Direct and Spillover Impacts of Formal Employment: Evidence from

Argentina*

Brian Feld[†] **UIUC**

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Abstract

Based on a neoclassical model of labor demand with two forms of hiring, I estimate

the effect of a policy aimed at formalizing domestic workers on their working conditions,

income and employment. I find no changes in unemployment following the reform, while

formality rates increased by approximately 40%, a magnitude much higher than what

was achieved by other policies. Moreover labor income raised by more than 4%, despite

a reduction in hours of work. In addition to this, I estimate whether the increase in

formality rates generated behavioral responses among other workers of the employee's

household. There is suggestive evidence of a reduction in labor supply for spouses and

children (particularly boys), as well as a lower likelihood of having a formal contract

among children of domestic workers following the reform. In addition to this, male

children of domestic workers are 3% more likely to attend secondary school following

the reform, suggesting that worker registration could have considerable spillover effects

beyond the labor market.

JEL Classification: J08, J46, O17

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bhfeld2@illinois.edu. Mail: 214 David Kinley Hall, 1407 W. Gregory, Urbana, IL 61801.

1 Introduction

According to the latest estimates, 50% of workers in developing countries are employed in the informal sector (ILO, 2018). Governments (especially in middle income countries) strive to reduce the proportion of workers employed off the books, not only because it entails a loss of tax revenue and it increases leakage of welfare benefits to individuals not intended to receive them (Gerard and Gonzaga, 2016), but also because this type of arrangements are usually associated with high instability, poverty, lack of protection and access to certain markets (Camacho, Conover, and Hoyos, 2013).

Despite the intentions of policymakers, it has been argued that some workers may enjoy some non-wage benefits of informal employment such as flexibility or independence (Maloney, 2004), and hence be working off the books voluntarily. Moreover, when informality is a response to the high costs of registering labor relationships, heightened enforcement by the Government may lead to higher unemployment. In addition to this, increasing formality rates among certain workers could trigger behavioral responses in the labor market from other individuals of the worker's family (Galiani and Weinschelbaum, 2012). Yet, research on the effects of increasing compliance with labor laws is scarce and only focused on either targeted workers or firms, while studies of its potential spillover effects to other individuals within a worker's family are nonexistent.

In this paper I aim to fill these gaps by studying the effects of a law enacted in Argentina targeted at improving the employment regulations of domestic workers (cleaning ladies, caregivers, etc.). The law set the labor rights of domestic workers on par with those of the rest of the workforce. These not only include direct benefits to employees, but also the sanctions that employers would face if they did not register their employee and were detected by the tax authority. Moreover, the burden of proof to avoid sanctions was reversed for certain households whom, based on their socioeconomic status and despite not registering an employee working for them, were likely to employ a domestic worker.

These changes can be seen as an increase in the cost of hiring a worker either formally or informally. However, the increase in sanctions was orders of magnitude higher than the additional costs of registering a worker, which were partially offset by a tax break that was already in place to encourage formalization. From a theoretical point of view, employers could thus register domestic

workers who were previously hired off the books or reduce their labor demand of either formal or informal workers on the extensive margin (i.e. fire the worker). The overall impact on the sector in terms of formality rates and employment is thus unclear. In terms of the income of domestic workers, the impact of the policy is also a-priori undetermined: employers willing to register their domestic worker may have to increase wages in order to comply with minimum wage laws, but they could also offset this increase by reducing the number of hours the worker is hired for.

To study the effects of this reform, I use a difference-in-differences strategy comparing domestic workers to other employees in the periods before and after the reform. Because domestic workers are very different from the rest of the workforce in their observable characteristics, I use different subset of workers not affected by the reform as my control group in order to test the robustness of my estimates.

In my preferred specification, I find that the changes to the law led to an increase of 40% in the formality rates of domestic workers, with no discernible impact on employment levels, which suggests that the sector is characterized by a segmented labor market. This result is orders of magnitude larger than those found in previous studies that look at the effect on formality of inspections (Ronconi, 2010; Almeida and Carneiro, 2012; De Andrade, Bruhn, and McKenzie, 2014) or the reduction of either barriers to operate formally (Galiani, Meléndez, and Navajas Ahumada, 2017), or to be paid under the table (Kumler, Verhoogen, and Frías, 2013). Importantly, the impact is also much larger in percentage terms than those found by de Melo Costa, de Holanda Barbosa, Hirata, et al. (2016), who study a similar reform to domestic workers' rights that took place in Brazil. One explanation for this difference in magnitude is that baseline levels of formality in the sector targeted by the policy were very low. In addition to this, reversing the burden of proof for some employers made it quite difficult for them to avoid sanctions in case they were effectively employing a worker off the books.

In addition to the changes in formality rates, I find that the policy led to an increase of 4.3% in monthly income of domestic workers. The main driver behind this result is compliance with labor laws that resulted from registering a domestic worker who was previously working off the books. These laws includes paying a minimum wage, so employers previously paying a salary lower than the specified minimum had to increase the wages of their workers upon registering them. On the other hand, I observe a decrease of 5% in hours of work, which following the wage increase could be

due to either a reduction in labor demand, a reduction in labor supply consequence of the income increase, or both. While I cannot rule out the first explanation, when employees are asked whether they would be willing to work more I do not observe any differential effect of the policy between domestic workers and other workers, supporting the income effect hypothesis.

Registered workers receive a series of benefits (such as health care insurance and pension) some of which extend to other members of the household. Therefore, if one household member has a formal employment, this reduces the incentives of other members to work in the formal sector, as shown theoretically by Galiani and Weinschelbaum (2012). Although there is evidence that support this theory of this behavior, existing studies focus on behavioral responses of the extension of welfare benefits either to informal workers or to other family members of formal workers. In this paper, I will instead use a similar difference-in-differences strategy to study whether the change in formality status of one household member (employed as a domestic worker) has spillover effects on other members of the worker's household. In particular, I will study the impact of the reform to the domestic worker sector on the labor market outcomes of their spouses and their children aged between 16 (the minimum legal age to work) and 30.

I find no statistically significant impact of the reform on spouses' participation rate or formality status. The reason behind this null result may lie in the fact that domestic workers who live with a spouse are not heads of their household but rather "secondary workers". Hence, their spouses are the main income earners, and as it is well known, these household members have a low elasticity of labor supply. Despite this, I cannot reject a small reduction of approximately 1.5% in labor supply along the intensive margin.

Similarly, I am not able to detect a statistically significant change in labor supply (both along the extensive and intensive margin) or in formality rates for young adult children of domestic workers following the policy reform. However, point estimates are negative and in some cases as large as 15% with respect to their mean values. On the other hand, I observe a 4% increase in school attendance and a 2% years of education among male children of domestic workers (who have lower attendance rates than girls), which may be a consequence of the positive income shock experienced by the household.

Taking together all the results, there is suggestive evidence that efforts to increase formality levels can have unintended consequences in terms of decisions made by other household members,

especially those with low labor attachment. This is important since the policy under analysis targeted a group of workers from low socioeconomic status, and for whom the levels of informality were exceptionally high. Therefore, these spillover impacts could provide a lower bound to the effects of formalization among more representative workers.

In addition to this, it should be noted that the reform did not, by itself, change the incentives for working in the formal sector to any household member. This is in contrast to previous studies that have arrived at similar conclusions: Camacho et al. (2013) and Bosch and Campos-Vazquez (2014) found that formality rates decreased following the detachment of health care benefits from formal employment in Colombia and Mexico, respectively. In turn, Bergolo and Cruces (2014) found that formality rates increased when health care coverage was extended to dependent children of formal workers in Uruguay, but they also observe an increase in the incidence of earnings under-reporting. In Argentina, Gasparini, Haimovich, Olivieri, et al. (2009) estimate that an unconditional cash transfer program implemented in the wake of a severe crisis increased informality rates when the size of the transfer was high relative to the prevailing wages in the formal sector.

The rest of the paper is structured as follows: Section 2 will first lay out a simple model of labor demand with two forms of hiring that will serve as a framework to analyze the impact of the policy change. I will also show theoretically why the way in which a worker is hired (either formally on informally) could have implications for the relatives of that worker when certain fringe benefits are shared among all members of the household. In turn, the characteristics of domestic work employment in Argentina and the reform proposed are described in detail in Section 3. Section 4 describes the dataset used and the empirical strategy implemented to estimate the effects of the reform. Section 5 presents the results, and Section 6 presents the conclusions of this study.

2 Theoretical Framework

Even though it is not easy to determine whether a dual labor market is segmented or integrated, there is evidence that suggest the market for domestic workers corresponds to the former. As it is shown in Table 1, registered domestic workers are older and have a longer tenure than unregistered ones. They also live in smaller households and are slightly more educated than those who have an informal contract. In addition to this, anecdotal evidence suggests that it is the employer who

determines whether to register a domestic worker, and given the low levels of formality in the sector employees have little bargaining power in this regard.

Taking these factors into consideration, in this section I lay out a simple model of demand for household services in which employers can also choose whether they report their consumption of these services to the Government (i.e. hire a worker in the formal sector) or not. This representative agent has a Stone-Geary utility function that depends consumption of goods C and household services H:

$$U(C;H) = a_1 \ln(C - b_1) + a_2 \ln(H - b_2)$$
(1)

with $a_1 < 0$, $a_2 < 0$, $a_1 + a_2 = 1$, $b_1 > 0$ and $b_2 < 0$. Therefore, the individual requires a "subsistence level" b_1 of consumption of goods, but this is not the case for household services. This reflects the fact that not all individuals demand household services in the market, presumably because a minimum level of these could be obtained through home production.

This individual has an exogenous income level y, over which she pays a share τ in the form of taxes. Labor demand for household services can be either reported to the social security administration or not. If reported, the individual has to pay the worker a minimum wage \bar{w} , but can deduct a share $\delta \bar{w}h$ from her income taxes (if $\delta \bar{w}h > \tau y$ the individual pays zero income taxes, but she is not entitled to a refund¹). If not reported, the individual pays a wage $w \leq \bar{w}$ but faces a probability of being detected by the social security administration and charged a fine. Let ξ be the expected penalty the individual has to pay for hiring an unregistered worker. The price of consumption goods is normalized to 1.

The problem faced by the individual is therefore:

$$\max U(C;H) \quad s.t. \begin{cases} 0 \leq H \leq \bar{H} \\ 0 \leq C \\ y = C + wH + \xi + \tau y \quad \text{if unregistered} \\ y = C + \bar{w}H + \max\{\tau y - \delta \bar{w}H; 0\} \quad \text{if registered} \end{cases}$$
 the US, the tax authority does not issue a refund when taxes are overpaid.

¹Unlike in the US, the tax authority does not issue a refund when taxes are overpaid.

The individual solves this problem by solving for $(C^*; H^*)$ under each hiring condition and then choosing the one that provides the highest utility level.

