimum wage effect on women's bargaining power is stronger when considering only the sample of households where the husband works full time in the formal sector and also when restricting to the sample of households where the wife primarily engages in "unpaid family work". These results are consistent with our proposed explanation

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[3]We define full time work as at least 35 hours per week. We use an imperfect proxy for formal sector employment, which is discussed further in Section 3.

for the main finding of a negative effect of the minimum wage on women's bargaining power because in these households the husband is more likely to benefit relative to his wife from a minimum wage increase. However, we find that it is not uncommon for workers to transition between the formal and informal sector so that restricting the sample in this way could introduce endogeneity in our analysis. Moreover, standard models of the household suggest that household decision making should not necessarily be affected by observed labor market outcomes, such as participation or sector choice, because intrahousehold bargaining power is determined by their *counterfactual* labor market outcomes via threat points. Thus, ideally we would restrict the sample to households where the wife's threat point entails employment in the formal sector. Since this is not possible, we instead restrict the sample by women's education level because more educated women are more likely to work in the formal sector if they choose to participate in the labor force. We find that women with a high school degree benefit as much, if not more, than men from minimum wage increases and household decision making is not significantly affected by the minimum wage in these households. The negative effect of minimum wage on women's bargaining power is isolated among less educated women. Magruder and Kleemans (2018) similarly find disparate impacts of internal migration on the Indonesian labor market by skill level and model this as a product of the large unregulated informal sector.

The following section will be devoted to discussing the labor market in Indonesia with a focus on the minimum wage and labor market environment by gender. In Section 3, we discuss the data and empirical strategy. Section 4 presents our main empirical results and robustness check and we conclude in Section 5.

2. Background on minimum wages in Indonesia

The unique history of minimum wages in Indonesia allows us to test our main hypothesis and explore the underlying mechanisms but also suggests the potential for endogeneity in standard regression estimates. A minimum wage law in Indonesia has been on the books since

1970, though it was largely unenforced before 1990. In the late 1980s, Indonesia experienced international pressure due to its low wages and worker exploitation, and minimum wage levels started to grow in response (see Harrison and Scorse, 2010, and Rama, 2001, for a more detailed discussion). During the 1990s the real minimum wage increased dramatically before stalling as nominal increases failed to keep up with high levels of inflation during the Asian financial crisis in 1997. Beyond its impact on the decline of real minimum wage, the Asian Crisis also served as a shock that provided the political and economic impetus that led to the demise of Suharto, the dictator in Indonesia from 1967 to 1998, and the subsequent political transformation that led to the enactment of the decentralization laws of 1999. These laws allowed each local government to make autonomous policies in consideration of the local economy, including the determination of minimum wage rates. After the economy recovered from the crisis in 2001, the upward trend in the real minimum wage recovered and has since shown a consistent increase (Del Carpio et al., 2015). Figure 1 shows the resulting variation in real minimum wages across provinces from 1993 to 2014.

The variation in minimum wages across provinces is a potential source of endogeneity for regression analysis, as suggested by Magruder (2013). Our concern is based on the purpose of the minimum wage law in Indonesia which is specified in the Ministry of Manpower's regulation. Though the regulation about the labor market has gone through revisions over the years, the core purpose of the minimum wage law stayed intact. For example, Ministry of Manpower's regulation No.01 of 1999 stipulates the purpose of the law in the following way:

1. In order to materialize decent income for workers, some considerations are taken into account that includes raising the welfare of workers without ignoring company's productivity and its advancement as well as a consideration on general economic conditions.

2. Determination of realistic regional and sectoral minimum wage should take into account some aspects such as company's capability to pay, conditions of the sector in which the company operates and the regional economy where the firm is located, it is also necessary

to determine regional and sectoral minimum wage.

Likewise, Ministry of Manpower's regulation in 2014 says:

Worker/labor wages might fall to the lowest level as a result of labor market imbalance. Therefore, it is necessary to harmonize the minimum wage policy to ensure the continuity of businesses and improve the living standard of workers/laborers.

Considering the purpose of the minimum wage law stipulated in Manpower's regulation, it is clear that its aim is not only to raise the welfare of the workers, but also to guarantee the betterment of firm's productivity and to sustain economic growth of the local economy. As a result, the minimum wage is carefully set with substantial consideration given to regional labor market conditions. Thus relative changes over time between provinces in minimum wage may be endogenous, suggesting a potential bias in standard province level difference in differences estimates. Our identification strategy instead leverages minimum variation between districts along province borders, minimizing this concern to the extent that provinces target the minimum wage to economic conditions in the province as a whole and not specific districts within the province.[4]

Several empirical studies have exploited variation in minimum wages in Indonesia to study labor market outcomes. Rama (2001), Suryahadi et al. (2003), Alatas and Cameron (2008), and Comola and de Mello (2011) use difference-in-differences approaches that exploit variation over time within province in the minimum wage. Some have used individual level panel data (Hohberg and Lay (2015), Hallward-Driemeier et al. (2015), Del Carpio et al. (2015)) controlling for the individual fixed effect, assuming that the correlation between minimum wage and labor market conditions is not a serious concern for endogeneity. Noting the potential for endogeneity discussed above, Magruder (2013) introduces the econometric method we use in this paper, which uses more local spatial variation in minimum wages to control for the time-varying province-level labor market conditions.

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[4]While some districts impose a higher minimum wage than that set by their provincial government we use only the minimum wage set by the province for our analysis. Using the district level minimum wage could reintroduce bias if they are set endogenously, as we might expect.

Among these, the only paper that focuses primarily on the effect of the minimum wage on gender equity is Hallward-Driemeier et al. (2015).[5] Hallward-Driemeier et al. (2015) provide evidence that the minimum wage hike narrowed the average gender wage gap between men and women working in the formal manufacturing sector between 1996 and 2006. However, the manufacturing sector represents only roughly 10 percent of the population and does not represent the general population, according to the IFLS data. Moreover, their analysis does not consider the impact of minimum wage on women who do not participate in the labor force.

3. Empirical implementation

3.1. Data

The primary data source for our analysis is the Indonesian Family Life Survey (IFLS). We use waves 3-5 of the survey, conducted in 2000, 2007, and 2014. In all three waves, households were administered survey questions regarding household decision making.[6] The data covers 83% of the total population and contains over 30,000 individuals living in 21 out of the 34 provinces. The IFLS is known for its lower level of attrition, and it collects data both on individuals and households, allowing us to construct individual level panel data and conduct the research on household decision making processes. The data set we use for our regression analysis includes 42,122 observations from 12,307 married couples.[7] For this sample of married couples we construct various labor market outcomes and decision making indicators for each individual. We annualize the self-reported income variables to be consistent with minimum wages prescribed by law for annual wage income. We also adjust

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[5]Comola and de Mello (2011) and Hohberg and Lay (2015) also provide some results by gender.

[6]The household decision making questionnaire was not administered in wave 1 of the survey. We exclude data from wave 2, which was conducted in 1997, from our analysis because of a concern that both the determination of minimum wages and other economic trends differed markedly before 2000 due to the Asian crisis, the fall of Suharto, and the subsequent decentralization. Incorporating data from wave 2 could invalidate the parameter constancy assumptions implicit in our empirical model.

[7]We first restrict the sample to only include the head of household or the head's spouse. We then restrict the sample further to only households where both spouses responded to the survey. For household decision making variables, we initially consider only the women's responses but we later show that our results are robust to replacing these with the husbands' responses in cases where the spouses disagree.

income and wages by a province level CPI published by the Indonesian Central Bureau of Statistics (BPS).[8]

Table 1 presents the cross-sectional descriptive statistics on the characteristics of the sample separately by gender and by survey year. We report three income variables that will be used later in the analysis. The first is coded as missing for anyone who does not report a positive wage income or self-employment income. For those reporting positive income of either type, this variable is the sum of any positive wage income and any positive self-employment income. The second variable records any positive wage income and is coded as missing for those who do not receive any positive wage income (including the self-employed). The third income variable is non-missing for any observation for which we can infer a income, even if it is zero income. Thus, for those who report not working this variable is zero. It is also zero for individuals who report working but indicate that their primary activity is the category of "unpaid family work" and report no wage or profit income. It is missing for those who report that they do work (but not primarily unpaid family work) yet do not report an income. For all others, it is the sum of wage and profit income from self-employment.

The panel is not balanced so that changes over time in the summary statistics represent, in part, changes in the composition of the sample. Nevertheless, the statistics reveal a number of contrasting characteristics on labor market outcome by gender. One pattern we observe from our data is that only about 60% of women work, though this jumps to nearly 66% in 2014. Moreover, the primary employment of 15-20% of these women is unpaid family work.[9] By contrast, 96-97% of men in the sample work, with only 1% from unpaid family work. The gap in labor force participation remains large over the three years under analysis. This is striking given that the gap in the average education level between men and women

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[8]We use CPI to deflate nominal income, household asset and nominal minimum wages. The BPS provides constructed CPI for different cities across the country. Matching the CPIs of the capital city with each province, we have created a CPI measure for provinces across years. We use 2007 as the base year.

[9]Respondents who report working are asked to categorize their primary job and any secondary job. This is the variable we use to distinguish between formal sector and informal sector employment. One of the possible categories is "unpaid family work". Unless otherwise noted, we consider unpaid family work as informal sector employment.

in the sample narrows substantially from 2000 to 2014.[10] Lastly, far more men than women report that their main job involves formal sector work (32-38% vs. 11-12%) though men and women report part-time formal sector employment at similar rates.[11]

Figure 2 plots the distribution of total earned income relative to the minimum wage by gender and year and Figure 3 plots the distribution of wages among full time formal sector workers relative to the minimum wage by gender and year. One feature that is evident is that there is a substantial proportion of both men and women earning less than the minimum wage.[12] Even among full time formal sector workers there is a substantial fraction reporting earnings below the minimum wage. This is common in developing countries, in contrast to developed countries where the minimum wage is typically at the bottom in the income distribution, and is the result of the inability of provincial governments in Indonesia to strictly enforce the minimum wage. In addition, there is clear evidence in Figure 3 of bunching in the wage distribution just above the minimum wage for both men and women, suggesting that the minimum wage is binding. However, a larger fraction of women than of men, both overall and in the formal sector, earn below the minimum wage. This provides some motivation for our analysis as it makes it apparent that minimum wages are binding to some extent but differentially affect men and women.

In the IFLS, the head of household and their spouse are asked who participates in various different categories of household decisions. The decision areas are: money given to the husband's parents and extended family, money given to the wife's parents and extended

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[10]This pattern is consistent with the National Labour Force Survey (SAKERNAS). See Schaner and Das (2016).

[11] Here, and throughout the rest of the paper, we define the formal sector as those who report working for a private company or the government. Informal sector workers are those who report being self employed or engaging primarily in casual work. We consider full time employment to be 35 hours or greater per week.

[12]We calculate total earned income by adding wage and profit from self employment. In our data, 60 percent of the respondents earned wage; 38 percent profit earner; 32 percent are both wage and profit earner; and 68 percent of the respondents earn income.

family, large expensive purchases, gifts for parties and weddings, husband's clothes, wife's clothes, money contributed to the arisan,[13] money contributed to monthly savings, children's clothes, children's education, children's health, contraception, and labor force participation of the spouse. Each type of decision could be made by a single household member or jointly with other household members. For each type of decision, we construct a binary indicator for whether the wife is reported to be one of the decision makers in the household decision.[14] Table 2 provides descriptive statistics for these variables, as reported by the women in our sample. There is substantial variation over time and across different decision categories in the percentage of households in which the woman is involved in decision making. Across all decision categories this percentage increases from 2000 to 2007 but drops after 2007, though this drop is more dramatic for some categories (money given to family, large expenses, and contraception) than others (routine purchases and the wife's and children's clothing).[15]

To motivate further analysis, Table 3 presents results from fixed effects regressions for each decision area and for two averages of these decision indicators.[16] According to these results, there is a negative and significant effect of the minimum wage on decisions regarding providing money to the husband's family, gifts for parties, money for the monthly arisan, money for monthly savings, children's education, and children's health. No decision areas exhibit a positive and significant effect. The effect is largest for monthly savings where a 10 percent increase in the minimum wage causes a decrease of 1.4 percentage points in the probability that the wife participates in decisions regarding savings. Overall, these preliminary results suggest a clear negative effect of the minimum wage on women's bargaining power.

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[13]The arisan is a form of Rotating Savings and Credit Association in Indonesian culture, a form of microfinance.

[14]This is in line with the measurement of women's empowerment through deprivations (Alkire et al., 2013).

[15]In unreported results we find that this decrease in married women's participation in household decisions from 2007 to 2014 is present regardless of education level, income, or sector or occupation, though the magnitude of the decrease varies.

[16]We estimate separate regressions with each of the decision-making variables as the dependent. Each regression controls for household assets belonging to wife and to husband, a dummy variable for urban/rural residence, a quadratic in age, a quadratic in education, and a quadratic in education of spouse and includes both individual fixed effects and year fixed effects, and clusters standard errors at the province level.

3.2. Main empirical strategy

The fixed effects specification in Table 3 controls for individual characteristics that may be correlated with minimum wages at the province level. However, one might worry that there are province-specific time trends, in household decision making or in the labor market outcomes that we also investigate, that are correlated with trends in the minimum wage. Indeed, given the way that minimum wages are set as described in Section 2 it seems likely that minimum wage changes are correlated with changes in economic conditions. Therefore we use a strategy, proposed by Magruder (2013), that is based on variation in the minimum wage between districts which are on opposite sides of a province border. These districts are subject to different minimum wages but plausibly share local markets and we expect trends in outcomes to be roughly the same in such districts, absent a difference in the minimum wage. Moreover, if these trends differ then the correlation with changes in the minimum wage should be substantially smaller than the correlation between province level trends and changes in the minimum wage given that minimum wages are set at the province level, not the district level, thus mitigating the bias present in the fixed effects regressions if not eliminating it entirely.

Figure 4 compares districts on opposite sides of the province borders.[17] Each panel plots a local polynomial regression of an outcome variable on the distance to the nearest district in a different province, where a positive distance indicates that the nearest such district has a lower minimum wage and a negative distance indicates that the nearest such district has a higher minimum wage. In other words, observations with a positive distance indicate individuals who live in a district that has a higher minimum wage than the nearest district that is in a different province. This is similar to a figure shown in Magruder (2013) to motivate the spatial analysis. In panel (a) the dependent variable is the average of ten of the decision making indicators, which we interpret as a proxy for women's bargaining power.