Interior solutions for H^* are as follows:

- If hiring unregistered: $H^* = \frac{a_2}{w}[y(1-\tau) \xi b_1] + a_1b_2$
- If hiring registered and $\tau y \delta \bar{w} H^* < 0$: $H^* = \frac{a_2}{\bar{w}} [y b_1] + a_1 b_2$
- If hiring registered and $\tau y \delta \bar{w} H^* > 0$: $H^* = \frac{a_2}{\bar{w}(1 \delta a_2)} [y(1 \tau) b_1] + \frac{a_1}{(1 \delta a_2)} b_2$

2.1 Comparative statics

From the results above, we can draw a series of conclusions about what we should expect from the reform introduced by the government:

- Increases in penalties for employers hiring unregistered workers: It is straightforward to show that if penalties increase, demand for household services will decrease for those hiring domestic workers off the books (in some cases, to the point of becoming zero). Moreover, for certain individuals (especially those with high incomes, as it will be shown later when the reforms are described in detail) it will be profitable to formalize a labor relationship that was being kept unregistered.
- Increases in the salary of registered workers: The increase in non-pecuniary benefits to registered workers to equate their rights to those of other employees is likely to reduce labor demand in the formal sector. It may also induce some individuals to switch a labor relationship from the formal to the informal sector.

From these results, we would expect the policy change to induce a reduction in hours of work for unregistered domestic workers due to the increase in ψ . In turn, the raise in the wages should decrease hours of work for formal domestic workers, although it may also have an impact on informal workers if their wages are affected by those of formal workers (for example, Lemos, 2009 and Dinkelman and Ranchhod, 2012 find evidence of a "lighthouse" effect of minimum wages on informal salaries in Brazil and South Africa, respectively). Moreover, one should expect this policy reform to

trigger switches from the informal to the formal sector and vice-versa, depending on how the new optimal values in each sector affects the utility function of the employer.

In turn, this paper analyzes whether the change in formality status of domestic workers following the policy reform affected the decisions of other members of the worker's household. These individuals may work in various sectors of the economy, either as registered or unregistered employees. If the labor market they operate in is segmented, changes in the formality status of another household member should not have an effect on their own registration status. However, if some individuals are able to switch between the formal and informal sector, once a household member (in this case the one employed as a domestic worker) switches to the formal sector, their incentives to be registered diminish.

To see this, consider a worker (indexed by j) in isolation who can earn wage w_j^F per hour in the formal sector and w_j^I if working unregistered, with $w_j^F > w_j^I$. These are equilibrium wages in each sector, conditional on the worker's characteristics such as her stock of human capital. However, when working in the formal sector she has to pay μw_j^F in taxes and in exchange receives non-pecuniary benefits κ . Hence, the utility of a worker from being employed in each sector is:

$$U_{j} = \begin{cases} U(w_{j}^{F}h(1-\mu); \kappa) & \text{if registered} \\ \\ U(w_{j}^{I}h) & \text{if unregistered} \end{cases}$$

From this, the decision on which sector to operate depends on the relative (after tax) wages that the worker could obtain in each sector as well as her valuation for the non-pecuniary benefits she would receive if registered.

Consider now what happens if two workers can share these non-pecuniary benefits. The utility of a registered worker would be the same as before, but that of an unregistered worker would depend on the sector in which her partner operates. In particular, the utility of worker j as a function of his registration status and that of worker k is:

$$U_{j} = \begin{cases} U(w_{j}^{F}h(1-\mu);\kappa) & \text{if } j \text{ is registered} \\ U(w_{j}^{I}h;\kappa) & \text{if } j \text{ is unregistered and } k \text{ is registered} \\ U(w_{j}^{I}h) & \text{if both } j \text{ and } k \text{ are unregistered} \end{cases}$$

Hence, certain workers who may have been working in the formal sector in order to obtain nonpecuniary benefits for them and their relatives, may prefer to become unregistered once the labor relationship of one of those relatives is formalized.

3 Domestic Workers in Argentina

The characteristics of domestic workers and their employment conditions in Argentina are not very different from what is observe in other middle income countries in Latin America. There are approximately one million people are employed as domestic workers in the country, of which more than 95% are women. This constitutes approximately 7% of the workforce and 17% of all employed women in the country (Lexartza, Chaves, and Carcedo, 2016). Approximately 10% are foreign migrants, mostly from other countries in South America, while another 20% are internal migrants. The country's migration policy allows foreign nationals from these countries to become legal residents upon arrival and before obtaining a job, so unlike what happens in developed countries, the proportion of undocumented migrants is very low.

Although in the past it was common for domestic workers to live with their employers, according to the 2012/2013 National Expenditure Survey, more than 97% of employees return to their homes every day, after finishing their work. This makes it difficult to characterize the employers of domestic workers from survey data, but according to Persia (2014) 50% of domestic workers are employed by households in the top two deciles of the income distribution, and 70% are employed by households in the top two quintiles of the income distribution.

As shown in Figure 1, most domestic workers are employed by only one household. However, when looking at the number of hours per week an employee was hired for (depicted in Figure 2), it can be noted that domestic workers are typically part-time employees. While this may help explain

the fact that domestic workers are paid less than other low-skilled employees, there is still a 50% difference between the hourly wages of domestic workers and other workers, which only decreases to 30% when comparing domestic workers to other low-skilled workers.

Lastly, another feature of this type of employment is that the vast majority of them (85%) were not registered in social security nor the tax administration at the time the policy under analysis was implemented. This is a low figure compared both to the share of unregistered workers in other sectors (approximately 30%) and also with respect to the proportion of unregistered domestic workers in Latin America (72%). Some reasons put forward in previous studies for this low level of registration are the lack of monitoring through inspections as well as lack of information from both employees and employers about the mechanisms for and costs of compliance.

3.1 Policies to increase formalization

As in most developing countries, the activity of domestic workers in Argentina was regulated by different laws than those which establish the rights of other workers. The main reason for this was to acknowledge that the work done by domestic workers is not a profit-generating one, and so the employer (a household) would have a lower capacity to pay a similar salary (both monetary and non-monetary) to that received by firm-employees.

As a consequence of this difference, regulations did not specify a maximum number of hours per day or week that domestic workers could be asked to work² (while other workers were subject to an 8-hour per day and 48-hour per week limit), they did not have mandated right to maternity or sick leave, and they were entitle to half the severance payment that firms would pay to workers due to dismissal (which amounts to one monthly salary per year of service). Moreover, their minimum wage was usually set at or below the general minimum wage (while in most sectors collective bargaining would set minimum wages above the Federal minimum), and employers were not required to carry an occupational accident insurance policy.

In order to reduce the gap between domestic workers' rights and those of other sectors, in March 2010 the President sent a bill to Congress to reform these regulations. Employers would be subject to the same limits as other employers in terms of the time they could hire a worker, and would

²However, it mandated 3 hours of rest during the day and 9 during the night, effectively limiting the workday to 12 hours.

be required to carry occupational accident insurance coverage. On the other hand, workers would benefit from 14 days of holidays (increasing to 21 after 5 years of tenure and to 28 after 10 years), and they would be granted paid sick and maternity leaves. Moreover, workers would be entitled to a severance payment of one month for every year worked if they were fired.

The reform set a new minimum wage for domestic workers of ARS 19.74 per hour (equivalent to \$3.53), or ARS 2589.85 and ARS 1294.93 per month for those working 40 and 20 hours a week, respectively. For comparison, households in the top three deciles of the income distribution (responsible for almost three quarters of the hires of domestic workers) had a total income between ARS 9,000 and ARS 141,000, with a median of ARS 12,900. In addition to this, employers had to pay contributions for health and pension coverage, which was set at a fixed amount of ARS 20 for those working less than 12 hours a week, ARS 39 between 12 and 16 hours, and ARS 135 for those working more than 16 hours a week. This contrasts with a contribution rate of 30% that employers pay for other workers and was meant to encourage registration.

In addition to this, a series of measures were included in the reform to dissuade employers from hiring off the books. First, as was already the case for employees in other sectors, severance payments would double in case an unregistered domestic worker was fired. This would typically be determined by a judge after a worker sued the employer for being fired and not paid the corresponding severance, and labor courts would usually side with employees. Second, employers hiring off the books who were detected would be required to pay the worker one quarter of a salary for each month the employee was unregistered, plus a fine of ARS 7000.

Despite being proposed in 2010, the law passed in March 2013, and it was not until April 12, 2013 that it was enacted. Employers were given a grace period of 60 days to comply with the new regulations, during which they could register a previously unregistered domestic worker without being subject to sanctions.

To further increase the incentives to register informal workers, a few weeks after the law passed the Federal Administration of Public Revenue (AFIP) announced that households with a yearly income of ARS 500,000 per year or a net worth of ARS 305,000 (approximately \$55,000) would be assumed to employ a domestic worker and compelled to either register the worker (if there was indeed one), or prove that they did not have any employee in order to avoid these sanctions. Figure 4 presents an example of the letter sent by the tax authority.

This amounted to reversing the burden of proof, with individuals presumed to have a domestic worker and compelled to prove their innocence rather than the authorities having to prove their wrongdoing. Although ultimately the letter were sent only to individuals who satisfied both the income and assets conditions, this decision was made public only days before the letters started to be sent, and it raised concern that households with lower income or assets levels may be targeted at a later date.

Given these changes, it is important to have a sense of the costs and benefits for an employer of complying with the new regulations. As Figure 3 shows, almost three quarters of informal domestic workers were already receiving a higher wage than what the law stated given their hours of work. However, among those employers not complying with the minimum wage, the median required increase was ARS 700 at the time, which represents more than a 50% raise for the average worker, but no more than a 7.5% increase in expenditure for the households who employed a worker. In addition to this, the contributions represented at most 1% of the household income of those in the top three deciles of the income distribution.

It should be noted that part of the salary increase was absorbed by the Government, thanks to a tax break implemented in 2006 for those who hired a domestic worker formally. This tax break disproportionately benefited individuals in the top two deciles of the income distribution, since the structure of income taxes is such that only those individuals are subject to a positive tax rate. On the other hand, although detection was still low (especially for those below the thresholds set by AFIP to send the letters), the fines increased more than fourfold and could reach an amount similar to or higher than the monthly income of the employer.

Although it is not possible to provide a clear threshold for when it was beneficial for employers to register a worker who was hired informally, the changes in costs and benefits may have incentivized many employers (especially those in the top 20% of the income distribution) to formalize their employees. As evidence of this, Figure 5 shows the share of registered workers for different groups of the workforce before and after the policy change.

The pre-reform period is characterized by a very slow increase in labor formality, a reflection of the stagnation experienced in terms of GDP and employment. The domestic workers' sector was no stranger to this phenomenon: increases in the share of registered workers are very similar to those experienced by other sectors, although the lower baseline levels of formality rates implies that growth rates in the share of formal workers were much higher. However, as it can be seen in the right panel, in 2013 and 2014 there are a discrete "jumps" in formality rates of domestic workers that seems to stabilize in 2015, while we do not observe similar that and 2014 formality rates among domestic workers increased sharply, while those of the other groups remained constant.

4 Data and empirical strategy

4.1 Data

The data used for the analysis is the Permanent Survey of Households (EPH), a stratified random sample that has been conducted quarterly since July 2003 by the National Statistical Office (INDEC, n.d.)³. At present, the survey covers the 31 largest MSAs of the country (representative of 62% of the country's population and 68% of the country's urban population), and is the main source for socioeconomic indicators in the country such as labor force participation, unemployment, earnings, poverty status, etc. For this paper I use data between 2009 and the first half of 2015, which implies 4 years before the law was enacted and two and a half years after the reform was implemented.

Although the survey has a rotating panel structure (whereby households are interviewed during two consecutive quarters, then excluded for two quarters and re-interviewed in the following two periods). The small number of domestic workers who are sampled both before and after the reform implies that the study would not be powered enough to take advantage of its panel structure. Hence, throughout this paper I stack each quarterly survey within a year and use it as a repeated cross-section dataset⁴.

The survey has a specific question regarding whether a person is a domestic worker, which is used here to define the treatment group. Among those defined as domestic workers in the sample, 89% are housemaids, more than 9% are caregivers, and the rest is divided between different occupations that are performed at another individual's home. In turn, a formal worker is defined as one for whom pension contributions are made out of his salary. This is the standard "legalistic" definition of informality, and every employed worker is specifically asked this question in the survey.

Because the sampling unit is the household, employers can only be linked to the domestic worker

³From 1974 and until June 2003, the survey was conducted every six months.

⁴The results are similar when the data is used quarterly instead of yearly.

whom they employ if both reside in the same unit. Less than 2% of domestic workers in the sample satisfy this condition, so all the analysis will be carried out using self reported information from the employee, and no characteristics of the employers will be incorporated.

Monetary values have been expressed in 2003 Argentinian pesos (ARS). There is ample evidence that INDEC falsified the inflation figures by a significant margin. For this reason, studies that use price and income data from Argentina have relied on alternative estimations produced either by private companies or statistical offices of certain provinces, which replicate INDEC's methodology at a smaller scale. For this study, I will use PriceStat's chained index (see Cavallo and Bertolotto, 2016, and Cavallo and Rigobon, 2016), which collects daily on-line data of millions of products sold in the country.

4.2 Empirical Strategy

Since the policy reform affected only one well-defined group of workers and all these workers were treated at the same time, this policy fits nicely into the difference-in-differences framework (Angrist and Krueger, 1999). Hence, throughout this paper I will use the following specification to estimate the impact of the reform on the different labor market outcomes of the employees:

$$Y_{ijmt} = \beta_0 + \beta_1 DW_{ijmt} + \beta_2 DW_{ijmt} \times Reform_t + \Gamma X_{ijmt} + \theta_t + \nu_j + \mu_m + \psi_{tm} + \varepsilon_{ijmt}$$
 (2)

Where Y_{ijmt} is the outcome of interest for individual i working in sector j in MSA m at time t. DW_{ijmt} indicates the person is a domestic worker. $Reform_t$ is a dummy variable equal to one in the post-reform periods (i.e. 2013 to 2015). X_{imt} is a set of worker's characteristics (age, country of birth, household size, marital status, literacy status and years of education). θ_t is a year fixed effect, with the base period set at the year immediately before the policy reform (2012). In turn, ν_j and μ_k are fixed effects by occupation and MSA of residence, respectively. Finally, ψ_{tk} estimates the interaction between year and MSA to capture local labor market trends. The parameter of interest is β_2 , which captures the effect of the policy change on the target population. A more flexible specification, which includes treatment effects per year is also estimated in the Appendix showing very similar results to those of this specification.

In all cases, following Bertrand, Duflo, and Mullainathan (2004) I cluster the standard errors at the MSA level to control for serial correlation across time and adjust the p-values for multiple hypothesis testing using Hochberg's step-up procedure (Hochberg, 1988).

Choosing the appropriate control group is not a trivial task in this case. Although the empirical strategy used does not require that treatment and control groups be similar in their baseline characteristics, this is desirable as it increases the likelihood that the evolution of both groups would be similar in the absence of treatment. Moreover, since workers can self-select into similar occupations, if the control group is very similar to the treatment group in terms of the skills used there is potential for flows of workers between treatment and control group that may change the group composition in terms of characteristics that may be correlated with the outcomes of interest.

Although in all cases my preferred comparison group will be that of all other workers in the economy, I will also use other subsets of the comparison sample to estimate the impacts of the policy reform, in a fashion similar to de Melo Costa et al. (2016): only female workers, and cleaning workers who are hired by firms and hence were not subject to the new regulations since they and their employers were already subject to the standard labor regulations.

Table 2 presents summary statistics for the treatment and each of the comparison groups in the pre-reform period, including whether or not these characteristics are statistically similar to those of domestic workers. As it can be seen, domestic workers are quite different in terms of demographic and socioeconomic characteristics than the rest of the employees, even when one concentrates on the sample of workers in the cleaning sector who are not domestic workers. Although this is not an issue in order to obtain unbiased estimates of the effect of the policy reform, the validity of the estimates relies on two crucial assumptions.

The first assumption, known as "group composition" refers to the fact that the observable characteristics of both treatment and control groups that may affect the outcomes of interest should not be altered as a result of the treatment, be it directly or through switching of members from one group to the other. Because the data used is not a panel, determining whether the treatment generated changes in the composition of treatment and control groups is not straightforward. However, certain features of the data suggest this was not the case in this setting.

First, in Table 3 I take the sample of all employed individuals and those unemployed but with a previous job and regress an indicator for having a job on occupation (either current or past) and

year dummies, including an interaction between a post-reform period and an indicator for domestic workers. From the results it seems that the reform did not increase the likelihood for domestic workers of becoming unemployed, something that could be problematic if firing targeted workers with certain characteristics.

It is still possible that workers switched sectors either into or out of domestic work after the reform. As a first approximation to the relevance of this issue, Figure 6 plots the number of workers surveyed every year in each of the comparison groups as well as other occupations that may be an alternative for domestic workers. As it can be seen, the trends in the number of workers surveyed who belong to each sector are similar both before and after the reform (the drop in 2015 is due to the availability of data only for the first half of the year). Moreover, Figure 7 shows that workers from different occupations as a share of the total workforce remained constant over time.

The evidence presented so far suggests that, at least in the short term, the policy did not generate large enough flows across treatment and comparison groups to be a concern for the analysis. However, the next section will provide further evidence of the stability in terms of group characteristics throughout the entire period under analysis.

The second assumption required for the internal validity of the empirical strategy, referred as "parallel trends" states that, in the absence of treatment, the evolution of the outcome variables for treatment and comparison groups should be similar, even if their levels are different. Although it is not possible to ascertain that treatment and control groups would have evolved similarly in the absence of treatment, one can found evidence in support of this by looking at the behavior of the variables of interest in periods before the treatment takes effect.

Similar to what was shown in Figure 5 regarding the share of formal workers for the different groups included in the analysis, Figures 8 and 9 presents the unconditional means of log monthly income and wages (which are constructed as the ratio of income to hours of work), and the hours of work per week, respectively. Once again, although the levels are different across treatment and comparison groups, there is no indication of pre-trend differences between them. In addition to this, Appendix 6 presents the results of the difference-in-differences estimates using interactions between a domestic worker indicator and a dummy for each year. The results also show that with a few notable exceptions, the interaction coefficients are never statistically different from zero in pre-reform years.

5 Results

5.1 Formality rates, earnings and working time

In this section, I present the results of estimating Equation 2 for the different outcomes of interest, starting with those concerning domestic workers themselves. Table 4 shows the effect of the labor reform on the probability that a worker is registered to the tax authority. This is typically measured by asking the employee whether his/her employer makes contributions to the pension system on behalf of the worker⁵. All the results point to an increase in the share of registered domestic workers as a consequence of the policy reform, although the magnitude of this change varies depending on which group is used as comparison.

When compared to all other workers, the fraction of formal domestic workers increased by 6 percentage points, a raise of almost 40% from their pre-reform levels. Similar results are obtained when comparing domestic workers with other working women. However, when the control group is the composed only of workers in the cleaning sector the increase in registration rates drops to 30%, still a sizable impact. Although it is not possible in principle to determine the reason for the difference in the magnitude of the impact, a plausible cause could be a change in the bargaining power of informal workers in the cleaning sector, whom as a consequence of the reform saw an improvement in their outside options, even if ultimately they did not change occupations.

As mentioned in Section 3, registering a labor relationship that used to be off-the-books is not sufficient for employers to abide by the law. In addition to this, they have to comply with other labor regulations, such as a limit on hours of work, paid leaves and minimum wages. Until the reform was implemented, minimum wages were set for full-time (40 hours/week), part-time (20 hours/week) and per hour in order to determine proportional wages and overtime payments. At the time of the reforms, the minimum wage for domestic workers was set at ARS 2,589.85 (approximately ARS 540 of 2003) per month for full-time workers, ARS 1294.93 for part-time workers, and ARS 19.74 per hour (equivalent to ARS 4.11 of 2003). Since September 2013, however, minimum wages were set per month (for 40 hours a week of work) and hour only.

Despite the inflation, minimum wages for the years 2012 and 2013 were similar in real terms,

⁵Although the burden of payroll taxes is split between workers and employers, it is the latter who has to transfer the money to the Social Security Administration

which allows one to compare the distribution of earnings within one year of the reform. This is shown in Figures 10 and 11 (which depict the distribution of earnings for domestic workers employed at least 40 hours per week and wages for those employed less than 40 hours a week, respectively) for the years 2012 and 2013. Both figures depict a very similar pattern: compared to the pre-reform year, in 2013 there is a shift to the right in the income distribution, with some bunching taking place around the minimum wage that was not present in the pre-treatment period.

In turn, Figures 12 and 13 show how the distribution of log income and wages from the main job compare across time between domestic workers and the rest of the workforce. Although in all cases it is possible to observe a shift to the right in the distribution for the treatment period (suggesting an increase in real income across the board), the shift for domestic workers (both in monthly income for those working full time and in hourly wages for those who work part-time) is more pronounced than that of the remainder of the workforce. This is especially noticeable for the distribution of wages per hour, which has now a mode near the minimum wage (1.41 log points). The difference between the changes observed in wages and income can be partially explained by Figure 14, which shows the distribution of hours of work by occupation and time period: while the hours worked every week by most of the workforce remained fairly constant, those of domestic workers varied slightly, with less density in the right tail and more density around the 20-hour mark.

A statistical analysis of these changes is presented in Table 5. Panel A presents the results of estimating Equation 2 using the natural logarithm of real income as the dependent variable, while Panel B use the natural logarithm of real hourly wages as the left hand side variable. As shown in the first panel, income of domestic workers increased by about 4%, while Panel B shows that wages went up by more than twice as much.