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[17]Figures 5-7 add confidence bands to these estimates. Confidence bands were left out of this figure to improve the presentation and because these figures are provided for motivation and are not the main results of our analysis.

We do not see a clear negative effect of minimum wage, unlike the fixed effects regression results in Table 3. There seems to be a negative effect in 2000 but a positive effect in 2007 and 2014, though these effects dissipate quickly as the distance to the nearest alternative minimum wage district increases. Panel (b) shows a similar pattern for the average of the three decision indicators regarding children. Panel (c), however, indicates that women on the high minimum wage side of the border are less likely to play a role in decisions regarding giving money to the husband's parents in each of the three years. These figures should be interpreted with some caution for two reasons. First, they do not allow for a district specific effect that is differenced out by the DSD estimator. Second, they do not use the full variation in minimum wages. That is, at some borders the minimum wage disparity may be higher than at others and the average size of this disparity may change as we increase the distance in these figures.

Our main empirical specification can be written as

$$y_{ist} = \beta' X_{ist} + \gamma W_{st} + \delta_{st} + \alpha_s + u_{ist}, \tag{1}$$

where y_{ist} is the dependent variable of interest for individual i residing in district s at time t, W_{st} is the log real minimum wage in district s at time t, and X_{ist} is a vector of controls—a polynomial in age, educational attainment, value of the household asset belonging to wife and to husband accordingly, and the dummy variable for being in a rural or urban area. The unobservable, $\delta_{st} + \alpha_s + u_{ist}$, consists of α_s, a district fixed effect that can vary discontinuously between spatially proximate districts, δ_{st}, a district-specific time trend that captures time-varying local labor market characteristics that will be assumed to vary smoothly over space, and an idiosyncratic shock, u_{ist}.

The district fixed effect, α_s, is included to control for economic, cultural, and institutional differences across districts that may be correlated with the minimum wage level, or changes in the minimum wage. The district-specific time effects more generally allow for selection

on changes over time rather than just levels. If changing labor market conditions and/or cultural attitudes, which affect labor market outcomes and household decision making, play a role in the setting of the minimum wage then a difference-in-differences regression estimator with $\delta_{st} = \delta_t$ would be biased. We are particularly concerned about the possibility of district-specific time trends that may be correlated with changes in the minimum wage at the province level, given that minimum wages are set on the province level in response to the province's labor market conditions, as described in the previous section.

It is not possible to estimate the model of equation (1) without restrictions on δ_{st} as variation in W_{st} cannot be separated from variation in δ_{st}. We assume that for any districts s and s', district-specific time trends are shared as the geographic distance between districts s and s' goes to 0 (that is, $\delta_{st} - \delta_{s't} \to 0$ as $d(s, s') \to 0$ where $d(s, s')$ is a measure of geographic distance.). Thus, given that minimum wage is set at the province level, not the district level, identification of γ is based on minimum wage variation between neighboring districts on the border between two different provinces, conditional on the individual level characteristics. Let $\widetilde{X}_{ist} = (X'_{ist}, d_{i1t}, \ldots, d_{iSt})'$ denote the individual-level covariate vector including district dummies indicating where individual i lived in period t and let $\widetilde{\beta} = (\beta', \alpha_1, \ldots, \alpha_S)'$. Then $\widetilde{\beta}'\widetilde{X}_{ist} = \beta'X_{ist} + \alpha_s$. Then, according to equation (1), the local spatial variation in outcomes can be written as

$$
y_{ist} - \frac{1}{n_{st}(\epsilon)} \sum_{i',s':d(s,s')<\epsilon} y_{i's't} = \widetilde{\beta}'\left(\widetilde{X}_{ist} - \frac{1}{n_{st}(\epsilon)} \sum_{i',s':d(s,s')<\epsilon} \widetilde{X}_{i's't}\right) \tag{2}
$$

$$
+ \gamma\left(W_{st} - \frac{1}{n_{st}(\epsilon)} \sum_{i',s':d(s,s')<\epsilon} W_{i's't}\right)
$$
$$
+ \left(\delta_{st} - \frac{1}{n_{st}(\epsilon)} \sum_{i',s':d(s,s')<\epsilon} \delta_{i's't}\right)
$$
$$
+ \left(u_{ist} - \frac{1}{n_{st}(\epsilon)} \sum_{i',s':d(s,s')<\epsilon} u_{i's't}\right),
$$

where $n_{st}(\epsilon)$ denotes the number of individuals in districts within a distance ϵ of district s in year t. If ϵ is chosen so that the local time trends, δ_{st}, are the same for districts within

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the radius ϵ then the third term on the right-hand side is negligible and a valid estimator is obtained by estimating a regression in spatial differences of y_{ist} on $\widetilde{X}_{ist}$ and W_{st}. This would be the case, for example, if these districts share endogenous labor market conditions. Alternatively, this can be viewed as a nonparametric estimator, where ϵ is a bandwidth parameter, that will be consistent as long as the local time trends are not discontinuous at the province border. This is the difference in spatial differences (DSD) estimator of Magruder (2013), applied to individual level data. It is also similar to the empirical approaches of Goldstein and Udry (2008) and Dube et al (2010).

The DSD method allows for the possibility that changes in minimum wages are correlated with changes in local labor market conditions, which affect other determinants of household decision making on the district level. Because minimum wages are set at the province level, this difference in spatial differences method utilizes the relative changes in outcomes in districts near province borders where the real minimum wage in the province on one side of the border increases relative to the real minimum wage on the other side of the border. The method cannot, however, account for a discontinuity in the time trend in district level labor market conditions and other determinants of household decision making at these province borders, as it attributes any such discontinuity in outcomes to the relative change in minimum wage. Our DSD estimates will be biased if such discontinuities are correlated with the relative changes in minimum wages. This source of endogeneity seems unlikely as minimum wages are set on the province level in response to province-wide conditions and not in response to conditions at the border.

For computing standard errors we follow the lead of Magruder (2013). We employ the method of Conley (1999) for clustering at the policy group (province/minimum wage regime) level and allowing for spatial autocorrelation. Even if there is no spatial autocorrelation in the raw data, it is induced by the spatial differencing if there is not a large number of districts satisfying $d(s, s') < \epsilon$. The somewhat small number of clusters might raise concern over the validity of the standard errors, in which case one can use the t_{G-2} critical values where G

denotes the number of clusters. Most of our results are robust to the use of these more conservative standard errors.

3.3. Additional empirical specifications

Despite the appeal of the DSD methodology, there is some criticism that, by focusing on variation near province borders, it uses a set of control observations that are not clearly to be preferred over others (Neumark, Salas, and Wascher, 2014). Therefore, we also present results of two additional empirical specifications. The first is the following fixed effects specification.

$$y_{ist} = \beta' X_{ist} + \gamma W_{st} + \delta_t + \alpha_s + u_{ist} \qquad (3)$$

We refer to the within estimator based on this specification as the difference-in-differences (DD) estimator. The second alternative specification is the spatial differencing (SD) estimator based on the specification

$$y_{ist} = \beta' X_{ist} + \gamma W_{st} + \delta_{st} + u_{ist}, \qquad (4)$$

The SD estimator is based on the premise that any discontinuity at the province border must be due to the difference in minimum wages. However, the SD estimator is biased if there are province level fixed effects that are correlated with minimum wages. Such province level fixed effects would not bias the DSD estimator or the DD estimator, however.

4. Results

In this section, we first study the impact of the minimum wage on household decision making. Subsequently, we look at the effect of the minimum wage on labor market outcomes by gender and on individual dimensions of household decision making. Standard models of the household suggest that existing labor market conditions are an important determinant

of household decision making processes. The collective model of the household (Browning and Chiappori, 1998) and other cooperative models (Manser and Brown, 1980; McElroy and Horney, 1981; Heath and Tan, 2015) suggest that the minimum wage affects households in two ways. First, for households where one or both spouses' (potential) wages are affected by the minimum wage increase, there are the usual substitution and income effects of a wage increase. Second, the minimum wage increase can affect bargaining power within the household. A common explanation for the effect on bargaining power is that bargaining power is determined by threat points, which are defined as the counterfactual utilities the spouses would obtain outside of the marriage. Thus, bargaining power within the household can be affected by a minimum wage increase even if neither the actual work hours nor the wage for either spouse actually changes. The effect on bargaining power is due to the minimum wage's effect on the labor market opportunities *available* to both spouses. By using a proxy for bargaining power in our analysis we are able to directly identify the second impact of the minimum wage on households.

4.1. Main results

We now present our main empirical findings. As discussed in Section 3, the DSD estimator we implement is robust to district-specific time effects that are shared by nearby districts, or that vary smoothly between nearby districts, addressing the potential for endogeneity in how minimum wages are determined. However, this method requires specification of a bandwidth, or radius. To explore robustness of our results to the choice of bandwidth, we show results for 25, 30, 35, 40, 60, and 80 miles. Here and in all other DSD results in the paper, we measure the distance between districts using the centroid method.[18] We find that

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[18]Geographical coordinates for each district were determined from internet resources. We defined the distance between any two districts separately for each year because the district definitions changed in some cases from 2000 to 2014, primarily due to cases where one district was split into multiple new districts. We mapped district codes over time using resources from BPS.

a bandwidth less than 40 miles results in too little spatial variation in the minimum wage.[19]

We first report results for two decision making indices. The first index is the unweighted average of the responses for each of the decision areas, excluding only the three variables pertaining to decisions involving children. This index measures the proportion of these decisions in which the wife reports participating, and we intepret it as a measure of the wife's bargaining power in the household. The second index that we create is the average of the responses to the three variables for decisions involving children. Averages of household decision-making indicators have been used in other work as proxies for bargaining power. Majlesi (2016), for example, argues that such indices measure which spouse's preferences are reflected in the decisions made by the household so that variation in the index should be interpreted as variation in intrahousehold bargaining power. This could formally be modeled as a threshold-crossing mechanism where the wife reports that she participates in the decision making if her bargaining power exceeds a certain level, where this threshold may vary across decision areas.

Alternative models might suggest more caution in interpretation of the household decision making variables as proxies for bargaining power. For example, suppose that participating in decision making entails some cost. Then the wife may be more likely to make, or participate in, a decision if making the decision is less costly to her than it is to her husband, either because she has expertise that he lacks or because making the decision involves a time cost and her market wage is lower. According to such a model we might expect to see an increase in the wife's role in decision making, at least in some decision areas, at the same time as a decrease in her bargaining power if her time spent in household production increases.

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[19] Magruder (2013) uses bandwidths of 15, 25, and 50 miles. While he does not specify what distance metric he uses, it seems apparent that he uses a method that results in shorter distances between districts, and this is likely why we find less variation at lower bandwidths.

Decisions involving children, in particular, may be a poor signal of the wife's bargaining power.

Results for the two decision making indices are reported in Table 4. In this table we reports DD and SD estimates alongside estimates from our preferred DSD specification. For the SD and DSD estimates we use a bandwidth of 40 miles. First, there is a positive and statistically significant effect of wife's assets and education level and either a negative or statistically insignificant effect of husband's assets and education level. This is consistent with the interpretation that the wife is more likely to be involved in decision making the greater her intrahousehold bargaining power is, where this bargaining power is determined by her threat point or outside option relative to her husband's, and her threat point is positively affected by her assets and education level and her husband's threat point is positively affected by his assets and education level.

Second, in our preferred specification in column 3, there is a negative and statistically significant effect of the minimum wage on the wife's decision making. A ten percent increase in the minimum wage is associated with a .24 $(= ln(2) \cdot 0.035 \cdot 10)$ percentage point decrease in the proportion of decisions in which the wife participates. Relative to a mean of 89 percent of decisions where the wife is involved, this is a small but not economically insignificant effect given that changes in the minimum wage in Indonesia are much larger than ten percent in some cases over this time period. The estimate from the DD specification, in column 1, is similar but the SD estimate is statistically and economically insignificant, suggesting district level fixed effects in decision making that are correlated with minimum wage *levels*. The results in columns (4)-(6) suggest that the wife's participation in decisions involving children is not affected by the minimum wage on average, given that the DD result is not robust to the methods based on spatial variation.

A possible interpretation of these results is that women see a decrease in bargaining power when the minimum wage increases due to a relative increase in their husband's outside option. Perhaps this is not reflected in the decisions involving children because, on average, women

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in the sample spend more time caring for their children when the minimum wage increases. That is, decisions related to care of children are not good proxies for bargaining power, as they may be influenced by the minimum wage in other ways as well.

4.1.1 Labor market outcomes by gender

We next look at the effect of the minimum wage on labor market outcomes for the same sample of married heads of household and their spouses. The reason for our focus on labor market outcomes in this section is two-fold. The first reason is to find evidence that men's outside options do in fact increase with the minimum wage relative to their wive's outside options. The second reason is to provide further evidence regarding the effect of the minimum wage on gender equity and women's empowerment. As we are interested in the overall effect of the minimum wage on households, the sample not only includes formal sector workers who work full-time (working hours of 35 or above), it also contains individuals who are part-time workers, self-employed, family workers, or not working.

The results for labor market outcomes from the DSD specification are reported in Table 5. Columns (1) and (5) reports estimates from specifications where we restrict the sample to individuals working full time (at least 35 hours) in the formal sector who report a wage income. For husbands, there is a significant increase in total income, the probability of working, and hours worked, as reported in columns (6)-(8). For a 10 percent increase in minimum wage, total incomes increase by more than 10 percent, the probability of working increases by 0.7-0.8 percentage points, and hours worked increases by 0.3-0.7 hours per week. The increase in income represents both an increase in incomes, conditional on being positive, and an increase in the probability of positive earnings, i.e.,

$$\Delta E(income) \;=\; \Delta E(income|income > 0)Pr(income > 0)$$

$$+E(income|income > 0)\Delta Pr(income > 0)$$

Thus, the estimated effect is not implausible given that we also find an increased probability of working. The effect on log wages in the formal sector reported in column (5) is not statistically significant. This is probably due to sample selection bias given that the choice to work in the formal sector is endogenous and there is substantial movement between the formal and informal sectors (and in and out of employment) over time in this sample. For the women in the sample, columns (1)-(4) in Table 5 show no statistically significant increase in total incomes or hours worked, except at the smaller bandwidths, and only a weakly significant increase in the probability of working. These effects, however, are not very precisely estimated. Focusing on the 40 mile bandwidth, according to a 95% confidence interval, the data is consistent with as large as a 10 percent increase in total income in response to a 10 percent increase in the minimum wage, nearly as large as the estimate for men. However, the final column of the table also shows that the difference between the income effects for men and women is statistically significant at four out of the six bandwidths.[20]

Table 6 shows results for a variety of other labor market outcomes. We see a positive and significant effect on part time formal work for both men and women. We also see an increase in men's (but not women's) working hours at their primary job, of roughly half the size of the effect on men's total hours. Lastly, we see an increase in unpaid family work for women that is robust to bandwidths between 35 and 80 miles, though not statistically significant.

Overall, these findings are consistent with the hypothesis of an increase in labor market opportunities for men relative to women. Nevertheless, the results are only suggestive given that labor supply decisions within marriage may differ from labor supply decisions under the "outside option", or threat point. The results also indicate that gender equity among married couples is negatively affected in some ways by the minimum wage, despite findings

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[20]The results reported in this column come from DSD regressions using the difference between the husband's log income and the wife's log income as the dependent variable and including all controls used in either the husband sample or wife sample regressions.

elsewhere that the wage gap narrows.

4.1.2 Women's intrahousehold decision making power

As we argue at the beginning of Section 4.1, the effect of the minimum wage might be different for different areas of decision making. Indeed, Majlesi (2016) found that the effect of shocks to labor market opportunities for women varied in this way in Mexico. In this section we investigate which individual dimensions of decision making are most affected by the minimum wage in our sample. For each decision area, our dependent variable is a dummy variable indicating whether the respondent reports that the wife plays a role in the decision.

Table 7 reports our results regarding wive's involvement in expenditure decisions. Table 8 shows results for decisions involving saving, children and others. The strongest result we find is regarding money given to the husband's family. This estimated effect is statistically significant, robust to choice of the bandwidth, and economically significant. A 10 percent increase in minimum wage is estimated to lead to a roughly 1.8-1.9 percentage point decrease in the probability that the wife is involved in decisions regarding money given to the husband's family. We also find results for monthly savings and contraception decisions that are fairly robust across different bandwidths. A 10 percent increase in minimum wage is estimated to lead to roughly 1.1-1.9 percentage point decrease in the probability that a woman plays a role in the decisions regarding monthly savings. A 10 percent increase in minimum wage causes a 0.4-0.8 percentage point decrease in wive's decision making regarding contraceptive use. We also find some evidence of a small positive effect on decisions regarding routine purchases and the wife's own clothing, but only at higher bandwidths. The statistical significance of these results is robust to a correction for the multiple testing problem.[21]

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[21]The tables report adjusted p-values that were constructed using the Benjamini Hochberg method for controlling the false discovery rate (FDR). For each bandwidth we order the 14 p-values from the different decision areas, $p_{(1)} < ... < p_{(14)}$ and then calculate $p_{(i)}^{adj*} = \frac{14}{i} p_{(i)}$. The adjusted p-values that we report are $p_{(i)}^{adj} = min_{j \geq i} p_{(j)}^{adj*}$.

4.1.3 Heterogeneous effects

The effects of minimum wage on women's bargaining power will likely vary in the population. For example, in households where the husband and wife both work in the formal sector, we might expect a minimum wage increase to increase women's bargaining power on average because in such households the wife's wage is more likely to be near the minimum wage and hence she is likely to see a larger wage increase, increasing her threat point and hence her bargaining power. We also expect the minimum wage to affect households differently depending on what sector the husband and wife work in, as Magruder (2013) found differential effects on labor market outcomes by sector. In this section we test these hypotheses by estimating DSD regressions on different subsamples based on labor force participation and sector of the husband and wife. This approach will produce biased results if the labor force participation decision and sector choice are endogenous and also affected by the minimum wage, which we suspect to be the case given that our previous results show that the minimum wage affects both decisions. To address this issue we also separate households by the education level of the wife and estimate DSD regressions separately for households where the wife has less than a high school education and those where the wife has at least a high school education. This analysis is less problematic as the education of the wife is likely not affected by the minimum wage.

Tables 9 and 10 report results by labor force participation of the wife and husband, respectively. For both sets of results we continue to use the women's responses for the decision making variables. We find a large, statistically significant, and robust negative effect on bargaining power for women engaged in unpaid family work. A 10 percent increase in the minimum wage reduces the decisions in which the wife participates by roughly one and a half percentage points on average. We also see a negative and significant effect for women engaged in formal work, though the magnitude of the estimate is about half of that for women doing unpaid family work. In Table 10 we see an effect for households in which

the husband is a full time formal sector work but not for those in which the husband works in the informal sector. Tables 11 and 12 report results by sector. In Table 11 none of the results are both robust to bandwidth and statistically significant. Despite the lack of significance, it is notable that we find large positive effects for women who work in agriculture. The same is true in Table 12 for bargaining power. However, we find strong positive and significant effects on decisions involving children in households where the husband works in manufacturing or retail.

Table 13 reports results by education of the wife. We split the sample into households where the wife has less than a high school education ("less educated") and households where the wife has more a high school education or more ("more educated"). We find a clear pattern of negative, statistically significant and robust effects on bargaining power for less educated women, but no effects for these women on decisions regarding children. For more educated women we find positive, statistically significant and robust effects on both outcomes, though the effect on bargaining power drops off at larger bandwidths. This suggests that the marital threat point of educated women does not decrease with the minimum wage as it does for less educated women. Consistent with this, we find in Table 14 that less educated women see zero or negative effects on income and working, positive effects on unpaid family work, and a shift towards agricultural work away from manufacturing in response to a minimum wage increase. For more educated women, the minimum wage increases incomes, labor force participation, and the probability of full time formal employment substantially.

4.2. Robustness

In this section we provide several robustness checks. The main results are based on the wife's response in each household regarding who makes decisions. Below we show results using the husbands' responses. Second, we report results from the DD and SD model specifications. Third, we report results obtained using a different approach for combining the decision making data into a series of indicators for bargaining power. Lastly, we show results for bargaining power where we control for labor market outcomes.

4.2.1 Results from husbands' responses

Tables 15 and 16 show our results regarding married women's participation in various decisions as reported by their husbands. The results are qualitatively simlar to those found using the women's responses. We find statistically significant effects for decisions regarding money given to the husband's family, money for monthly savings and contraception decisions, as we did in the women's sample. These results are robust to the choice of bandwidth and of similar magnitude to the results in Tables 7 and 8 based on the wives' responses. We also find significant results from the sample of men suggesting a negative effect of the minimum wage on decisions involving routine purchases and the husband's clothing and a positive effect on the children's clothing. The statistical significance of these results is again robust to our correction for the multiple testing problem.

4.2.2 DD and SD results

We also estimate DD, or fixed effects, models and spatial differencing (SD) models, as described in Section 3.3. Both Dreimeier et al. (2015) and Hohberg and Lay (2016), in their studies of the minimum wage in Indonesia, estimate specifications similar to our DD model. As noted above, this method fails to account for correlation between changes in minimum wages and local labor market dynamics but does not require the specification of a bandwidth parameter as the DSD estimator does nor does it rely only on relative changes in minimum wages at province borders. The DD method also avoids the criticism of spatial methods that they reduce the variation to a set of observations that is misrepresentative of the population in important ways.

In Tables 17 and 18 we report results for labor market outcome for men and women. In columns (5)-(8) we find statistically significant positive effects on income, wages, and work status for men with both the DD and SD methods. The only notable difference compared to the DSD results in Table 5 is for wage, where the effects from the DSD regressions were

insignificant and negative. In columns (1)-(4) we find no significant effect on income or wages for women in the DD regressions. However, the SD estimates are large and statistically significant. This likely reflects province-specific effects on women's income that are correlated with minimum wage differences at the border, which are not accounted for by the SD estimator. The results in Table 18 follow generally the same pattern. Overall, the DD estimates are more in line with the DSD estimates than the SD estimates are, suggesting important province-specific effects. However, the results in Tables 17 and 18 still seem to suggest a overal labor market environment that responds to minimum wage increases more favorably for men than women.

Next, Tables 19 and 20 report the results of the DD and SD regressions for the household decision indicators. Again, the overall picture that these results provide is consistent with the DSD results – the minimum wage has a negative effect on women's participation in household decision making. If anything, the estimates here suggest a stronger negative effect, for more decision areas, than the DSD results do.

4.2.3 Redefinition of decision indicators

As part of the IFLS survey, the head of each household and their spouse were asked who within the household participates in each type of decision. Potential answers were the head, the spouse, and other members of the household. Respondents were allowed to indicate multiple people for a given decision type as well. So far in the analysis we have converted this data to a single indicator for each type based on whether the wife participates or not. We could also define an indicator based on whether the husband participates in the decision. For each decision area, we define an indicator equal to 1 if the husband participates in the decision and 0 otherwise. To be consistent with the previous results we would expect the minimum wage effects to be positive, meaning that a minimum wage increase leads to more participation of the husband, as the wife's bargaining power decreases.

To provide some additional context for interpreting the results in this section, suppose

that no third parties participated in decisions. Then this new variable would measure whether the women is the sole decision maker, with a value of 0 indicating she is the sole decision maker and a value of 1 indicating that she is not the sole decision maker. Therefore, in a sense, the difference between our preferred measure and the one used in this section is the difference between a deprivations approach and an attainment approach to measuring women's empowerment (Alkire et al., 2013). Our preferred method measures whether the wife is deprived of decision making, and the method in this section measures attainment of decision making power. The deprivation approach has a strong foundation and rich tradition in social welfare measurement study.

Tables 21 and 22 report results from the DD and DSD specifications for each decision type. Many of the estimates are not statistically significant. Most of the estimates that are significant are negative, indicating a positive effect of minimum wage on women's bargaining power, in contrast with our main results. It is not plausible, for a given household, that both the wife and the husband are less likely to participate in decisions in response to a minimum wage increase. Therefore, what these results seem to reflect is the heterogeneity that is masked by the average effect in both cases. As the minimum wage increases there may be both an increase in the fraction of households where only the husband makes the decision and the wife does not play a role and also in the fraction of households where the wife is the sole decision maker.

Interestingly, the decision areas where we find these significant results are areas where there was not a statistically significant effect in the main results in Tables 7 and 8. One interesting case of this is for decisions involving savings. In our main results we find a negative effect on monthly savings but no significant effect on contributions to the monthly arisan. In Table 21 we see the opposite – a negative coefficient (i.e., a positive effect on women's decision making) for monthly arisan but no significant effect for monthly savings. However, most households only use one of these savings vehicles and hence only responds to one of these two decision making variables. Moreover, the arisan is more popular with

educated households. Thus, these results are somewhat consistent with there being a positive effect of the minimum wage on women's intrahousehold bargaining for educated women but a negative effect for less educated women.

4.2.4 Controlling for outcomes

If the minimum wage effects decision making in the household through an increase in men's wages (i.e., monthly wages accounting for work hours) relative to women's then it seems plausible that including variables related to the household's labor market decisions and outcomes should mitigate the effects we find on decision making variables. There are two potential problems with such an analysis. First, these labor market variables are endogenous because they are outcomes as well. Including these variables as regressors can lead to what is sometimes referred to as the "bad control" bias (Angrist and Pischke, 2008). Second, according to the non-unitary models of the household (e.g., the collective model), the minimum wage will effect bargaining power through the potential wages of both spouses, not through the observed labor market outcomes. Thus, for example, in a household where the wife is more educated but does not work (and has no labor income), a minimum wage increase could increase her bargaining power because it increases her threat point within the marriage. Controlling for observed income and labor force participation does not properly identify this mechanism.

Nevertheless, for comparison in Table 23 we report results that control for the husband's and wife's income, labor force status, and total hours worked in a typical week. For convenience we have included the results that do not include these controls in this table as well. These results without the additional controls differ slightly from those reported in Table 4 because we have limited the sample for all results in Table 23 to those households that have non-missing values for all of the additional control variables. We find surprisinlgy little difference between the results that control for labor market outcomes and those that do not.

We do see, however, that the husband's labor income has a negative and significant effect on women's bargaining power, the wife's income has a positive and significant effect on women's bargaining power.

5. Conclusion

This paper demonstrates the potential of important unintended consequences of minimum wage policies in developing countries. Using unique historical minimum wage increases in Indonesia from 2000 to 2014 and an individual panel on labor market outcomes and detailed information on household decision making, we have shown a clear link between a higher minimum wage and a diminished role of women in household decisions. Our empirical results are consistent with the hypothesis that a minimum wage increase in this population on average reduces the marital threat point of married women, thus diminishing their bargaining power. Importantly, we find that the negative effect of minimum wage is reversed in households with a more educated wife. We also find that the effect varies across different areas of decision making. Most notably, married women's role in decisions regarding their children's clothes, education, and health are not generally negatively impacted by the minimum wage.

Though minimum wage laws have been widely implemented in developing countries, few other papers have demonstrated their impact on household decision making or women's empowerment. Given the evidence in this paper and the theoretical importance of the labor market environment in household decision making processes, particular attention should be paid to the effects of labor market policies on women's bargaining power within the household and other issues of gender equity. In developing countries, these policies may in some cases reduce female bargaining power and reinforce traditional gender roles.

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Figure Legends

Figure 1. Real minimum wages by province.

Notes: We use a province-specific CPI to deflate minimum wages. The BPS provides constructed CPI for different cities across the country. Matching the CPIs of the capital city with each province, we have created a CPI measure for provinces across years. We choose 2007 as the base year. Each gray line represents a different province and the black line is the simple average across all provinces.

Figure 2. Incomes relative to the minimum wage.

Notes: The figure shows histograms of the difference between the log of real earned income and minimum wage. Based on the sample of individuals who report working.

Figure 3. Formal sector wages relative to the minimum wage.

Notes: The figure shows histograms of the difference between the log of real wage income and minimum wage. Based on the sample of individuals who report working full time in the formal sector.

Figure 4. Spatial discontinuity.

Notes: Each panel plots, for each of the three years of the panel, a local polynomial regression of an outcome variable on the distance to the nearest district in a different province, where a positive distance indicates that the nearest such district has a lower minimum wage and a negative distance indicates that the nearest such district has a higher minimum wage. The sample is restricted to women.