Panel A of Table 6 shows that the difference in the percentage change between wages and income is due to a reduction of working time of between 5 and 7%. This, together with the results shown in Table 3, suggest that the adjustment in labor demand that occurred due to the reform operated on the intensive margin only. This should not be surprising, since the cost of firing a domestic worker who was employed off the books became four times as costly, whereas adjusting hours of work did not entail any penalties for employers.

Moreover, Panel B of Table 6 shows the difference-in-differences estimate when the dependent variable is an indicator that takes the value one if the worker is willing to work more hours, a concept

known as *involuntary part-time employment*. Even though domestic workers are more likely to be in this status, the reform did not differentially change the likelihood of being in this status despite the average reduction in hours of work. This suggests some income effect at play in the labor supply of domestic workers following the policy change.

5.1.1 Heterogeneity in treatment effects

Although the labor reform had a positive effect on formality rates, it is clear from the results that only a fraction of domestic workers moved from the informal to the formal sector, even two and a half years after the policy was in place. This is likely due to the fact that the benefit of switching to the formal sector was different for both employers and workers based on their characteristics. For example, employers may consider that the quality of the service received by more productive workers would not be much affected by registering them and reducing their hours of work to compensate for the increase in cost. On the other hand, it is common for employees to live in different districts than their employers, and some take advantage of this to take their children to better schools. For these workers, it may be convenient to spend more hours at their workplace than being registered and having to make different arrangements with their family.

As it was shown in Table 2, two characteristics that distinguish domestic workers from workers in other sectors is the larger proportion of foreign-born individuals and their lower average level of education. Employers may take this into account, for example by disproportionately registering workers with a higher level of education than the sector average, if their higher ability justifies the increased cost. Therefore, here I explore whether the reform had heterogeneous treatment effects on the target population along these dimensions.

Table A1 presents estimates of the treatment effect for migrants and natives separately, showing that the former were overwhelmingly benefited from the reform, although the estimates are less precise due to the small sample size. Although surprising at first, migrants are older, have longer tenure than natives, and were already more likely to be registered even though they are slightly less educated. Hence, this result could reflect differential selection into working as a domestic worker by nationality (given the low-skilled nature of the sector, native domestic workers may be worse than foreigners in terms of unobservable characteristics). In addition to that, this result provides evidence that country of origin was not a deterrent factor for registration of the workers by their

employers.

In turn Table A2 splits the sample by whether the employee completed high school. The results show that those with a high-school degree and above were between 1 and 2.6 percentage points more likely to become registered than those with less than high-school education. As mentioned above, assuming education is a proxy for ability, this result is consistent with employers willing to pay more for a higher-ability worker, even if that requires reducing their demand for household services.

5.1.2 Threats to validity and robustness checks

As mentioned in Section 4, the estimates shown above would be biased if the policy induced changes in the composition of either treatment or comparison groups. Although Table 3 showed that domestic workers were no more likely to be fired than other workers following the reform, and Figures 6 and 7 provided evidence against changes in the composition of occupations among the individuals surveyed, it is still possible for the reform to induce flows of workers across occupations, leaving the total numbers and shares constant over time. Alternatively, the policy may change the selection into occupations among those who enter the labor market.

As a way of testing this, Table B1 presents point estimates of estimating Equation 2 but using each row variable as the dependent variable and including only fixed effects by year, time and MSA. The results show that the difference-in-differences estimate is almost never statistically different from zero, suggesting that both treatment and control groups remained stable in terms of their observable characteristics, even if the individuals surveyed before and after the treatment were not always the same.

Regarding the presence of pre-trend differences across groups, I formally test for its presence in two ways. First, I regress an indicator for being a formal worker on the full set of controls used in my main specification, but replacing the interaction between the domestic worker and *Reform* indicators with domestic worker-by-year interactions. In the presence of pre-trend differences, the interactions corresponding to pre-reform years should be statistically different from zero. Table C1 presents the results of this analysis, showing no evidence of difference in the evolution of formality rates between domestic and non-domestic workers before the reform.

As a second validity test of the parallel trends assumption, I estimate the model using two

alternative reform periods: in 2010 when the Bill was first sent to Congress and in 2011 the House of Representatives approved the Bill and it was expected it would be enacted after its treatment in the Senate. The results are shown in Panels A and B respectively of Table B2. In neither case we observe that any of the difference-in-differences coefficient is statistically different from zero, which suggests that there was no anticipation effect to the reform.

5.2 Spillover effects of the reform

Although it is out of the scope of this paper to calculate aggregate welfare changes, the evidence so far suggests that at least some domestic workers benefited from the change in regulations, while there is no conclusive evidence that any group was made worse off by it. Despite this, the impacts of the reform may not be limited to domestic workers.

The workers targeted by the policy change tend to live in households with lower than average income, and their spouses and children (at least those legally allowed to work) have a higher labor supply at the intensive and extensive margin (respectively) than those of the spouses and children of workers in other sectors. If each household member makes his/her labor supply decisions taking into account the entire household income, then the increase in wages and reduction of hours of work experienced by domestic workers might have an effect on other household members' labor supply.

On the other hand, the switch to a formal job may trigger behavioral responses from other family members in the labor market. Formal workers enjoy certain welfare benefits that are tied to their registration status (such as enhanced health care insurance and pensions), as well market goods that also require consumers to be registered (access to formal channels of credit and a broader housing market, among others). Other household members can also benefit from some of these amenities, as is the case with health insurance. In Argentina, formal workers are covered by default by union run mutualities called "Obras Sociales". This coverage extends to the spouse of the worker and his/her children up to the age of 21, or those between 22 and 25 years old provided they attend school and do not have a formal employment. Hence, if a worker is employed in the formal sector, these benefits reduce the incentives for other household members to have a job that is reported to the tax authorities. However, the evidence so far is not conclusive, and these responses which is why additional tests of this hypothesis are needed.

Finally, the raise in income received by domestic workers could be used to invest in their chil-

dren's human capital. Previous studies in developing countries have found a causal relationship between household income and schooling, be it due to an economic shock (Duryea, Lam, and Levison, 2007) or a cash transfer (Baird, McIntosh, and Özler, 2011 and Benhassine, Devoto, Duflo, Dupas, and Pouliquen, 2015). Moreover, the impacts are usually larger when the recipient of the additional income is a woman (Duflo, 2003, Armand, Attanasio, Carneiro, and Lechene, 2016).

In the particular case of Argentina, primary school attendance is nearly universal, there is still a considerable proportion of children who drop out of secondary school. In fact, Edo, Marchionni, and Garganta (2015) find that the CCT set in place there led to an approximate 5% increase in attendance rates among youth between the ages of 15 and 17. Hence, it is possible that the income increase received by domestic workers may affect the educational outcomes of their children.

Using the data from the EPH, it is possible to investigate whether the policy change affected the decisions of other household members beyond the targeted workers. In particular, I will estimate Equation 2 when the outcome variable is participation in the labor force, formality status and working conditions considering the spouses and children of domestic workers after the policy reform as the treatment group. Finally, I will look at whether and how school attendance and level of education changed for children of domestic workers as a consequence of the change in labor regulations.

5.2.1 Spouses of domestic workers

As it can be seen in Table 2, domestic workers are predominantly women. Moreover, they are generally the second wage-earner in the household, except when a spouse is not present. For this reason, when looking at treatment effects on spouses of domestic workers, the control group I will consider is composed of male household heads who are married to working women in other sectors.

According to the estimates from Table 7 the reform to domestic worker's labor regulations did not generate any impact on their spouses' labor supply on the extensive margin (columns 1 and 2). Moreover, there seems to be no switching between formal and informal sectors among those who are employed (columns 3 and 4) either. However, it should be noted that in this case, the confidence intervals are fairly large, ranging from a decrease in formality rates of 2.3 percentage points to an increase of 3.6 pp.

Lack of adjustment along these dimensions from the part of spouses of domestic workers may

be due to the fact that household heads tend to react less than secondary wage earners to changes in income of other household members. An additional hint at the reason for lack of adjustment regarding the registration status may be found in Table 8, which lists the most occupations for the treatment and control groups, along with their formality rates at baseline. Not only spouses of domestic workers are much more concentrated in terms of their type of occupation, but also more than 30% of spouses of domestic workers are employed in the construction sector, where levels of registration are also low. Also, almost 40% of these workers are employed in sectors with lower than average formality rates. Hence, most workers affected by the change in registration status of their spouses may already be operating in the informal sector.

Alternatively, spouses of domestic workers could change their labor force participation along the intensive margin. If one considers the earnings by each household member as total household income, the income effect experienced by spouses of domestic workers could lead them to reduce the time they work and their own earnings.

Columns 1 through 4 of Table 9 show whether the reform to domestic workers' rights had an impact on their spouses earnings. As it can be seen, monthly income (columns 1 and 2) was barely affected, if at all. On the other hand, wage per hour estimates (columns 3 and 4) shows a large increase of 5%, but this can be attributed to the change in hours of work per week (columns 5 and 6) which, although not statistically different from zero, is very imprecisely estimated with a 95% confidence interval ranging from -1.5 hours to 0.15 hours. In fact, it is not possible to reject the null hypothesis that the estimate is equal to -1, suggesting that spouses of domestic workers could have actually reduced their labor supply, even if marginally.

5.2.2 Children of domestic workers

To estimate the effects of the policy reform on labor market outcomes of children of domestic workers, I restrict the attention to those aged 16 to 21, and those between 22 and 25 who are attending school. The lower bound corresponds to the legal age of work, and as it can be seen in Figure 15, labor force participation is negligible for children under that age. In turn, the upper limit correspond to the different restrictions that regulate when a child can be covered by her parents' health insurance policy.

Table 10 suggest that the improvement in their parents' working conditions did not lead to a

statistically significant decline in either labor force participation (columns 1 and 2) or formality rates (columns 3 and 4) among children. Similarly to what was seen in the case of spouses of domestic workers, a large proportion of the employed children of domestic workers are already in the informal sector (including a significant proportion who are employed as domestic workers themselves), as Table 11 shows. Hence, these workers may have little margin to switch between sectors.

The description above notwithstanding, it should be noted that sample sizes are relatively small and, with the notable exception of formality rates for female children of domestic workers, all the coefficients are negatively signed. I can thus not rule out a negative effect on labor force participation nor (particularly for boys) a reduction in the levels of formality, which could be relatively large given the low baseline values. Thus, even if there was a negative effect on labor supply or formality rates by children of domestic workers, this impact is so low that there may not be enough power to detect it.

In turn, Table 12 also shows non significant effects for income and hours of work. Once again the estimates are not precise, so it is not possible to completely rule out changes along these margins, especially in respect to decreases in labor supply at the intensive margin.