Figure 5. Spatial discontinuity for bargaining power.

Notes: Each panel plots, for one of the three years of the panel, the same local polynomial regression from Figure 4 for the bargaining power outcome along with 90% confidence bands.

Figure 6. Spatial discontinuity for decisions regarding children.

Notes: Each panel plots, for one of the three years of the panel, the same local polynomial regression from Figure 4 for the decisions regarding children outcome along with 90% confidence bands.

Figure 7. Spatial discontinuity for decisions regarding giving to spouse's parents.

Notes: Each panel plots, for one of the three years of the panel, the same local polynomial regression from Figure 4 for the decisions regarding giving to spouse's parents outcome along with 90% confidence bands.

(a) working husbands

2000   2007   2014

(b) working wives

2000   2007   2014
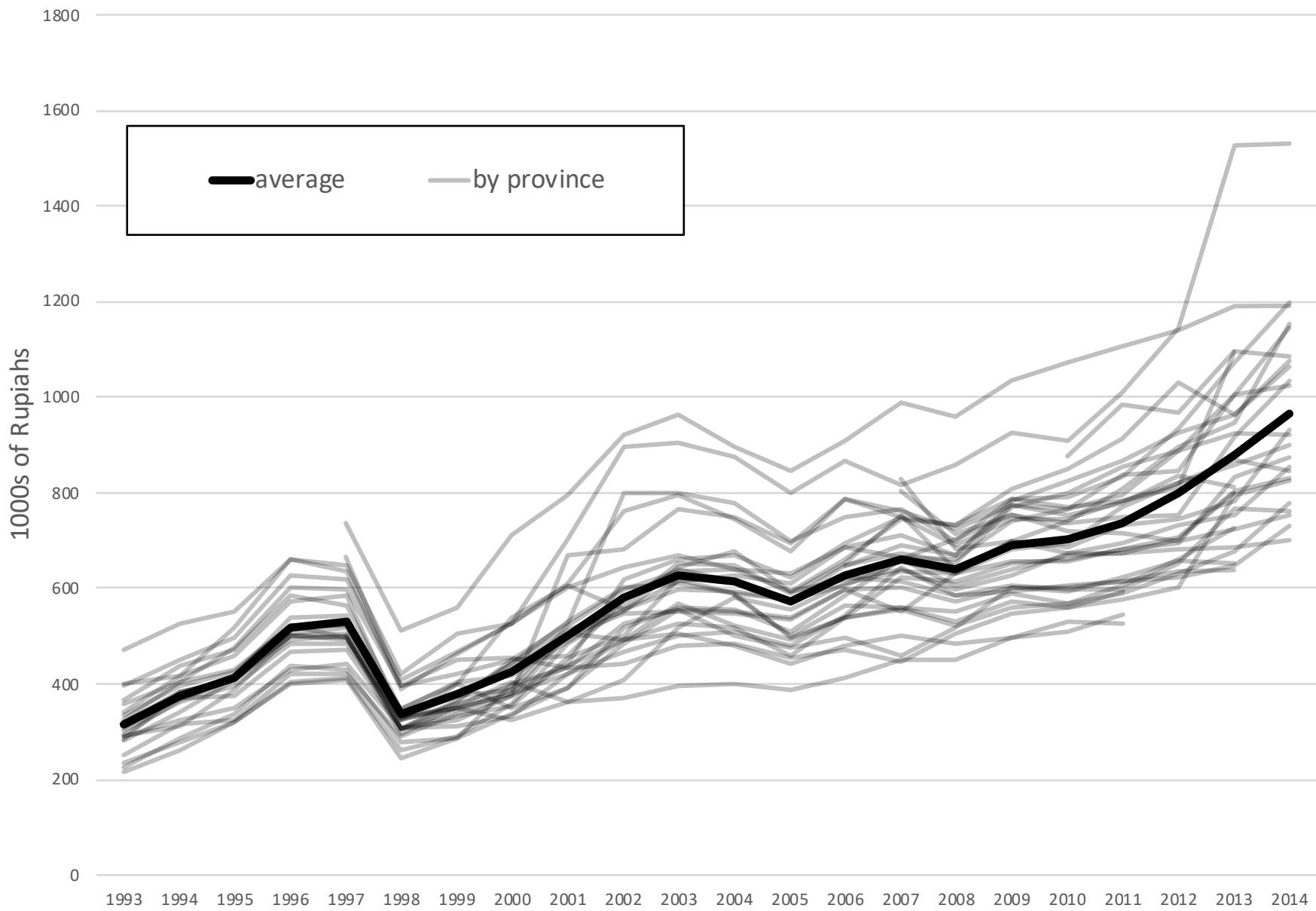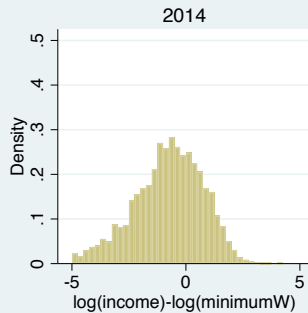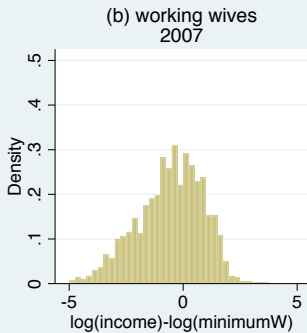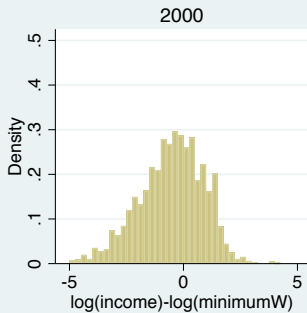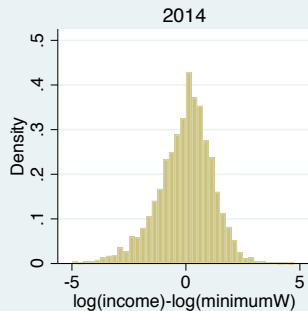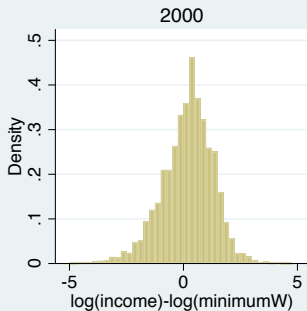
(a) husbands, fulltime, formal

2000   2007   2014
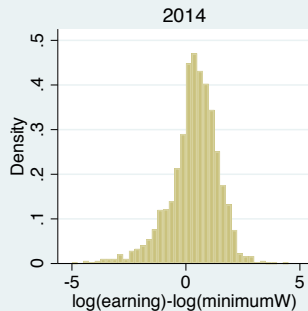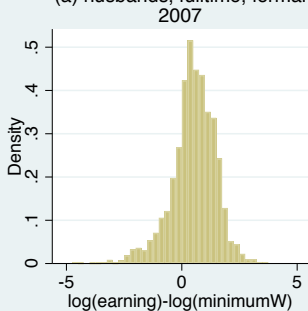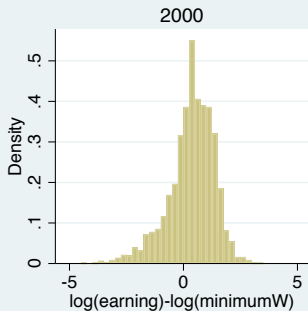
(b) wives, fulltime, formal sector
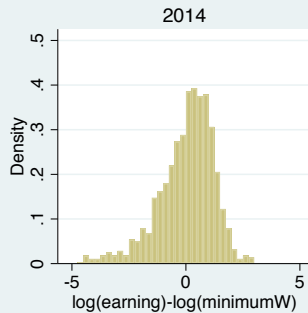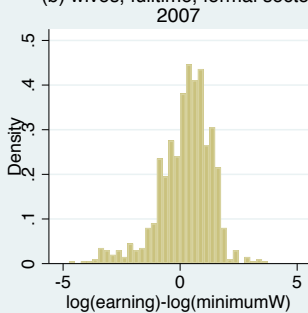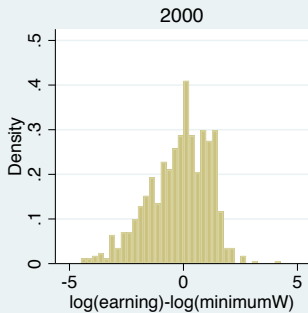
2000   2007   2014
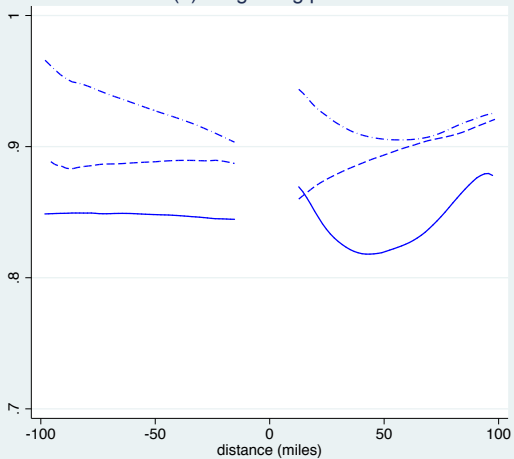
(a) Bargaining power   (b) Decisions regarding children   (c) Decisions regarding giving to spouse's parents
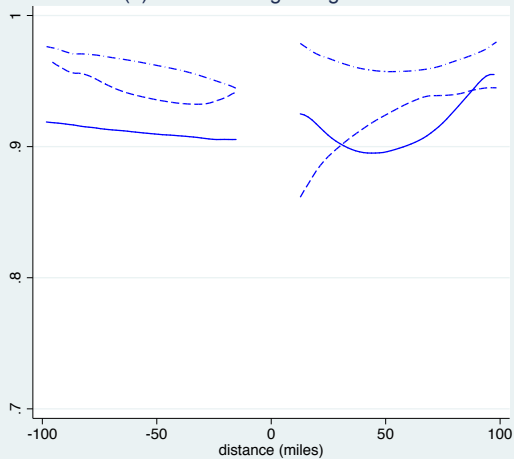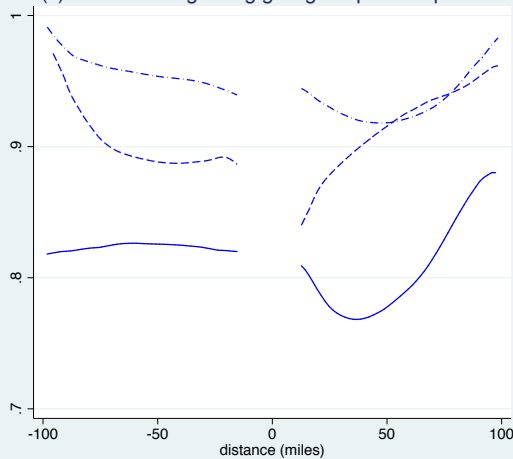
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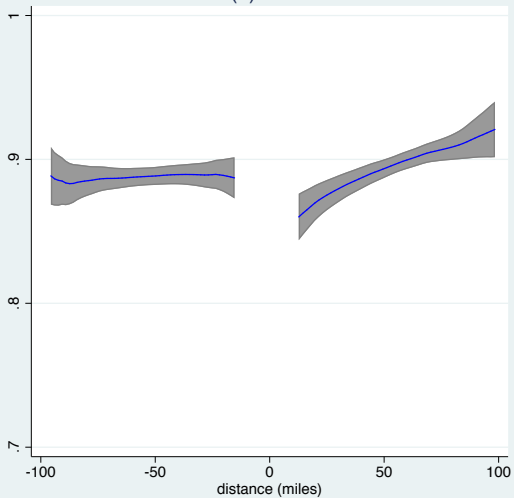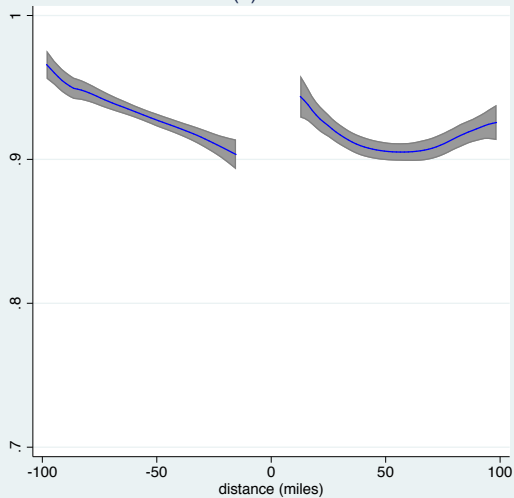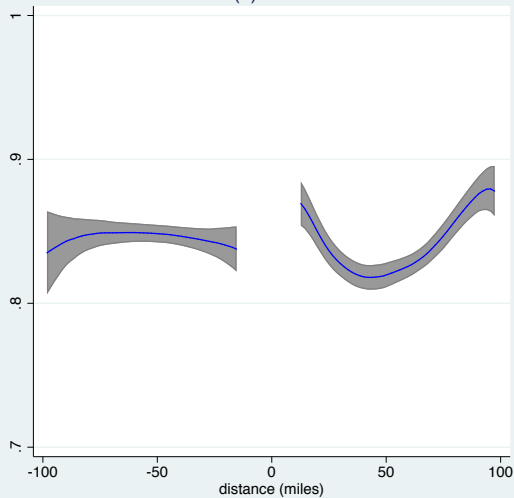
| (a) 2000 | (b) 2007 | (c) 2014 |
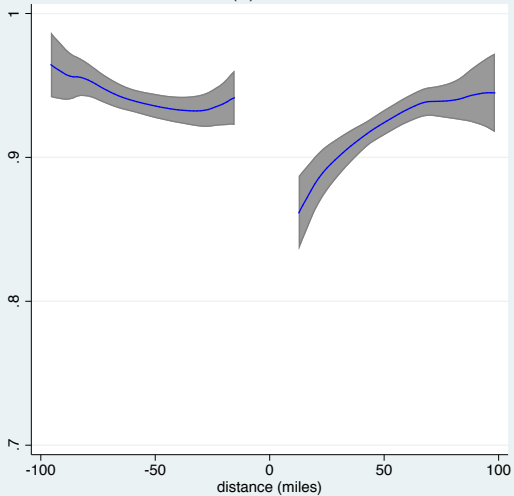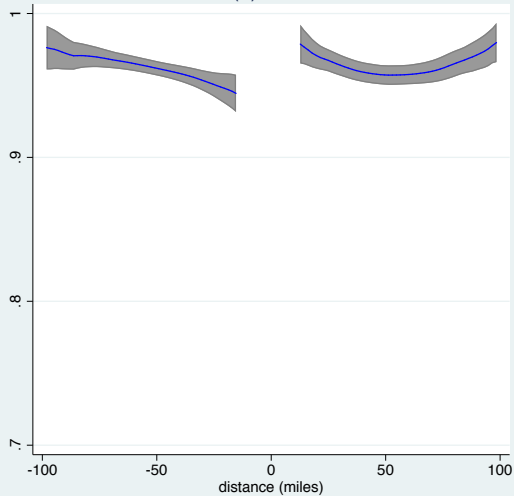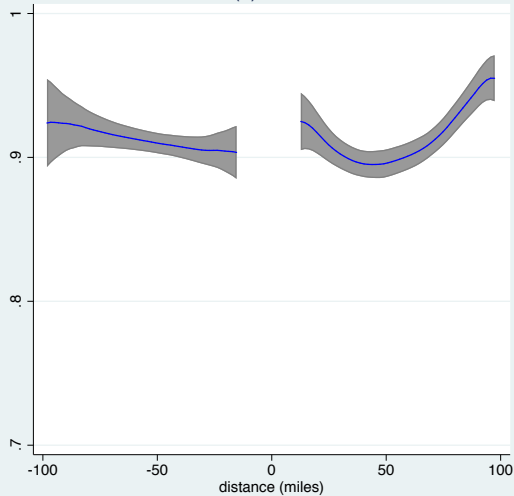
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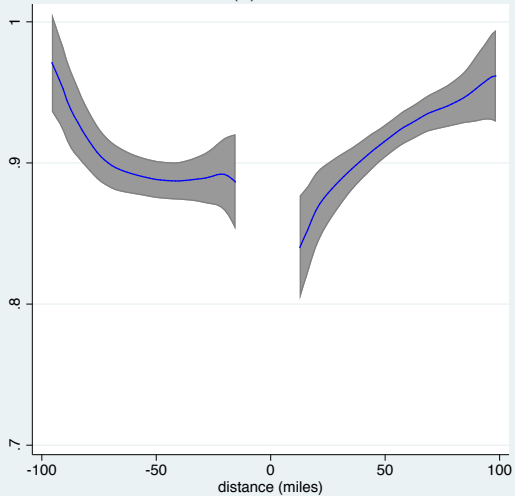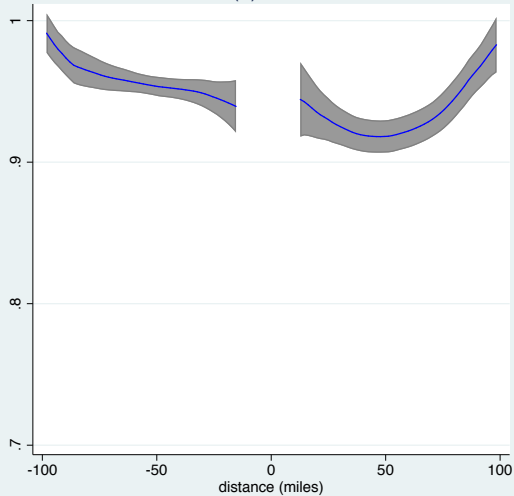
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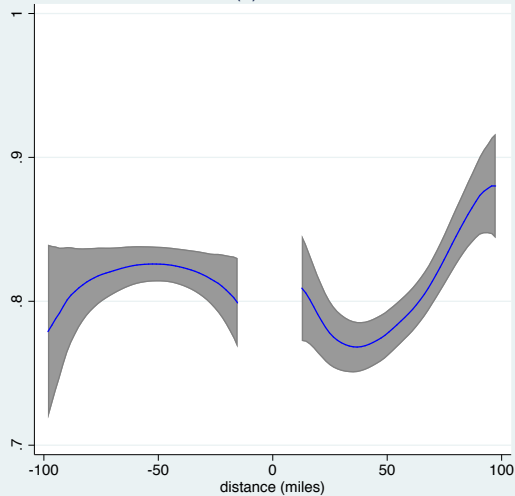
Table 1. Descriptive statistics for labor market outcomes