Finally, Table 13 presents the estimates of the impact of the reform on school attendance and years of education of children of high school age (13-18). Although I do not observe a significant effect when both boys and girls are pooled together, disaggregating the results by gender show that the reform induced an increase of almost 4% in school attendance and 2% increase in years of education for boys. Although this change does not completely close the 10% gap in attendance and 5% in years of education between boys and girls of domestic workers, it reduces it by almost one half. Moreover, this is a considerable effect both with respect to previous findings regarding the educational impacts of economic shocks in a country where enrolment rates are already high.

6 Conclusion

Governments in middle-income countries constantly strive to increase the share of employees with a formal contract. This effort stems not only from the need to increase tax revenue and reduce leakage from welfare policies, but also from the belief that formal jobs provide more stability and rights to the worker. However, policies set in place to achieve this objective may impact not only the targeted employers and employees, but also other individuals who may be affected by the type of labor relationship of their family members. While studies direct impacts of increasing formalization of firms and workers are scarce, those focusing on their potential spillover effects are nonexistent.

This paper aims to fill the gap in the literature by analyzing the impacts of one such regulation implemented in Argentina on both targeted workers and their family members. The policy targeted only domestic workers (a large sector in terms of employment and with the highest rates of informality in the economy), and consisted of an increase in the cost of hiring both formally and informally, with a disproportionate emphasis on the latter.

Contrary to what was expected, the reform did not increase the chances of a domestic worker being fired. In fact, I find that the measures taken by the Government had a positive effect on the formality status of domestic workers. Moreover, wages of domestic workers increased (likely the result of compliance with labor laws resulting from registration), and even though this was accompanied with a reduction in the hours of work, there is no evidence that employees were made worse off by this decrease in working time.

Because formal employment is tied to certain welfare benefits (such as pension and health insurance coverage) that in some cases extend to other family members, there is concern that a policy that increased formality rates in one sector may be partially offset by behavioral responses from other workers in the household. Indeed, I do not find conclusive evidence of changes in other household member's decisions in the labor market, although the study is likely underpowered to detect small impacts. On the other hand, this implies that policies that aim to reduce formality rates among individuals of low socioeconomic status may suffer less from unintende consequences for othe household members than incentivizing worker registration across the board.

All the above said, the data available is limited to labor market outcomes, and thus cannot be used to assess other potential consequences of worker formalization. First, it is not possible to do a welfare analysis of the reform, since no data is available from employers, so it is not possible to determine whether the improvement in working conditions and income of domestic workers affected their employers' level of consumption.

Secondly, the survey does not contain information regarding intra-household decision-making. Since almost all the affected workers in this sample are women, this reform may have indirectly affected women empowerment and the distribution of tasks and decisions within the household.

The domestic worker sector has the highest informality rates of all occupations in the country, and while it has some characteristics that make it quite distinct from other sectors of the economy, it is not unconceivable that measures along the lines of the ones taken to reduce informality in this sector would have similar effects on other occupations with similar features. As an example, since behavioral responses are smaller for main wage earners, and considering that women tend to be second wage earners and at the same time more likely to be in the informal sector, targeting occupations where women constitute the majority of the workforce may be more overall more effective than focusing on predominantly male occupations.

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Figure 1: Number of houses where domestic workers are employed

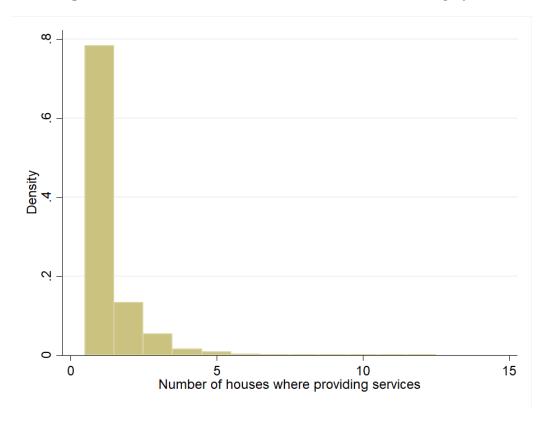


Figure 2: Number of hours of work per week of domestic workers

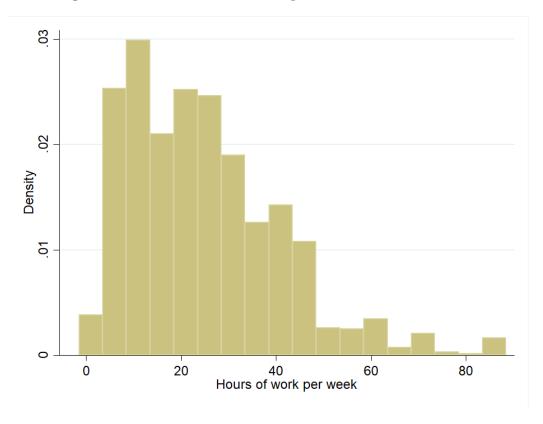


Figure 3: Difference between minimum wage and current wage for informal domestic workers in $\mathrm{Q}1\ 2013$

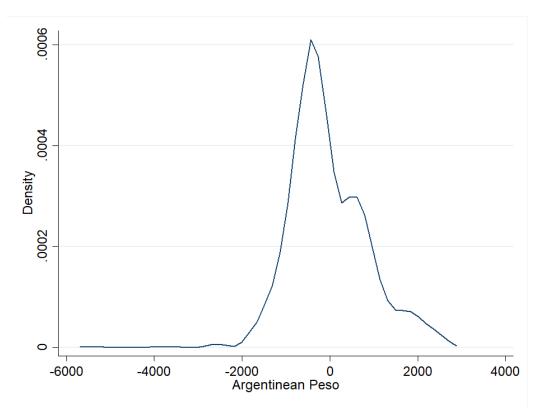


Figure 4: Letter sent by the tax authority compelling potential employers to register a domestic worker



Figure 5: Share of registered workers

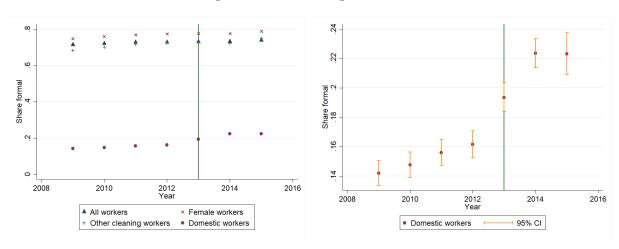


Figure 6: Number of workers by occupation

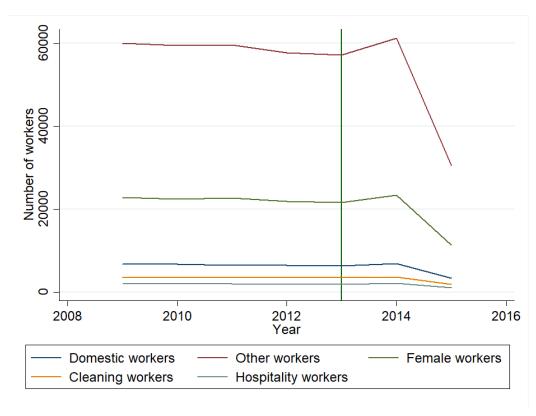


Figure 7: Share of workers by occupation

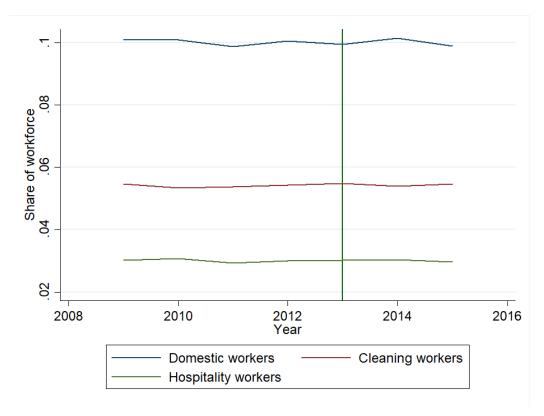


Figure 8: Earnings from main job

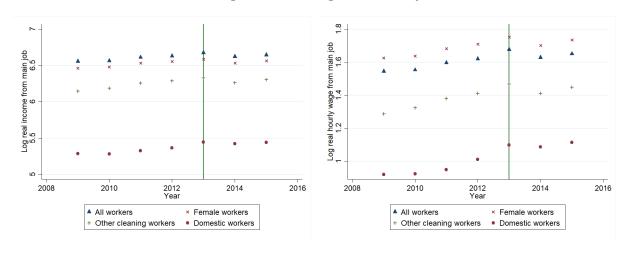


Figure 9: Hours of work per week

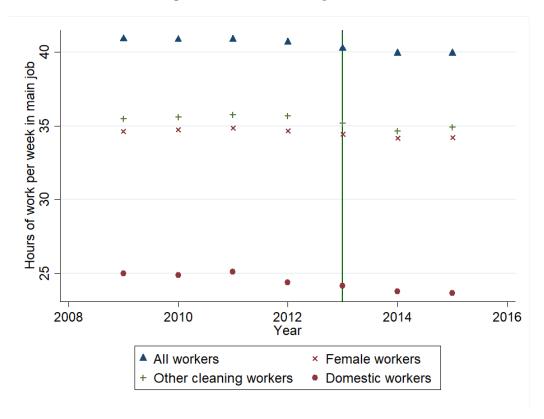


Figure 10: Distribution of domestic workers' income with respect to minimum wage

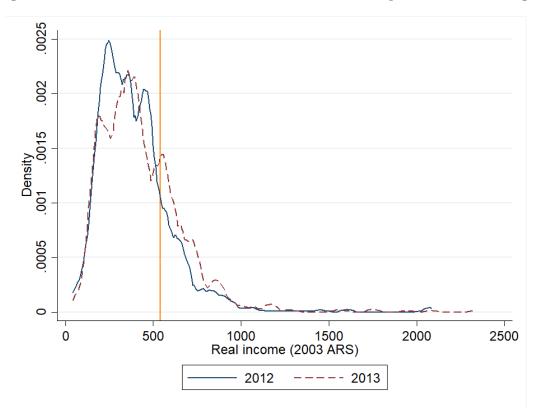


Figure 11: Distribution of domestic workers' wage with respect to minimum wage

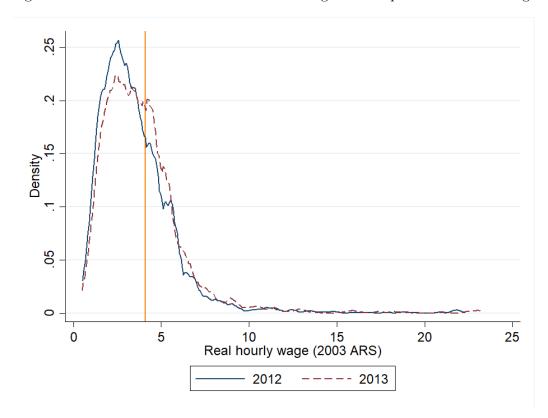


Figure 12: Distribution of monthly income by occupation

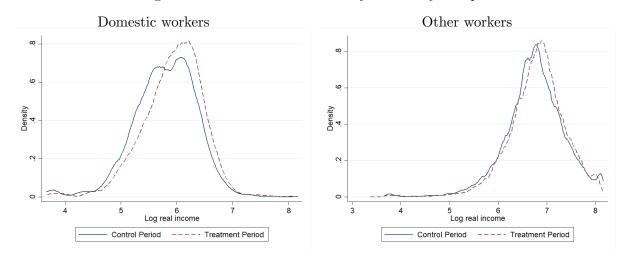
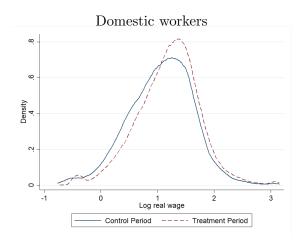


Figure 13: Distribution of wages by occupation



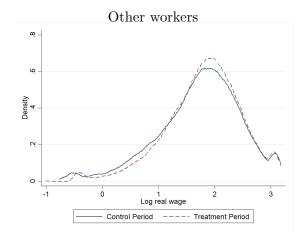
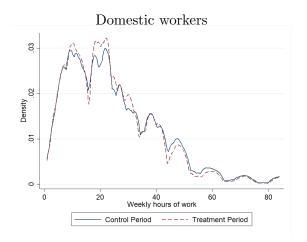
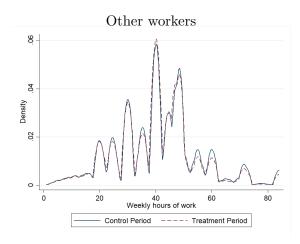
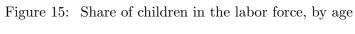


Figure 14: Distribution of hours of work per week by occupation







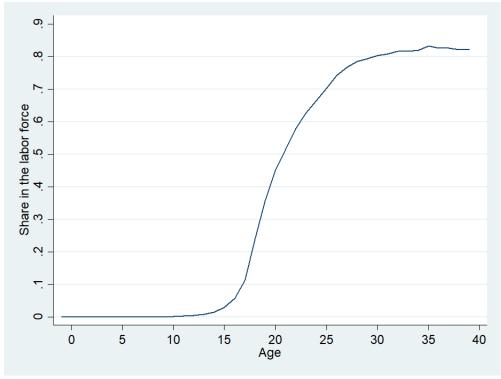


Table 1: Characteristics of registered and unregistered domestic workers at baseline

| | Unregistered | Registered | Difference |
|-------------------------------|--------------|------------|------------|
| Demographics | | | |
| Age | 39.90 | 43.72 | -3.828*** |
| Share internal migrant | 0.18 | 0.23 | -0.047*** |
| Share foreign migrant | 0.07 | 0.12 | -0.050*** |
| Share married | 0.44 | 0.50 | -0.053*** |
| Share divorced | 0.15 | 0.16 | -0.004 |
| Share widow | 0.06 | 0.05 | 0.010** |
| Household size | 4.43 | 3.74 | 0.685*** |
| | | | |
| Education | | | |
| Literacy | 0.99 | 0.99 | -0.004** |
| Ever attended school | 0.99 | 0.99 | -0.003* |
| Complete primary school (%) | 0.87 | 0.89 | -0.024*** |
| Complete secondary school (%) | 0.28 | 0.27 | 0.007 |
| Complete higher education (%) | 0.02 | 0.02 | -0.001 |
| Years of education | 8.67 | 8.56 | 0.101 |
| | | | |
| Work | | | |
| Tenure (months) | 41.06 | 89.19 | -48.136*** |
| | | | |
| Observations | 22354 | 3997 | |

Note: Mean refers to the mean of the variable for the corresponding group in the pre-reform period (2009-2012). The column Difference shows the difference in the variable mean in the pre-reform period between unregistered and registered domestic workers, with stars representing the statistical significance of the difference.

**** p<0.01, ** p<0.05, * p<0.1

Summary statistics Table 2:

| | Domestic Workers | All | All workers | Fema | Female workers | Other cl | Other cleaning workers |
|-------------------------------|------------------|--------|-------------|--------|----------------|----------|------------------------|
| Demographics | Mean | Mean | Dillerence | Mean | Dillerence | Mean | Dillerence |
| Proportion male | 0.02 | 0.62 | 0.605*** | 0.00 | 0.000 | 0.47 | 0.454*** |
| Age | 40.48 | 37.81 | -2.670*** | 38.43 | -2.068*** | 40.68 | 0.208 |
| Share internal migrant | 0.19 | 0.19 | -0.002 | 0.18 | -0.007* | 0.18 | -0.005 |
| Share foreign migrant | 0.08 | 0.03 | -0.048*** | 0.02 | -0.053*** | 0.04 | -0.034*** |
| Household size | 4.32 | 4.02 | -0.296*** | 3.78 | -0.548*** | 4.50 | 0.182*** |
| Education | | | | | | | |
| Literacy | 0.99 | 1.00 | 0.008*** | 1.00 | 0.009*** | 0.99 | 0.002 |
| Ever attended school | 0.99 | 1.00 | 0.007*** | 1.00 | 0.009 | 0.99 | 0.002* |
| Complete primary school (%) | 0.87 | 96.0 | 0.084*** | 0.98 | 0.109*** | 06.0 | 0.026*** |
| Complete secondary school (%) | 0.28 | 0.65 | 0.367*** | 0.79 | 0.514*** | 0.29 | 0.007 |
| Complete higher education (%) | 0.02 | 0.22 | 0.209*** | 0.36 | 0.340*** | 0.02 | -0.001 |
| Years of education | 8.65 | 11.74 | 3.091*** | 12.98 | 4.326*** | 8.86 | 0.209*** |
| Work | | | | | | | |
| Hours of work per week | 24.86 | 40.82 | 15.962*** | 34.71 | 9.911*** | 35.62 | 10.766*** |
| Monthly real income | 248.36 | 914.91 | 666.553*** | 846.35 | 598.427*** | 623.33 | 374.969*** |
| Hourly real wage | 3.10 | 6.04 | 2.942*** | 6.54 | 3.435*** | 4.54 | 1.440*** |
| Health insurance contribution | 0.15 | 0.73 | 0.582*** | 0.77 | 0.626*** | 0.72 | 0.573*** |
| Pension contribution | 0.15 | 0.72 | 0.571*** | 0.76 | 0.610*** | 0.71 | 0.555*** |
| Has health insurance | 0.42 | 0.80 | 0.386*** | 0.86 | 0.446*** | 0.76 | 0.343*** |
| Observations | 26345 | 23 | 236468 | ~ | 89672 | | 14208 |

Note: Mean refers to the mean of the variable for the corresponding group in the pre-reform period (2009-2012). The column Difference shows the difference in the variable mean in the pre-reform period between the corresponding group and domestic workers, with stars representing the statistical significance of the difference. All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners.

*** p<0.01, ** p<0.05, * p<0.1

Table 3: Effect of policy reform on unemployment

| | (1) | (2) | (3) |
|---|------------------|--------------------|------------------|
| Domestic worker \times Reform | 0.003 (0.003) | $0.004 \\ (0.004)$ | 0.007 (0.004) |
| Mean dependent variable of treatment group pre-reform | 0.91 | 0.91 | 0.91 |
| Mean dependent variable of control group pre-reform | 0.93 | 0.93 | 0.95 |
| Comparison group | All workers | Female workers | Cleaning workers |
| Observations | $462,\!589$ | 203,388 | 71,732 |
| R-squared | 0.202 | 0.155 | 0.065 |

Note: Each column reports the results of estimating Equation 2 when the outcome of interest is an indicator for being employed among employed and unemployed individuals with a previous job. All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners. Controls include age, migrant status, household size, literacy status, years of education, marital status, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects. Standard errors clustered at the MSA level in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 4: Effect of policy reform on formality status

| | (1) | (2) | (3) |
|---|-------------|----------------|------------------|
| Domestic worker \times Reform | 0.060*** | 0.056*** | 0.045** |
| | (0.010) | (0.009) | (0.013) |
| Mean dependent variable of treatment group pre-reform Mean dependent variable | 0.15 | 0.15 | 0.15 |
| | 0.72 | 0.76 | 0.71 |
| of control group pre-reform Comparison group Observations R-squared | All workers | Female workers | Cleaning workers |
| | 428,170 | 188,079 | 66,093 |
| | 0.313 | 0.402 | 0.350 |

Note: Each column reports the results of estimating Equation 2 when the dependent variable is an indicator for whether contributions to the pension system are made out of the worker's salary. All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners. Means of control and treatment groups in the pre-reform period were drawn from Table 2. Controls include age, migrant status, household size, marital status, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects.

Standard errors clustered at the MSA level in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 5: Changes in labor earnings after policy reform

| | (1) | (2) | (3) |
|----------------------------------|------------------------|---------------------------|----------------------------|
| Panel A: Log of real income | | | |
| Domestic worker \times Reform | 0.043*** (0.012) | 0.039** (0.013) | 0.020 (0.019) |
| R-squared | 0.458 | 0.518 | 0.384 |
| Panel B: Log of real wage | | | |
| Domestic worker \times Reform | 0.093*** (0.011) | 0.101*** (0.013) | 0.078*** (0.018) |
| R-squared | 0.424 | 0.466 | 0.288 |
| Observations Comparison group | 428,170 All workers | 188,079 Female workers | 66,093 Cleaning workers |

Note: Each column reports the results of estimating Equation 2 when the dependent variable is either the natural log of income (Panel A) or the natural log of hourly wages (Panel B). All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners. Controls include age, migrant status, household size, marital status, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects. Standard errors clustered at the MSA level in parentheses.

**** p<0.01, ** p<0.05, * p<0.1

Table 6: Changes in hours of work after policy reform

| | (1) | (2) | (3) |
|---|------------------------|---------------------------|----------------------------|
| Panel A: Hours of work per week | | | |
| Domestic worker \times Reform | -1.247*** (0.220) | -1.736*** (0.248) | -1.415*** (0.361) |
| Mean dependent variable of treatment group pre-reform | 24.86 | 24.86 | 24.86 |
| Mean dependent variable of control group pre-reform | 40.82 | 34.71 | 35.62 |
| R-squared | 0.295 | 0.229 | 0.157 |
| Panel B: Involuntary part-time | | | |
| Domestic worker \times Reform | -0.004 (0.006) | -0.003 (0.006) | 0.007 (0.006) |
| Mean dependent variable of treatment group pre-reform | 0.174 | 0.174 | 0.174 |
| Mean dependent variable of control group pre-reform | 0.035 | 0.044 | 0.054 |
| R-squared | 0.062 | 0.074 | 0.072 |
| Observations Comparison group | 428,170 All workers | 188,079 Female workers | 66,093 Cleaning workers |

Note: Each column reports the results of estimating Equation 2 when the dependent variable is either the number of hours of work per week (Panel A), or an indicator for willing to work more hours (Panel B). All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners. Controls include age, migrant status, household size, marital status, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects. Standard errors clustered at the MSA level in parentheses.