| | 2000 | | | 2007 | | | 2014 | | |
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Log total income (if positive)[1]									
Wife	2611	14.870	1.488	2980	15.122	1.476	4091	15.215	1.591
Husband	5476	15.603	1.188	6821	15.800	1.162	7543	16.015	1.257
Log wage (full-time formal sector)[2]									
Wife	684	15.213	1.355	799	15.914	1.169	1110	16.037	1.238
Husband	2194	15.780	1.028	2305	16.235	0.992	2660	16.406	1.091
Log total income[3]									
Wife	5771	6.728	7.469	7205	6.254	7.508	7884	7.895	7.689
Husband	5756	14.844	3.551	7181	15.008	3.629	7862	15.365	3.391
Working									
Wife	5807	0.608	0.488	7280	0.605	0.489	7975	0.657	0.475
Husband	5805	0.961	0.194	7281	0.961	0.194	7970	0.970	0.170
Hours worked (primary job)									
Wife	5803	24.239	26.733	7275	23.298	25.537	7961	25.229	26.892
Husband	5795	43.071	20.325	7273	43.186	20.054	7936	42.464	20.629
Total hours worked									
Wife	5803	26.481	28.781	7275	25.263	27.308	7961	27.162	28.443
Husband	5795	50.169	23.372	7273	49.378	22.595	7936	48.590	23.283
Full-time formal									
Wife	5803	0.120	0.325	7275	0.111	0.314	7954	0.141	0.348
Husband	5795	0.381	0.486	7273	0.321	0.467	7936	0.337	0.473
Informal									
Wife	5807	0.425	0.494	7280	0.440	0.496	7968	0.441	0.497
Husband	5805	0.506	0.500	7281	0.585	0.493	7970	0.561	0.496
Part-time formal									
Wife	5803	0.063	0.244	7275	0.054	0.226	7954	0.075	0.263
Husband	5795	0.075	0.263	7273	0.055	0.229	7936	0.072	0.259
Unpaid family work									
Wife	5807	0.174	0.379	7280	0.205	0.404	7968	0.148	0.355
Husband	5805	0.012	0.110	7281	0.014	0.118	7970	0.013	0.115
Education[4]									
Wife	5804	1.560	1.060	7257	1.881	1.097	7962	2.116	1.109
Husband	5801	1.796	1.124	7259	2.043	1.119	7960	2.209	1.102
Age									
Wife	5808	36.324	10.212	7281	35.924	9.956	7975	37.253	9.824
Husband	5808	41.212	10.735	7281	40.338	10.437	7975	41.326	10.110
Log Household Asset									
Wife	5773	24.693	3.566	7230	24.935	3.036	6907	23.383	7.660
Husband	5771	25.080	3.117	7247	25.289	2.717	7745	24.980	5.295

Notes: Notes: The sample is restricted to include only wives of the head of household (or the head if the head is a woman) for households where both the head and his/her spouse both complete the survey. [1] Summary statistics for this variable are only computed on the subsample of respondents with positive reported income. Total income includes wages and profits from self-employment. [2] Summary statistics for this variable are computed on the subsample of respondents who reported that their primary job was in the formal sector. [3] Summary statistics for this variable were computed across all respondents, including those who reported no income. Total income includes wages and profits from self-employment. [4] Education is a categorical variable equal to 0 if no education, 1 for an elementary level education, 2 for a middle school education, 3 for a high school education, and 4 for university or above.

Table 2. Descriptive statistics for household decision making

	2000			2007			2014		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
A: Expenditure									
On Money given to Wife's Family	5432	0.928	0.259	6850	0.959	0.198	7528	0.845	0.362
On Money given to Husband's Family	5364	0.908	0.288	6785	0.942	0.234	7450	0.815	0.388
On Large Expenses	5489	0.844	0.363	7147	0.903	0.296	7822	0.795	0.403
On Gifts for Parties/Weddings	5778	0.940	0.237	7271	0.961	0.194	7929	0.890	0.312
On Routine Purchases	5741	0.936	0.245	7225	0.936	0.245	7858	0.911	0.284
On Husband's Clothes	5769	0.725	0.447	7252	0.784	0.412	7895	0.689	0.463
On Wife's Clothes	5769	0.940	0.237	7259	0.937	0.244	7902	0.924	0.265
B. Saving									
On Money for Monthly Arisan	3525	0.931	0.253	3881	0.952	0.215	5567	0.886	0.317
On Money for Monthly Saving	2703	0.867	0.340	3426	0.927	0.260	5080	0.845	0.362
C. Children									
On Children's Clothes	5041	0.934	0.249	6596	0.960	0.195	6863	0.932	0.251
On Children's Education	4840	0.917	0.277	6715	0.957	0.204	7264	0.882	0.323
On Children's Health	5266	0.947	0.223	6834	0.969	0.174	7411	0.923	0.267
D. Others									
On Contraception	4218	0.939	0.240	5647	0.968	0.176	6867	0.897	0.303
On Spouse Work	5789	0.694	0.461	7263	0.808	0.394	7961	0.666	0.472

Notes: The sample is restricted to include only wives of the head of household (or the head if the head is a woman) for households where both the head and his/her spouse both complete the survey.

Table 3. Fixed effects regressions for household decision making

	(1) Money given to wife's family	(2) Money given to husband's family	(3) Large Expenses	(4) Gifts for parties	(5) Routine purchases	(6) Wife's clothes	(7) Husband's clothes	(8) Money for monthly arisan
Log Real Min Wage	-0.050	-0.093 **	-0.044	-0.041 *	0.008	0.001	-0.099	-0.054 **
	(0.031)	(0.041)	(0.048)	(0.021)	(0.031)	(0.018)	(0.075)	(0.024)
Mean	0.912	0.892	0.851	0.933	0.929	0.935	0.736	0.921
Observations	18,718	18,516	19,290	19,792	19,649	19,747	19,732	12,309

	(9) Money for monthly savings	(10) Contraception	(11) Bargaining power	(12) Children's clothes	(13) Children's education	(14) Children's health	(15) Decisions regarding children	(16) On spouse work
Log Real Min Wage	-0.140 ***	-0.033	-0.052 ***	-0.007	-0.038 *	-0.061 ***	-0.038 **	-0.022
	(0.043)	(0.022)	(0.016)	(0.017)	(0.023)	(0.017)	(0.015)	(0.048)
Mean	0.878	0.935	0.890	0.944	0.921	0.947	0.936	0.728
Observations	10,724	15,730	19,857	17,457	17,737	18,407	18,532	19,817

Robust standard errors in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 4. The effect of minimum wage on household decision making

	Bargaining power			Children		
	FE	SD	DSD	FE	SD	DSD
Log Real Min Wage	-0.052 ***	-0.001	-0.035 **	-0.038 **	0.014 ***	0.015
	(0.016)	(0.014)	(0.016)	(0.015)	(0.005)	(0.023)
Log Husband's Assets	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Log Wife's Assets	0.002 ***	0.003 ***	0.003 ***	0.002 **	0.002 ***	0.002 ***
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Husband's Educ.	-0.007	0.000	-0.002	-0.007	-0.006	-0.006
	(0.012)	(0.006)	(0.006)	(0.016)	(0.007)	(0.007)
Husband's Educ. Sq.	0.002	0.000	0.000	0.001	0.000	0.000
	(0.003)	(0.001)	(0.001)	(0.003)	(0.002)	(0.002)
Wife's Educ.	-0.011	0.009 *	0.010 **	0.003	0.003	0.004
	(0.016)	(0.005)	(0.004)	(0.013)	(0.004)	(0.004)
Wife's Educ. Sq.	0.000	0.000	0.000	-0.003	0.002 **	0.002 **
	(0.003)	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)
Urban/Rural residence	0.009	0.002	0.001	-0.002	0.001	-0.003
	(0.008)	(0.004)	(0.006)	(0.011)	(0.004)	(0.007)
Age	0.004	0.003 ***	0.004 ***	0.000	0.000	0.000
	(0.003)	(0.001)	(0.001)	(0.004)	(0.001)	(0.001)
Age Squared	0.000	0.000 ***	0.000 ***	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Mean		0.890			0.936	
Observations		19,857			18,532	

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

	Wife Sample				Husband Sample				Difference
VARIABLES	(1) Log wage (full-time formal sector)	(2) Log total income	(3) Working	(4) Total hours worked	(5) Log wage (full-time formal sector)	(6) Log total income	(7) Working	(8) Total hours worked	Log total income
25 miles	0.756 ***	0.214	-0.043 **	-5.755 **	-0.045	0.938 ***	0.065 ***	-1.931	0.880 *
	(0.263)	(0.161)	(0.018)	(2.328)	(0.136)	(0.337)	(0.008)	(1.725)	(0.476)
30 miles	0.562 **	0.291	-0.014	-1.888	-0.064	0.904 ***	0.072 ***	-1.843	0.548
	(0.219)	(0.255)	(0.016)	(2.868)	(0.138)	(0.297)	(0.006)	(1.246)	(0.512)
35 miles	0.432	-0.150	0.019	-2.448	-0.049	1.240 ***	0.080 ***	2.007	1.382 ***
	(0.318)	(0.263)	(0.033)	(2.874)	(0.165)	(0.287)	(0.009)	(1.575)	(0.355)
40 miles	0.242	0.431	0.058 *	-1.321	-0.079	1.229 ***	0.081 ***	3.156 *	0.834 **
	(0.300)	(0.317)	(0.033)	(3.001)	(0.162)	(0.242)	(0.007)	(1.711)	(0.408)
60 miles	-0.044	0.723	0.094 *	2.029	-0.036	1.421 ***	0.073 ***	6.913 ***	0.535
	(0.226)	(0.534)	(0.052)	(4.069)	(0.142)	(0.110)	(0.005)	(1.525)	(0.630)
80 miles	0.211	0.102	0.083	1.430	0.067	1.444 ***	0.072 ***	5.001 **	1.249 **
	(0.213)	(0.586)	(0.063)	(3.914)	(0.152)	(0.156)	(0.009)	(2.020)	(0.596)
Mean	15.793	7.035	0.629	26.495	16.163	15.098	0.964	49.338	8.055
Observations	2,449	19,705	19,879	19,860	7,047	20,488	20,726	20,676	19,468