**** p<0.01, *** p<0.05, * p<0.1

Table 7: Effect of domestic workers' reform on spouse's labor supply

| | Par | ticipation | Fo | ormality |
|---|-------------------|-------------------|--------------------|------------------|
| | (1) | (2) | (3) | (4) |
| Spouse of Domestic worker x Reform | -0.003 (0.007) | -0.001 (0.011) | $0.006 \\ (0.015)$ | 0.003 (0.024) |
| Mean dependent variable of treatment group pre-reform | 0.89 | 0.89 | 0.65 | 0.65 |
| Mean dependent variable of control group pre-reform | 0.94 | 0.89 | 0.85 | 0.76 |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers |
| Observations | 83,975 | 20,467 | 53,205 | 11,368 |
| R-squared | 0.158 | 0.183 | 0.166 | 0.185 |

Note: Each column presents the result of estimating Equation 2 when the dependent variable is either a dummy for participating in the labor force (i.e. employed or unemployed but looking for a job, columns 1 and 2) or a dummy for whether pension contributions are made out of the worker's salary, among employed individuals (columns 3 and 4). The sample is composed of all household members categorized as male household head in the period 2009-2014. All workers refers to spouses of female workers from any sector other than domestic workers. Cleaning workers refers to spouses of female workers working in the cleaning sector. Controls include gender, age, migrant status, household size, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects (only in columns 4 to 6) and year-MSA fixed effects. Means of the dependent variables obtained by regressing the outcome of interest on a constant and a dummy for being the spouse of a domestic worker in the pre-reform period, among those observations that contain all the controls used. Standard errors clustered at the MSA level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 8: Main sectors of employment of spouses and formality rates

| Spouses of domest | ic workers | Spouses of other | workers |
|--------------------------|----------------|---------------------------|----------------|
| Sector (Pct) | Formality rate | Sector (Pct) | Formality rate |
| | | | |
| Construction (30.7%) | 0.44 | Administrative (10.9%) | 0.87 |
| Manufacturing (10.3%) | 0.71 | Transportation (6.5%) | 0.59 |
| Transportation (9.1%) | 0.59 | Manufacturing (6.5%) | 0.71 |
| Cleaning (5.4%) | 0.70 | Retail (6.3%) | 0.61 |

Note: The table shows the four main sectors of employment and the overall formality rates of each sector in the period 2009-2012, for spouses of domestic workers and other workers who participate in the labor market. The figure shown in parenthesis represents the share of individuals working in each sector.

Table 9: Effect of domestic workers' reform on spouse's income and time working

| | Log inco | Log income per month | Log wa | Log wage per hour | Hours of | Hours of work per week |
|--|--------------------|-------------------------|--------------------|-------------------------|--------------------|-------------------------|
| | (1) | (2) | (3) | (4) | (5) | (9) |
| Spouse of Domestic worker x Reform | 0.038* (0.014) | 0.008 (0.027) | 0.050*** (0.014) | 0.019 (0.020) | -0.688 (0.414) | -0.778 (0.856) |
| Mean dependent variable of treatment group pre-reform | | | | | 47.03 | 47.03 |
| Mean dependent variable of control group pre-reform | | | | | 44.44 | 45.65 |
| Comparison group Observations | All workers 53,205 | Cleaning workers 11,368 | All workers 53,205 | Cleaning workers 11,368 | All workers 53,205 | Cleaning workers 11,368 |
| K-squared | 0.333 | 0.285 | 0.353 | 0.287 | 0.224 | 0.180 |

Note: All columns present the results of estimating Equation 2 when the dependent variable is either the natural logarithm of monthly income in 2003 ARS (columns 1 and 2), the natural logarithm of hourly wage in 2003 ARS (columns 3 and 4), or the number of hours of work per week (columns 5 and 6). The sample is composed of all household members categorized as male household head in the period 2009-2015. All workers refers to spouses of female workers working in the cleaning workers refers to spouses of female workers working in the cleaning sector. Controls include gender, age, migrant status, household size, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed errors clustered at the MSA level in parentheses.

*** p<0.01, *** p<0.05, * p<0.1

Table 10: Effect of domestic workers' reform on children's labor supply

| | Labor for | ce participation | Form | ality status |
|---|-------------------|---------------------|-------------------|--------------------|
| | (1) | (2) | (3) | (4) |
| Panel A: All Children | | | | |
| Child of Domestic worker \times Reform | -0.012 (0.010) | -0.031 (0.012) | -0.005 (0.014) | $0.006 \\ (0.022)$ |
| Mean dependent variable of treatment group pre-reform | 0.37 | 0.37 | 0.23 | 0.23 |
| Mean dependent variable of control group pre-reform | 0.27 | 0.31 | 0.38 | 0.30 |
| Observations R-squared | 110,901 0.178 | 27,837 0.206 | 18,498 0.272 | 5,766 0.280 |
| Panel B: Female Children | | | | |
| Child of Domestic worker \times Reform | -0.010 (0.011) | -0.039 (0.017) | 0.013 (0.022) | 0.041 (0.057) |
| Mean dependent variable of treatment group pre-reform | 0.28 | 0.28 | 0.22 | 0.22 |
| Mean dependent variable of control group pre-reform | 0.21 | 0.23 | 0.38 | 0.30 |
| Observations R-squared | 55,030 0.154 | $14,\!256 \\ 0.164$ | 6,906 0.324 | 2,241 0.260 |
| Panel C: Male Children | | | | |
| Child of Domestic worker \times Reform | -0.012 (0.014) | -0.022 (0.021) | -0.016 (0.022) | -0.036 (0.040) |
| Mean dependent variable of treatment group pre-reform | 0.46 | 0.46 | 0.24 | 0.24 |
| Mean dependent variable of control group pre-reform | 0.32 | 0.40 | 0.38 | 0.31 |
| Observations R-squared | 55,871 0.184 | 13,581 0.226 | 11,580 0.269 | 3,539 0.217 |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers |

Note: Each column presents the result of estimating Equation 2 when the dependent variable is either a dummy for participating in the labor force (i.e. employed or unemployed but looking for a job, columns 1 and 2) or a dummy for whether pension contributions are made out of the worker's salary, among employed individuals (columns 3 and 4). The sample is composed of all household members categorized as children between 16-21 years old and those between 22 and 25 years old who are in school during the period 2009-2015. All workers refers to children of workers from any sector other than domestic workers. Cleaning workers refers to children of workers from the cleaning sectors. Controls include gender, age, migrant status, household size, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects (only in columns 4 to 6) and year-MSA fixed effects. Means of the dependent variables obtained by regressing the outcome of interest on a constant and a dummy for being the child of a domestic worker in the pre-reform period, among those observations that contain all the controls used.

Standard errors clustered at the MSA level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 11: Main sectors of employment of children and formality rates

| Children of domestic | c workers | Children of other | r workers |
|---|------------------------------|--|------------------------------|
| Sector (Pct) | Formality rate | Sector (Pct) | Formality rate |
| Construction (17.4%) Domestic workers (14.4%) Retail (11.4%) Manufacturing (9.3%) | 0.44 0.16 0.61 0.71 | Retail (14.9%) Construction (11.8%) Administrative (9.2%) Manufacturing (8.2%) | 0.61 0.56 0.87 0.71 |

Note: The table shows the four main sectors of employment and the overall formality rates of each sector in the period 2009-2012, for children of domestic workers and other workers who are between 16 and 25 years and participate in the labor market. The figure shown in parenthesis represents the share of children working in each sector.

Table 12: Effect of domestic workers' reform on children's earnings and hours of work

| | Log r | Log real income | Log | Log real wage | Hours of | Hours of work per week |
|---|-------------------|-------------------|-----------------|-------------------|-------------------|------------------------|
| | (1) | (2) | (3) | (4) | (5) | (9) |
| Panel A: All Children | | | | | | |
| Child of Domestic worker x Reform | 0.003 (0.023) | -0.030 (0.035) | 0.024 (0.017) | 0.001 (0.028) | -0.643 (0.540) | -0.493 (0.980) |
| Mean dependent variable of treatment group pre-reform Mean dependent variable of control group pre-reform | | | | | 34.92 34.95 | 34.92 |
| Observations R-squared | 18,498 0.327 | 5,766 0.361 | 18,498 0.287 | 5,766 0.281 | 18,498 0.216 | 5,766 0.268 |
| Panel B: Female Children | | | | | | |
| Child of Domestic worker x Reform | 0.024 (0.039) | 0.070 (0.046) | 0.044 (0.035) | 0.067 | -0.236 (1.002) | 0.365 (1.379) |
| Mean dependent variable of treatment group pre-reform Mean dependent variable of control group pre-reform | | | | | 27.91 | 27.91 29.47 |
| Observations R-squared | 6,906 | 2,231 0.455 | 6,906 0.321 | 2,231 0.350 | 6,906 | 2,231 0.296 |
| Panel C: Male Children | | | | | | |
| Child of Domestic worker x Reform | -0.017 (0.038) | -0.068 (0.051) | 0.008 (0.026) | -0.034 (0.042) | -0.978 (0.729) | -0.695 (1.272) |
| Mean dependent variable of treatment group pre-reform Mean dependent variable of control group pre-reform | | | | | 39.58 | 39.58 38.21 |
| Observations R-squared | 11,580 0.266 | 3,521 0.290 | 11,580 0.294 | 3,521 0.313 | 11,580 0.141 | 3,521 0.172 |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers | All workers | Cleaning workers |

Note: All columns present the results of estimating Equation 2 when the dependent variable is the natural logarithm of monthly income in 2003 ARS (columns 1 and 2), the natural logarithm of hourly wage in 2003 ARS (columns 3 and 4), or the number of hours of work per week (columns (5 and 6). The sample is composed of all household members categorized as children between 16-21 years old and those between 22 and 25 years old who are in school during the period 2009-2015. All workers refers to children of workers from any sector other than domestic workers. Cleaning workers refers to children of workers from the cleaning sectors. Controls include gender, age, migrant status, household size, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects.

Standard errors clustered at the MSA level in parentheses.