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables

VARIABLES	Wife Sample						Husband Sample					
	(1) Log total income (if positive)	(2) Full-time formal	(3) Informal	(4) Part-time formal	(5) Unpaid family work	(6) Hours (primary job)	(7) Log total income (if positive)	(8) Full-time formal	(9) Informal	(10) Part-time formal	(11) Unpaid family work	(12) Hours (primary job)
25 miles	-0.119	-0.017	-0.109 ***	0.083 ***	-0.056 ***	-4.215 **	-0.023	0.002	0.009	0.048 **	0.004	0.403
	(0.133)	(0.016)	(0.017)	(0.014)	(0.014)	(2.063)	(0.139)	(0.033)	(0.030)	(0.019)	(0.009)	(0.724)
30 miles	0.001	0.012	-0.098 ***	0.073 ***	-0.024	-0.572	-0.060	-0.008	0.009	0.068 ***	0.010	-0.187
	(0.175)	(0.010)	(0.010)	(0.011)	(0.017)	(2.544)	(0.123)	(0.026)	(0.030)	(0.023)	(0.007)	(0.464)
35 miles	-0.290 *	0.020	-0.021	0.020	0.049	-0.953	0.045	0.032	0.008	0.037 ***	0.007	2.448 ***
	(0.167)	(0.015)	(0.036)	(0.013)	(0.038)	(2.348)	(0.098)	(0.029)	(0.040)	(0.013)	(0.005)	(0.346)
40 miles	-0.382	0.024 *	0.004	0.030 ***	0.048	0.166	0.032	0.030	0.012	0.037 **	0.008 *	2.893 ***
	(0.235)	(0.012)	(0.033)	(0.009)	(0.031)	(2.427)	(0.096)	(0.020)	(0.031)	(0.014)	(0.005)	(0.569)
60 miles	-0.692 **	-0.019	0.054	0.059 ***	0.063	1.081	0.097	0.044 *	0.009	0.018	-0.005	2.930 ***
	(0.298)	(0.025)	(0.039)	(0.018)	(0.039)	(3.320)	(0.068)	(0.024)	(0.032)	(0.014)	(0.007)	(0.891)
80 miles	-0.441 *	-0.035 *	0.059	0.058 ***	0.087 **	0.677	0.196 ***	0.047	0.005	0.018 *	-0.003	1.600
	(0.229)	(0.019)	(0.053)	(0.016)	(0.039)	(3.156)	(0.064)	(0.029)	(0.032)	(0.011)	(0.005)	(1.330)
Mean	15.111	0.125	0.440	0.064	0.177	24.433	15.830	0.343	0.554	0.067	0.013	42.890
Observations	9,174	19,854	19,873	19,854	19,873	19,860	19,541	20,676	20,726	20,676	20,726	20,676

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables

Table 7. The effect of minimum wage on household decision making (DSD)

VARIABLES	(1) Money given to wife's family	(2) Money given to husband's family		(3) Large Expenses	(4) Gifts for parties		(5) Routine purchases		(6) Wife's clothes		(7) Husband's clothes
25 miles	0.015	-0.183	***	0.055	-0.034		0.002		-0.008		-0.025
	(0.031)	(0.020)		(0.085)	(0.026)		(0.018)		(0.017)		(0.024)
	0.884	*0.000*		*0.884*	*0.680*		*0.896*		*0.884*		*0.698*
30 miles	0.031	-0.189	***	0.041	-0.010		-0.003		0.023		-0.010
	(0.041)	(0.012)		(0.075)	(0.034)		(0.017)		(0.015)		(0.016)
	0.726	*0.000*		*0.741*	*0.895*		*0.911*		*0.312*		*0.726*
35 miles	0.013	-0.196	***	0.029	-0.007		0.032	*	0.040	**	0.007
	(0.035)	(0.017)		(0.065)	(0.025)		(0.017)		(0.016)		(0.023)
	0.774	*0.000*		*0.774*	*0.774*		*0.173*		*0.040*		*0.774*
40 miles	0.023	-0.183	***	0.059	0.003		0.044	**	0.044	***	0.026
	(0.037)	(0.019)		(0.065)	(0.026)		(0.018)		(0.014)		(0.031)
	0.633	*0.000*		*0.554*	*0.922*		*0.050*		*0.006*		*0.554*
60 miles	-0.034	-0.189	***	-0.050	-0.030		0.019		0.045	***	0.002
	(0.034)	(0.020)		(0.056)	(0.019)		(0.034)		(0.016)		(0.027)
	0.484	*0.000*		*0.488*	*0.234*		*0.672*		*0.020*		*0.950*
80 miles	-0.057	-0.189	***	-0.051	-0.044	**	0.024		0.043	***	-0.064
	(0.036)	(0.025)		(0.054)	(0.019)		(0.036)		(0.015)		(0.047)
	0.266	*0.000*		*0.483*	*0.053*		*0.596*		*0.010*		*0.345*
Mean	0.912	0.892		0.851	0.933		0.929		0.935		0.736
Observations	18,718	18,516		19,290	19,792		19,649		19,747		19,732

Notes: The sample is restricted to women. Robust standard errors in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$, based on unadjusted p-values. Adjusted p-values, based on the method of Benjamini Hochberg method, are reported in italics. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 8. The effect of minimum wage on household decision making (DSD), cont'd.

VARIABLES	Saving			Children			Other		
	(1) Money for monthly arisan	(2) Money for monthly savings		(3) Children's clothes	(4) Children's education	(5) Children's health	(6) Contraception		(7) On spouse work	
25 miles	-0.009	-0.122	***	-0.004	0.030	0.008	-0.086	***	0.119	
	(0.057)	(0.027)		(0.030)	(0.039)	(0.035)	(0.007)		(0.102)	
	0.896	*0.000*		*0.896*	*0.884*	*0.896*	*0.000*		*0.686*	
30 miles	-0.026	-0.108	***	0.021	0.040	0.000	-0.082	***	0.187	*
	(0.039)	(0.010)		(0.021)	(0.049)	(0.032)	(0.008)		(0.112)	
	0.726	*0.000*		*0.726*	*0.726*	*0.988*	*0.000*		*0.312*	
35 miles	-0.030	-0.133	***	0.029	0.059	0.018	-0.067	***	0.180	*
	(0.041)	(0.037)		(0.019)	(0.049)	(0.036)	(0.011)		(0.107)	
	0.718	*0.001*		*0.235*	*0.400*	*0.774*	*0.000*		*0.212*	
40 miles	0.005	-0.124	***	0.026	0.043	0.020	-0.063	***	0.181	*
	(0.049)	(0.040)		(0.017)	(0.044)	(0.031)	(0.019)		(0.099)	
	0.922	*0.007*		*0.237*	*0.554*	*0.633*	*0.006*		*0.156*	
60 miles	0.017	-0.167	***	0.040 **	0.035	-0.028	-0.039	**	0.151	*
	(0.048)	(0.042)		(0.019)	(0.040)	(0.021)	(0.019)		(0.086)	
	0.771	*0.001*		*0.128*	*0.488*	*0.331*	*0.128*		*0.180*	
80 miles	-0.010	-0.188	***	0.021	0.007	-0.031	-0.053	***	0.077	
	(0.032)	(0.018)		(0.018)	(0.043)	(0.028)	(0.006)		(0.102)	
	0.817	*0.000*		*0.430*	*0.864*	*0.430*	*0.000*		*0.569*	
Mean	0.921	0.878		0.944	0.921	0.947	0.935		0.728	
Observations	12,309	10,724		17,457	17,737	18,407	15,730		19,817	

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1, based on unadjusted p-values. Adjusted p-values, based on the method of Benjamini Hochberg method, are reported in italics. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 9. The effect of minimum wage on household decision making (DSD), by wife's labor market participation

VARIABLES	Works		Primary work is unpaid family work		Primary work is informal, not unpaid		Primary work is formal	
	(1) Bargaining power	(2) Decisions involving children	(3) Bargaining power	(4) Decisions involving children	(5) Bargaining power	(6) Decisions involving children	(7) Bargaining power	(8) Decisions involving children
25 miles	-0.058 ***	0.055	-0.148 **	-0.181	-0.022	-0.021 ***	-0.059 ***	0.011
	(0.022)	(0.052)	(0.063)	(0.149)	(0.025)	(0.005)	(0.015)	(0.103)
30 miles	-0.041	0.046	-0.091	-0.083	-0.010	0.020	-0.069 ***	0.008
	(0.026)	(0.051)	(0.118)	(0.160)	(0.024)	(0.015)	(0.015)	(0.087)
35 miles	-0.027	0.072	-0.168 **	-0.137	0.018	0.060 **	-0.051 *	0.040
	(0.031)	(0.050)	(0.085)	(0.107)	(0.025)	(0.029)	(0.029)	(0.085)
40 miles	-0.012	0.072	-0.148 *	-0.143 *	0.031 *	0.062 **	-0.049	0.021
	(0.035)	(0.048)	(0.079)	(0.080)	(0.018)	(0.024)	(0.035)	(0.076)
60 miles	-0.004	0.088 ***	-0.164 ***	-0.215 ***	-0.036	-0.028	-0.083 **	-0.020
	(0.028)	(0.032)	(0.025)	(0.038)	(0.042)	(0.028)	(0.037)	(0.031)
80 miles	-0.035	0.049	-0.126 ***	-0.129 **	-0.033	0.004	-0.067 **	-0.014
	(0.036)	(0.037)	(0.032)	(0.052)	(0.033)	(0.022)	(0.032)	(0.033)
Mean	0.874	0.930	0.888	0.936	0.897	0.939	0.912	0.946
Observations	7,374	6,854	3,516	3,311	5,220	4,978	3,738	3,383

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 10. The effect of minimum wage on household decision making (DSD), by husband's labor market participation

VARIABLES	Informal work		Full time formal work	
	(1) Bargaining power	(2) Decisions involving children	(3) Bargaining power	(4) Decisions involving children
25 miles	-0.034	0.018	-0.034 ***	0.054 ***
	(0.028)	(0.065)	(0.010)	(0.013)
30 miles	-0.017	0.022	-0.047 ***	0.047 ***
	(0.031)	(0.057)	(0.010)	(0.006)
35 miles	-0.036	0.004	-0.034 ***	0.073 ***
	(0.029)	(0.056)	(0.011)	(0.004)
40 miles	-0.022	0.008	-0.028 **	0.068 ***
	(0.032)	(0.044)	(0.012)	(0.008)
60 miles	-0.037 **	0.037 *	-0.059 **	0.001
	(0.018)	(0.022)	(0.026)	(0.016)
80 miles	-0.057 ***	-0.003	-0.075 ***	0.007
	(0.019)	(0.024)	(0.023)	(0.016)
Mean	0.887	0.937	0.895	0.937
Observations	10,965	10,326	6,825	6,313

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 11. The effect of minimum wage on household decision making (DSD), by wife's occupation/sector

	Agriculture		Manufacturing		Retail		Services	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Bargaining power	Decisions involving children	Bargaining power	Decisions involving children	Bargaining power	Decisions involving children	Bargaining power	Decisions involving children
25 miles	0.665 ***	0.770 **	-0.067 **	0.147 ***	-0.035	-0.182 ***	-0.018	-0.026
	(0.199)	(0.351)	(0.028)	(0.047)	(0.026)	(0.061)	(0.014)	(0.022)
30 miles	0.372	0.369	-0.068 ***	0.121 *	-0.010	-0.082	-0.019 **	-0.017
	(0.325)	(0.555)	(0.025)	(0.067)	(0.033)	(0.071)	(0.009)	(0.018)
35 miles	0.127	0.296	-0.038	0.127	-0.004	-0.072	-0.009	0.009
	(0.180)	(0.326)	(0.040)	(0.096)	(0.024)	(0.062)	(0.014)	(0.020)
40 miles	0.281 **	0.396	-0.014	0.105	0.000	-0.047	-0.006	-0.014
	(0.124)	(0.257)	(0.051)	(0.080)	(0.020)	(0.053)	(0.009)	(0.022)
60 miles	0.092	0.081	-0.018	0.018	-0.020	-0.060	-0.061 ***	-0.062 ***
	(0.089)	(0.128)	(0.028)	(0.018)	(0.023)	(0.060)	(0.021)	(0.015)
80 miles	0.029	0.045	-0.061 ***	0.002	-0.056	-0.056	-0.046 **	-0.044 **
	(0.057)	(0.087)	(0.016)	(0.009)	(0.043)	(0.048)	(0.018)	(0.020)
Mean	0.889	0.941	0.901	0.935	0.899	0.936	0.912	0.951
Observations	3,819	3,601	1,648	1,512	4,221	3,992	2,485	2,292

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 12. The effect of minimum wage on household decision making (DSD), by husband's occupation/sector

VARIABLES	Agriculture		Manufacturing		Retail		Services	
	(1) Bargaining power	(2) Decisions involving children	(3) Bargaining power	(4) Decisions involving children	(5) Bargaining power	(6) Decisions involving children	(7) Bargaining power	(8) Decisions involving children
25 miles	0.390 *	0.147	0.035	0.230 ***	-0.056 ***	0.046 *	-0.064	-0.036
	(0.200)	(0.212)	(0.033)	(0.088)	(0.015)	(0.024)	(0.044)	(0.054)
30 miles	0.312	0.293	-0.024	0.145 **	-0.029 *	0.072 **	-0.052	-0.021
	(0.263)	(0.259)	(0.021)	(0.059)	(0.016)	(0.028)	(0.045)	(0.058)
35 miles	0.055	0.092	-0.024	0.156 **	-0.043	0.071 *	-0.024	0.037
	(0.143)	(0.121)	(0.029)	(0.073)	(0.027)	(0.037)	(0.048)	(0.066)
40 miles	0.085	0.051	-0.031	0.161 **	-0.025	0.061 *	-0.013	0.048
	(0.149)	(0.105)	(0.028)	(0.071)	(0.036)	(0.031)	(0.049)	(0.061)
60 miles	0.032	0.028	-0.053 ***	0.099 ***	-0.035	0.083 ***	-0.052	-0.011
	(0.082)	(0.059)	(0.007)	(0.025)	(0.031)	(0.031)	(0.034)	(0.039)
80 miles	-0.060	-0.004	-0.074 ***	0.071 ***	-0.029	0.074 ***	-0.052	-0.009
	(0.068)	(0.057)	(0.018)	(0.011)	(0.021)	(0.027)	(0.039)	(0.043)
Mean	0.892	0.946	0.892	0.929	0.883	0.926	0.894	0.933
Observations	6,270	5,868	2,169	1,993	3,208	2,987	4,086	3,822

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 13. The effect of minimum wage on household decision making (DSD), by wife's education

VARIABLES	Less educated				More educated			
	(1) Bargaining power		(2) Decisions involving children		(5) Bargaining power		(6) Decisions involving children	
25 miles	-0.104	***	-0.080	**	0.023	**	0.119	***
	(0.040)		(0.039)		(0.011)		(0.011)	
30 miles	-0.090	*	-0.067	*	0.039	***	0.136	***
	(0.047)		(0.040)		(0.009)		(0.007)	
35 miles	-0.068		-0.024		0.041	***	0.137	***
	(0.047)		(0.050)		(0.008)		(0.011)	
40 miles	-0.058		-0.025		0.049	***	0.138	***
	(0.047)		(0.046)		(0.007)		(0.014)	
60 miles	-0.068	**	-0.030		0.007		0.107	***
	(0.032)		(0.020)		(0.021)		(0.012)	
80 miles	-0.092	***	-0.048	**	0.000		0.091	***
	(0.028)		(0.021)		(0.021)		(0.008)	
Mean	0.884		0.931		0.901		0.947	
Observations	13,479		12,649		6,378		5,883	

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables

Table 14. The effect of minimum wage on labor market outcomes (DSD), by wife's education

	Less educated							More educated						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**
VARIABLES	Log total income	Working	Unpaid family work	Full-time formal	Informal	Work in agriculture	Work in manufacturing	Log total income	Working	Unpaid family work	Full-time formal	Informal	Work in agriculture	Work in manufacturing
25 miles	-2.003 **	-0.230 ***	-0.088 ***	-0.094 ***	-0.164 ***	-0.059 *	-0.154 ***	2.238 **	0.123 *	-0.038 **	0.099 **	-0.109 ***	-0.007	-0.048
	(0.801)	(0.045)	(0.020)	(0.028)	(0.024)	(0.035)	(0.021)	(0.892)	(0.074)	(0.017)	(0.040)	(0.036)	(0.006)	(0.047)
30 miles	-2.130 ***	-0.184 ***	-0.020	-0.085 ***	-0.108 ***	-0.040	-0.116 ***	2.697 ***	0.157 ***	-0.029 **	0.153 ***	-0.135 ***	-0.009	-0.024
	(0.680)	(0.033)	(0.028)	(0.019)	(0.008)	(0.030)	(0.015)	(0.731)	(0.055)	(0.013)	(0.036)	(0.009)	(0.007)	(0.032)
35 miles	-1.860 ***	-0.096 **	0.068	-0.048 ***	-0.045	0.076 **	-0.111 ***	2.248 ***	0.144 ***	-0.015	0.137 ***	-0.083 ***	-0.005	-0.023
	(0.624)	(0.043)	(0.054)	(0.014)	(0.043)	(0.038)	(0.026)	(0.373)	(0.040)	(0.021)	(0.026)	(0.027)	(0.010)	(0.032)
40 miles	-0.915	-0.031	0.065	-0.033 **	-0.025	0.090 **	-0.099 ***	2.356 ***	0.146 ***	-0.024	0.123 ***	-0.063 **	-0.004	-0.047
	(0.567)	(0.043)	(0.044)	(0.014)	(0.034)	(0.038)	(0.025)	(0.384)	(0.043)	(0.026)	(0.029)	(0.029)	(0.011)	(0.042)
60 miles	0.071	0.058	0.100 *	-0.053 ***	0.061	0.203 ***	-0.121 ***	2.593 ***	0.178 ***	-0.014	0.077	-0.012	0.011	-0.079
	(0.762)	(0.059)	(0.060)	(0.011)	(0.051)	(0.047)	(0.022)	(0.826)	(0.065)	(0.071)	(0.028)	(0.010)	(0.010)	(0.074)
80 miles	-0.436	0.065	0.120 **	-0.061 ***	0.072	0.171 ***	-0.117 ***	1.885 ***	0.144 ***	0.007	0.034	-0.018	0.014	-0.102
	(0.705)	(0.083)	(0.055)	(0.008)	(0.070)	(0.039)	(0.037)	(0.606)	(0.048)	(0.018)	(0.055)	(0.035)	(0.012)	(0.066)
Mean	6.360	0.632	0.218	0.087	0.508	0.254	0.087	8.462	0.622	0.091	0.204	0.298	0.061	0.074
Observations	13,375	13,495	13,492	13,479	13,492	13,496	13,496	6,330	6,384	6,381	6,375	6,381	6,384	6,384

Notes: The sample is restricted to women. Robust standard errors in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 15. The effect of minimum wage on household decision making, husband sample (DSD)

VARIABLES	(1) Money given to wife's family		(2) Money given to husband's family		(3) Large Expenses		(4) Gifts for parties		(5) Routine purchases		(6) Wife's clothes		(7) Husband's clothes	
25 miles	0.011		-0.071	**	0.019		-0.037		-0.042	***	0.046		-0.124	**
	(0.029)		(0.035)		(0.049)		(0.029)		(0.007)		(0.030)		(0.056)	
	0.827		*0.154*		*0.827*		*0.397*		*0.000*		*0.351*		*0.145*	
30 miles	0.025		-0.102	***	-0.039		-0.025		-0.023	***	0.047	**	-0.163	***
	(0.031)		(0.039)		(0.027)		(0.035)		(0.009)		(0.021)		(0.043)	
	0.535		*0.033*		*0.286*		*0.547*		*0.033*		*0.078*		*0.001*	
35 miles	-0.007		-0.100	**	-0.062	***	-0.009		-0.066	***	0.009		-0.158	***
	(0.018)		(0.043)		(0.018)		(0.029)		(0.007)		(0.021)		(0.033)	
	0.763		*0.046*		*0.003*		*0.766*		*0.000*		*0.763*		*0.000*	
40 miles	-0.009		-0.096	**	-0.041	*	-0.007		-0.057	***	0.009		-0.150	***
	(0.011)		(0.048)		(0.023)		(0.027)		(0.013)		(0.022)		(0.054)	
	0.569		*0.106*		*0.138*		*0.792*		*0.000*		*0.729*		*0.016*	
60 miles	-0.085	***	-0.172	***	-0.116	***	-0.058	***	-0.069	***	-0.009		-0.113	***
	(0.006)		(0.018)		(0.030)		(0.020)		(0.018)		(0.041)		(0.031)	
	0.000		*0.000*		*0.000*		*0.006*		*0.000*		*0.885*		*0.000*	
80 miles	-0.058	***	-0.156	***	-0.110	***	-0.053	***	-0.066	***	-0.007		-0.162	***
	(0.007)		(0.022)		(0.036)		(0.016)		(0.015)		(0.036)		(0.038)	
	0.000		*0.000*		*0.004*		*0.003*		*0.000*		*0.855*		*0.000*	
Mean	0.892		0.843		0.836		0.893		0.921		0.936		0.671	
Observations	19,606		19,472		20,210		20,657		20,575		20,630		20,607	

Notes: The sample is restricted to men. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1, based on unadjusted p-values. Adjusted p-values, based on the method of Benjamini Hochberg method, are reported in italics. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 16. The effect of minimum wage on household decision making, husband sample, cont'd. (DSD)

	Saving				Children		Other	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Money for monthly arisan	Money for monthly savings	Children's clothes	Children's education	Children's health	Contraception	On spouse work
25 miles	-0.039	-0.126	0.038 **	-0.016	0.060	0.011	-0.011
	(0.050)	(0.101)	(0.018)	(0.093)	(0.061)	(0.009)	(0.161)
	0.608	*0.397*	*0.145*	*0.927*	*0.514*	*0.397*	*0.946*
30 miles	-0.051	-0.160 *	0.067 ***	0.014	0.081	0.014	0.072
	(0.046)	(0.091)	(0.013)	(0.098)	(0.058)	(0.014)	(0.153)
	0.412	*0.181*	*0.000*	*0.882*	*0.286*	*0.412*	*0.688*
35 miles	-0.086 **	-0.182 **	0.017 **	-0.028	0.046	-0.025 ***	0.050
	(0.044)	(0.071)	(0.007)	(0.071)	(0.044)	(0.009)	(0.135)
	0.086	*0.029*	*0.046*	*0.763*	*0.463*	*0.027*	*0.763*
40 miles	-0.077 *	-0.187 ***	0.017 ***	-0.042	0.053	-0.036 ***	0.070
	(0.041)	(0.064)	(0.003)	(0.061)	(0.039)	(0.009)	(0.131)
	0.115	*0.012*	*0.000*	*0.625*	*0.285*	*0.000*	*0.690*
60 miles	-0.105 **	-0.202 ***	0.046 *	-0.059	-0.019	-0.082 ***	0.008
	(0.041)	(0.069)	(0.027)	(0.068)	(0.046)	(0.014)	(0.116)
	0.016	*0.006*	*0.119*	*0.489*	*0.804*	*0.000*	*0.947*
80 miles	-0.108 ***	-0.172 ***	0.038	-0.054	-0.023	-0.053 ***	-0.047
	(0.035)	(0.037)	(0.030)	(0.066)	(0.050)	(0.019)	(0.129)
	0.003	*0.000*	*0.277*	*0.519*	*0.749*	*0.007*	*0.767*
Mean	0.882	0.833	0.936	0.876	0.897	0.926	0.646
Observations	12,576	11,362	18,403	18,508	19,222	16,456	20,671

Notes: The sample is restricted to men. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1, based on unadjusted p-values. Adjusted p-values, based on the method of Benjamini Hochberg method, are reported in italics. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 17. The effect of minimum wage on labor market outcomes (FE and SD)

VARIABLES	Wife Sample								Husband Sample								Difference	
	(1) Log wage (full-time formal sector)		**(2)** Log total income		**(3)** Working		**(4)** Total hours worked		**(5)** Log wage (full-time formal sector)		**(6)** Log total income		**(7)** Working		**(8)** Total hours worked		Log total income	
	A. Fixed Effects																	
	-0.032		0.140		0.086	**	2.747		0.187	**	0.843	***	0.034	***	1.595		0.720	
	(0.165)		(0.485)		(0.035)		(2.396)		(0.079)		(0.207)		(0.013)		(1.916)		(0.595)	
	B. Spatial Differencing																	
25 miles	0.056		1.461	***	0.073	***	5.365	***	-0.160	***	0.141		0.008		4.068	***	-1.358	**
	(0.069)		(0.279)		(0.023)		(1.724)		(0.045)		(0.243)		(0.015)		(0.890)		(0.567)	
30 miles	0.023		1.865	***	0.098	***	7.298	***	-0.192	***	0.309	**	0.021	***	5.464	***	-1.633	***
	(0.112)		(0.376)		(0.024)		(2.298)		(0.035)		(0.127)		(0.005)		(1.828)		(0.412)	
35 miles	0.003		1.690	***	0.138	***	7.780	***	-0.165	***	0.170		0.011		4.197	***	-1.629	***
	(0.081)		(0.267)		(0.024)		(2.163)		(0.050)		(0.115)		(0.008)		(1.149)		(0.424)	
40 miles	-0.010		1.621	***	0.143	***	7.609	***	-0.162	***	0.139		0.009		3.682	***	-1.590	***
	(0.079)		(0.208)		(0.021)		(2.238)		(0.060)		(0.110)		(0.008)		(1.197)		(0.372)	
60 miles	-0.099		1.490	***	0.184	***	9.027	***	0.000		0.448	***	0.009		5.550	***	-1.131	**
	(0.114)		(0.400)		(0.042)		(2.636)		(0.105)		(0.139)		(0.008)		(0.458)		(0.575)	
80 miles	0.078		1.515	***	0.180	***	9.304	***	0.086		0.597	***	0.012	**	4.719	***	-1.034	*
	(0.223)		(0.548)		(0.045)		(2.283)		(0.145)		(0.118)		(0.005)		(0.369)		(0.624)	
Mean	15.793		7.035		0.629		26.495		16.163		15.098		0.964		49.338		8.055	
Observations	2,449		19,705		19,879		19,860		7,047		20,488		20,726		20,676		19,468	

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables

Table 18. The effect of minimum wage on additional labor market outcomes (FE and SD)

VARIABLES	Wife Sample						Husband Sample					
	(1) Log total income (if positive)	**(2)** Full-time formal	**(3)** Informal	**(4)** Part-time formal	**(5)** Unpaid family work	**(6)** Hours (primary job)	**(7)** Log total income (if positive)	**(8)** Full-time formal	**(9)** Informal	**(10)** Part-time formal	**(11)** Unpaid family work	**(12)** Hours (primary job)
						A. Fixed Effects						
	0.021	0.010	0.045	0.029 **	0.079 *	1.382	0.373 ***	0.150 ***	-0.129 ***	0.011	0.009	-1.047
	(0.200)	(0.017)	(0.037)	(0.012)	(0.043)	(1.836)	(0.088)	(0.048)	(0.044)	(0.017)	(0.009)	(1.590)
						A. Spatial Differencing						
25 miles	-0.139 ***	-0.058 **	0.095 ***	0.036 ***	-0.019 ***	5.239 ***	0.084	-0.133 **	0.098 ***	0.038 ***	0.004	1.936 ***
	(0.032)	(0.029)	(0.036)	(0.004)	(0.005)	(1.495)	(0.089)	(0.060)	(0.038)	(0.009)	(0.006)	(0.404)
30 miles	0.117 **	0.015	0.053 ***	0.030 ***	-0.012 ***	7.144 ***	0.060	-0.125 ***	0.107 ***	0.037 ***	0.002	3.478 ***
	(0.048)	(0.020)	(0.020)	(0.003)	(0.001)	(1.995)	(0.048)	(0.035)	(0.026)	(0.008)	(0.007)	(1.134)
35 miles	0.038	0.037	0.090 ***	0.011 **	0.040 ***	7.171 ***	0.094	-0.043 **	0.045 **	0.009	0.009 ***	1.945 *
	(0.046)	(0.026)	(0.021)	(0.005)	(0.014)	(1.765)	(0.063)	(0.022)	(0.018)	(0.005)	(0.003)	(1.123)
40 miles	0.017	0.036	0.097 ***	0.010 **	0.050 ***	7.020 ***	0.095	-0.022	0.032 **	-0.002	0.008 ***	1.553
	(0.070)	(0.022)	(0.017)	(0.005)	(0.015)	(1.808)	(0.061)	(0.018)	(0.016)	(0.006)	(0.003)	(1.130)
60 miles	-0.133	-0.006	0.165 ***	0.026 ***	0.100 ***	7.610 ***	0.248 ***	-0.027	0.050 **	-0.015 **	0.000	2.236 **
	(0.121)	(0.021)	(0.027)	(0.008)	(0.026)	(2.237)	(0.043)	(0.030)	(0.025)	(0.007)	(0.003)	(1.026)
80 miles	0.027	0.000	0.152 ***	0.028 ***	0.094 ***	7.730 ***	0.332 ***	-0.014	0.028	-0.003	-0.002	1.989 **
	(0.148)	(0.017)	(0.026)	(0.009)	(0.023)	(1.934)	(0.065)	(0.031)	(0.026)	(0.009)	(0.002)	(0.853)
Mean	15.111	0.125	0.440	0.064	0.177	24.433	15.830	0.343	0.554	0.067	0.013	42.890
Observations	9,174	19,854	19,873	19,854	19,873	19,860	19,541	20,676	20,726	20,676	20,726	20,676

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables

Table 19. The effect of minimum wage on household decision making (FE and SD)

VARIABLES	(1) Money given to wife's family	(2) Money given to husband's family	(3) Large Expenses	(4) Gifts for parties	(5) Routine purchases	(6) Wife's clothes	(7) Husband's clothes
				Expenditure			
			A. Fixed Effects				
	-0.050	-0.093 **	-0.044	-0.041 *	0.008	0.001	-0.099
	(0.031)	(0.041)	(0.048)	(0.021)	(0.031)	(0.018)	(0.075)
	0.217	*0.090*	*0.496*	*0.146*	*0.853*	*0.965*	*0.292*
			B. Spatial Differencing				
25 miles	-0.017	-0.076 **	0.023	-0.011	0.002	0.002	0.052 ***
	(0.014)	(0.033)	(0.039)	(0.017)	(0.003)	(0.008)	(0.017)
	0.441	*0.080*	*0.649*	*0.649*	*0.649*	*0.791*	*0.030*
30 miles	-0.011	-0.065 **	0.007	-0.016	-0.014	0.010	0.060 **
	(0.017)	(0.032)	(0.026)	(0.022)	(0.011)	(0.007)	(0.027)
	0.611	*0.210*	*0.862*	*0.611*	*0.408*	*0.330*	*0.191*
35 miles	-0.033 **	-0.099 ***	-0.037	-0.027 **	0.008	0.008	0.023
	(0.017)	(0.024)	(0.027)	(0.011)	(0.006)	(0.006)	(0.015)
	0.124	*0.000*	*0.252*	*0.057*	*0.236*	*0.281*	*0.236*
40 miles	-0.041 **	-0.108 ***	-0.038	-0.025 ***	0.016 ***	0.013 **	-0.009 *
	(0.017)	(0.023)	(0.028)	(0.009)	(0.005)	(0.006)	(0.005)
	0.042	*0.000*	*0.235*	*0.016*	*0.002*	*0.048*	*0.158*
60 miles	-0.045 **	-0.117 ***	-0.043	-0.029 ***	0.037 ***	0.017 **	-0.068 **
	(0.018)	(0.018)	(0.028)	(0.009)	(0.014)	(0.008)	(0.029)
	0.031	*0.000*	*0.162*	*0.005*	*0.021*	*0.051*	*0.037*
80 miles	-0.063 ***	-0.127 ***	-0.047 *	-0.047 ***	0.034	0.013 *	-0.098 ***
	(0.023)	(0.026)	(0.025)	(0.012)	(0.024)	(0.008)	(0.037)
	0.014	*0.000*	*0.097*	*0.001*	*0.208*	*0.123*	*0.018*
Mean	0.912	0.892	0.851	0.933	0.929	0.935	0.736
Observations	18,718	18,516	19,290	19,792	19,649	19,747	19,732

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1, based on unadjusted p-values. Adjusted p-values, based on the method of Benjamini Hochberg method, are reported in italics. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 20. The effect of minimum wage on household decision making, cont'd. (FE and SD)

VARIABLES	Saving				Children			Other	
	(1) Money for monthly arisan		(2) Money for monthly savings		(3) Children's clothes	(4) Children's education	(5) Children's health	(6) Contraception	(7) On spouse work	
	A. Fixed Effects								
	-0.054	**	-0.140	***	-0.007	-0.038 *	-0.061 ***	-0.033	-0.022	
	(0.024)		(0.043)		(0.017)	(0.023)	(0.017)	(0.022)	(0.048)	
	0.090		*0.009*		*0.772*	*0.217*	*0.003*	*0.222*	*0.772*	
	B. Spatial Differencing								
25 miles	0.018	**	0.009		0.013	0.037 ***	-0.008	0.017	0.146 ***	
	(0.009)		(0.025)		(0.013)	(0.013)	(0.013)	(0.013)	(0.056)	
	0.098		*0.790*		*0.520*	*0.041*	*0.649*	*0.441*	*0.041*	
30 miles	0.007		0.037		0.000	0.014	-0.017 *	0.006	0.198 ***	
	(0.005)		(0.032)		(0.015)	(0.016)	(0.010)	(0.010)	(0.072)	
	0.347		*0.438*		*1.000*	*0.611*	*0.319*	*0.611*	*0.086*	
35 miles	-0.022	*	-0.020		-0.017	-0.006	-0.034 ***	0.002	0.155 **	
	(0.011)		(0.028)		(0.016)	(0.017)	(0.013)	(0.012)	(0.065)	
	0.124		*0.547*		*0.385*	*0.794*	*0.057*	*0.847*	*0.060*	
40 miles	-0.020		-0.026		-0.021	-0.011	-0.038 ***	0.005	0.141 **	
	(0.013)		(0.029)		(0.016)	(0.018)	(0.012)	(0.012)	(0.058)	
	0.200		*0.428*		*0.250*	*0.577*	*0.006*	*0.661*	*0.042*	
60 miles	-0.011		-0.044	*	-0.009	-0.005	-0.040 ***	-0.003	0.113 ***	
	(0.014)		(0.024)		(0.014)	(0.016)	(0.008)	(0.014)	(0.042)	
	0.550		*0.097*		*0.620*	*0.804*	*0.000*	*0.855*	*0.021*	
80 miles	-0.010		-0.056	***	-0.016	-0.024	-0.043 ***	-0.002	0.094 **	
	(0.010)		(0.019)		(0.015)	(0.025)	(0.012)	(0.018)	(0.042)	
	0.334		*0.009*		*0.334*	*0.371*	*0.002*	*0.932*	*0.050*	
Mean	0.921		0.878		0.944	0.921	0.947	0.935	0.728	
Observations	12,309		10,724		17,457	17,737	18,407	15,730	19,817	

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1, based on unadjusted p-values. Adjusted p-values, based on the method of Benjamini Hochberg method, are reported in italics. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 21. The effect of minimum wage on redefined DM indicators (FE and DSD)

VARIABLES	(1) Money given to wife's family	(2) Money given to husband's family	(3) Large Expenses	(4) Gifts for parties	(5) Routine purchases	(6) Wife's clothes	(7) Husband's clothes
				Expenditure			
	A. Fixed Effects						
	-0.080 **	-0.068 *	0.018	-0.099 **	0.122	0.013	0.006
	(0.039)	(0.037)	(0.055)	(0.047)	(0.145)	(0.092)	(0.123)
	0.134	*0.160*	*0.937*	*0.134*	*0.561*	*0.985*	*0.985*
	B. Difference in Spatial Differences						
25 miles	-0.063	0.056 **	0.045 **	-0.008	0.008	0.135	0.136 **
	(0.071)	(0.022)	(0.018)	(0.053)	(0.145)	(0.127)	(0.061)
	0.474	*0.053*	*0.053*	*0.985*	*0.985*	*0.403*	*0.087*
30 miles	-0.122 *	0.010	0.033 **	-0.020	0.015	0.079	0.080
	(0.074)	(0.013)	(0.014)	(0.027)	(0.100)	(0.105)	(0.062)
	0.231	*0.498*	*0.064*	*0.498*	*0.884*	*0.498*	*0.339*
35 miles	-0.155 **	0.003	-0.002	-0.092 ***	-0.053	0.013	-0.019
	(0.074)	(0.017)	(0.025)	(0.033)	(0.089)	(0.093)	(0.072)
	0.100	*0.947*	*0.947*	*0.018*	*0.947*	*0.947*	*0.947*
40 miles	-0.189 **	-0.026	-0.013	-0.103 ***	-0.110	-0.022	-0.050
	(0.074)	(0.023)	(0.025)	(0.027)	(0.090)	(0.097)	(0.068)
	0.028	*0.453*	*0.641*	*0.001*	*0.444*	*0.817*	*0.641*
60 miles	-0.140 *	-0.034	0.007	-0.079 **	-0.055	-0.009	-0.018
	(0.073)	(0.035)	(0.050)	(0.039)	(0.100)	(0.114)	(0.085)
	0.196	*0.757*	*0.938*	*0.191*	*0.769*	*0.938*	*0.938*
80 miles	-0.124 *	-0.027	-0.023	-0.123 ***	-0.031	-0.090	-0.013
	(0.069)	(0.032)	(0.044)	(0.046)	(0.084)	(0.121)	(0.078)
	0.250	*0.804*	*0.865*	*0.033*	*0.865*	*0.804*	*0.869*
Mean	0.863	0.894	0.881	0.805	0.278	0.660	0.375
Observations	18,742	18,532	19,673	19,829	19,853	19,858	19,858

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1, based on unadjusted p-values. Adjusted p-values, based on the method of Benjamini Hochberg method, are reported in italics. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 22. The effect of minimum wage on redefined DM indicators, cont'd. (FE and DSD)

	Saving			Children			Other	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Money for monthly arisan	Money for monthly savings	Children's clothes	Children's education	Children's health	Contraception	On spouse work
	A. Fixed Effects							
	0.038	0.120	-0.051	-0.026	-0.039	-0.054	0.006
	(0.091)	(0.083)	(0.106)	(0.039)	(0.048)	(0.095)	(0.031)
	0.286	*0.145*	*0.286*	*0.134*	*0.286*	*0.985*	*0.028*
	B. Difference in Spatial Differences							
25 miles	0.051	0.079 *	0.102	0.155 **	0.075	-0.001	-0.043 ***
	(0.036)	(0.041)	(0.076)	(0.072)	(0.056)	(0.038)	(0.014)
	0.286	*0.121*	*0.286*	*0.087*	*0.286*	*0.985*	*0.028*
30 miles	-0.054 ***	0.042	0.116 **	0.164 **	0.076	-0.047	-0.056 ***
	(0.019)	(0.034)	(0.051)	(0.072)	(0.065)	(0.033)	(0.017)
	0.028	*0.339*	*0.064*	*0.064*	*0.339*	*0.326*	*0.017*
35 miles	-0.118 ***	-0.059	0.026	0.134 ***	0.090 *	0.012	-0.108 ***
	(0.032)	(0.060)	(0.059)	(0.047)	(0.046)	(0.030)	(0.030)
	0.002	*0.638*	*0.947*	*0.018*	*0.121*	*0.947*	*0.002*
40 miles	-0.152 ***	-0.071	-0.035	0.105 ***	0.066 *	0.021	-0.111 ***
	(0.037)	(0.068)	(0.060)	(0.038)	(0.040)	(0.037)	(0.026)
	0.000	*0.455*	*0.641*	*0.019*	*0.222*	*0.641*	*0.000*
60 miles	-0.195 ***	-0.043	-0.071	0.032	0.016	-0.043	-0.107 ***
	(0.019)	(0.077)	(0.083)	(0.024)	(0.032)	(0.055)	(0.032)
	0.000	*0.769*	*0.757*	*0.488*	*0.769*	*0.757*	*0.006*
80 miles	-0.159 ***	0.012	-0.073	0.010	0.036	-0.026	-0.115 ***
	(0.014)	(0.055)	(0.088)	(0.032)	(0.029)	(0.064)	(0.040)
	0.000	*0.869*	*0.804*	*0.865*	*0.585*	*0.865*	*0.027*
Mean	0.580	0.685	0.512	0.808	0.805	0.685	0.932
Observations	12,385	10,840	18,700	18,363	18,679	15,743	19,836

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1, based on unadjusted p-values. Adjusted p-values, based on the method of Benjamini Hochberg method, are reported in italics. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.

Table 23. The effect of minimum wage on household decision making (DSD), controlling for labor market outcomes

	Bargaining power								Decisions involving children							
	(1)		(2)		(3)		(4)		(1)		(2)		(3)		(4)	
Log Real Min Wage	-0.035	**	-0.035	**	-0.035	**	-0.035	**	0.006		0.009		0.008		0.007	
	(0.016)		(0.016)		(0.016)		(0.016)		(0.022)		(0.022)		(0.023)		(0.023)	
Wife's income			0.002	***	0.002	***	0.002	***			0.001	***	0.001	**	0.001	**
			(0.000)		(0.000)		(0.000)				(0.000)		(0.001)		(0.000)	
Wife works					0.009		0.008						0.001		0.006	
					(0.006)		(0.007)						(0.007)		(0.009)	
Wife's total hours							0.000								0.000	
							(0.000)								(0.000)	
Husband's income			0.000		-0.002	***	-0.002	***			-0.001	***	-0.002	**	-0.002	**
			(0.000)		(0.001)		(0.001)				(0.000)		(0.001)		(0.001)	
Husband works					0.032	**	0.031	**					0.031		0.036	
					(0.013)		(0.013)						(0.021)		(0.022)	
Husband's total hours							0.00004								-0.00011	**
							(0.00004)								(0.00006)	
Mean					0.890								0.937			
Observations					19,460								18,170			

Notes: The sample is restricted to women. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls: household assets belonging to wife and to husband, dummy variable for urban/rural residence, age and age polynomial, education level and its polynomial for wife/husbands as the controlled variables.