Table 13: Effect of domestic workers' reform on children's educational outcomes

| | Schoo | l attendance | Years | of education |
|---|--------------------|-------------------|--------------------|--------------------|
| | (1) | (2) | (3) | (4) |
| Panel A: All Children | | | | |
| Child of Domestic worker x Reform | 0.013 (0.007) | 0.025 (0.013) | 0.094 (0.045) | 0.137 (0.071) |
| Mean dependent variable of treatment group pre-reform | 0.83 | 0.83 | 8.44 | 8.44 |
| Mean dependent variable of control group pre-reform | 0.90 | 0.86 | 8.86 | 8.56 |
| Observations R-squared | 103,710 0.129 | 26,073 0.163 | 103,710 0.450 | 26,073 0.382 |
| Panel B: Female Children | | | | |
| Child of Domestic worker x Reform | -0.003 (0.010) | 0.000 (0.018) | $0.020 \\ (0.059)$ | 0.014 (0.096) |
| Mean dependent variable of treatment group pre-reform | 0.87 | 0.87 | 8.66 | 8.66 |
| Mean dependent variable of control group pre-reform | 0.91 | 0.88 | 9.00 | 8.70 |
| Observations R-squared | 50,997 0.120 | 13,130 0.150 | 50,997 0.493 | 13,130 0.428 |
| Panel C: Male Children | | | | |
| Child of Domestic worker x Reform | 0.030** (0.009) | 0.047* (0.018) | 0.172** (0.060) | 0.251** (0.075) |
| Mean dependent variable of treatment group pre-reform | 0.80 | 0.80 | 8.22 | 8.22 |
| Mean dependent variable of control group pre-reform | 0.89 | 0.85 | 8.73 | 8.41 |
| Observations R-squared | 52,713 0.141 | 12,943 0.193 | 52,713 0.413 | $12,943 \\ 0.345$ |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers |

Note: All columns present the results of estimating Equation 2 when the dependent variable is the number of hours of work per week. The sample is composed of all household members categorized as children between 16-21 years old and those between 22 and 25 years old who are in school during the period 2009-2015. All workers refers to children of workers from any sector other than domestic workers. Cleaning workers refers to children of workers from the cleaning sectors. Controls include gender, age, migrant status, household size, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects. Means of control and treatment groups in the pre-reform period were obtained by regressing the dependent variable on a constant and an indicator for domestic worker using the specified sample in the pre-reform period.

Standard errors clustered at the MSA level in parentheses.

**** p<0.01, *** p<0.05, ** p<0.1

Appendix A: Heterogeneous treatment effects by migrant status and education

Table A1: Effect of policy reform on formality status - Heterogeneity by migrant status

| | (1) | (2) | (3) |
|---|---------------------|---------------------|--------------------|
| Panel A: Foreign workers | | | |
| Domestic worker \times Reform | 0.112** (0.037) | 0.119* (0.042) | 0.103 (0.049) |
| Mean dependent variable of treatment group pre-reform | 0.24 | 0.24 | 0.24 |
| Mean dependent variable of control group pre-reform | 0.66 | 0.70 | 0.83 |
| Observations R-squared | $14,\!103 \\ 0.290$ | 6,698 0.343 | 4,205 0.317 |
| Panel B: Native workers | | | |
| Domestic worker \times Reform | 0.056*** (0.010) | 0.052*** (0.009) | 0.040** (0.013) |
| Mean dependent variable of treatment group pre-reform | 0.14 | 0.14 | 0.14 |
| Mean dependent variable of control group pre-reform | 0.72 | 0.76 | 0.70 |
| Observations R-squared | $414,094 \\ 0.314$ | 181,380 0.404 | $61,872 \\ 0.355$ |
| Comparison group | All workers | Female workers | Cleaning workers |

Note: Each column reports the results of estimating Equation 2 when the dependent variable is an indicator for whether contributions to the pension system are made out of the worker's salary. All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners. Controls include age, migrant status, household size, marital status, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects. Standard errors clustered at the MSA level in parentheses.

**** p<0.01, *** p<0.05, ** p<0.1

Table A2: Effect of policy reform on formality status - Heterogeneity by level of education

| | (1) | (2) | (3) |
|---|----------------------|----------------------|--------------------|
| Panel A: Low education (less than high school) | | | |
| Domestic worker \times Reform | 0.060*** (0.011) | 0.044** (0.013) | 0.038* (0.013) |
| Mean dependent variable of treatment group pre-reform | 0.15 | 0.15 | 0.15 |
| Mean dependent variable of control group pre-reform | 0.58 | 0.58 | 0.70 |
| Observations R-squared | $162,776 \\ 0.279$ | $58,540 \\ 0.320$ | $46,065 \\ 0.347$ |
| Panel B: High education (high school or above) | | | |
| Domestic worker \times Reform | 0.071*** (0.012) | 0.070*** (0.012) | 0.060** (0.019) |
| Mean dependent variable of treatment group pre-reform | 0.15 | 0.15 | 0.15 |
| Mean dependent variable of control group pre-reform | 0.80 | 0.81 | 0.73 |
| Observations R-squared | $265,\!421 \\ 0.252$ | $129{,}544 \\ 0.327$ | $20,033 \\ 0.371$ |
| Comparison group | All workers | Female workers | Cleaning workers |

Note: Each column reports the results of estimating Equation 2 when the dependent variable is an indicator for whether contributions the pension system are made out of the worker's salary. All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners. Controls include age, migrant status, household size, marital status, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects.

Standard errors clustered at the MSA level in parentheses.

**** p<0.01, *** p<0.05, ** p<0.1

Appendix B: Tests for changes in group composition and robustness checks

Table B1: Estimates of the effect of the reform on observable characteristics

| | (1) | (2) | (3) |
|-----------------------------|-------------|----------------|------------------|
| | | | |
| Male indicator | 0.005 | | 0.009 |
| | (0.002) | | (0.008) |
| Age | 0.250 | 0.230 | 0.500 |
| | (0.215) | (0.232) | (0.346) |
| Household size | 0.032 | 0.037 | 0.020 |
| | (0.034) | (0.040) | (0.051) |
| Married indicator | 0.016 | 0.013 | 0.017 |
| | (0.008) | (0.009) | (0.015) |
| Divorced indicator | 0.004 | 0.004 | 0.009 |
| | (0.006) | (0.006) | (0.007) |
| Widow indicator | -0.007 | -0.006 | -0.004 |
| | (0.004) | (0.004) | (0.005) |
| Internal migrant indicator | 0.000 | -0.002 | 0.004 |
| | (0.005) | (0.007) | (0.010) |
| Foreign migrant indicator | 0.001 | 0.000 | 0.001 |
| | (0.003) | (0.004) | (0.005) |
| Literacy indicator | -0.000 | -0.000 | -0.003 |
| | (0.001) | (0.001) | (0.002) |
| School attendance indicator | 0.001 | 0.001 | -0.002 |
| | (0.001) | (0.001) | (0.001) |
| Finished primary school | 0.013 | 0.017** | -0.007 |
| | (0.004) | (0.005) | (0.008) |
| Finished secondary school | 0.014 | 0.018 | -0.015 |
| | (0.005) | (0.006) | (0.009) |
| Finished tertiary education | -0.004 | -0.001 | 0.130 |
| | (0.004) | (0.003) | (0.045) |
| Years of education | 0.130 | 0.161 | -0.109 |
| | (0.045) | (0.051) | (0.072) |
| Comparison group | All workers | Female workers | Cleaning workers |
| Observations | $428,\!176$ | 188,081 | 66,094 |

Note: Each row reports the estimate of the interaction between the treatment and the domestic worker dummies on the corresponding covariate, using as control group the sample specified in the column. All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners. Controls include MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects.

Standard errors clustered at the MSA level in parentheses.

**** p<0.01, ** p<0.05, * p<0.1

Table B2: Effect of policy reform on formality - Robustness checks

| | (1) | (2) | (3) |
|---|----------------------|-------------------|-------------------|
| Panel A: Treatment in 2010 | | | |
| Domestic worker \times Reform | 0.001 (0.008) | -0.002 (0.008) | -0.009 (0.017) |
| Mean dependent variable of treatment group pre-reform | 0.14 | 0.14 | 0.14 |
| Mean dependent variable of control group pre-reform | 0.71 | 0.75 | 0.68 |
| Observations R-squared | 198,749 0.312 | 87,389 0.410 | 30,641 0.365 |
| Panel B: Treatment in 2011 | | | |
| Domestic worker \times Reform | $0.005 \\ (0.008)$ | 0.001 (0.009) | -0.011 (0.014) |
| Mean dependent variable of treatment group pre-reform | 0.14 | 0.14 | 0.14 |
| Mean dependent variable of control group pre-reform | 0.72 | 0.75 | 0.69 |
| Observations R-squared | $262,\!836 \\ 0.313$ | 115,597 0.408 | 40,556 0.365 |
| Comparison group | All workers | Female workers | Cleaning workers |

Note: Each column reports the results of estimating Equation 2 when the dependent variable is an indicator for whether fote: Each column reports the results of estimating Equation 2 when the dependent variable is an indicator for whether contributions to the pension system are made out of the worker's salary. Panel A uses data from the period 2009-2011 and assumes that treatment took place in 2010, when the reform was first sent to Congress. Panel B uses data from the years 2009 to 2012 and assumes that treatment took place in 2011, when it was assumed that the bill would pass. All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners. Controls include age, migrant status, household size, marital status, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects. Means of control and treatment groups in the pre-reform period were obtained by regressing the dependent variable on a constant and an indicator for domestic worker using the specified sample in the pre-reform period.

Standard errors clustered at the MSA level in parentheses.

Standard errors clustered at the MSA level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Appendix C: Difference-in-differences estimates using yearly interactions

The following tables present the results of estimating the following equation using the same outcomes shown in the main part of the paper:

$$Y_{ijkt} = \beta_0 + \beta_1 DW_{ijkt} + \sum_{t=2009}^{2014} \beta_t DW_{ijkt} \times I[Year = t] + \Gamma X_{ijkt} + \theta_t + \nu_j + \mu_k + \psi_{tk} + \varepsilon_{ijkt}$$
(3)

The omitted category is always the year 2012, the year prior to the introduction of the reforms.

Table C1: Effect of policy reform on formality status

| | (1) | (2) | (3) |
|--------------------------------------|--------------------|----------------|------------------|
| | | | |
| $2009 \times \text{Domestic worker}$ | -0.007 | 0.000 | 0.014 |
| | (0.010) | (0.011) | (0.019) |
| $2010 \times \text{Domestic worker}$ | -0.007 | -0.003 | 0.008 |
| | (0.009) | (0.011) | (0.013) |
| $2011 \times \text{Domestic worker}$ | -0.005 | -0.002 | 0.000 |
| | (0.007) | (0.009) | (0.012) |
| $2013 \times \text{Domestic worker}$ | 0.034*** | 0.032*** | 0.035* |
| | (0.010) | (0.011) | (0.018) |
| $2014 \times \text{Domestic worker}$ | 0.072*** | 0.075*** | 0.070*** |
| | (0.013) | (0.012) | (0.018) |
| $2015 \times \text{Domestic worker}$ | 0.063*** | 0.059*** | 0.041** |
| | (0.015) | (0.016) | (0.019) |
| Domestic worker | -0.324*** | -0.330*** | -0.574*** |
| | (0.020) | (0.023) | (0.032) |
| Constant | 0.203*** | 0.303*** | 0.384*** |
| | (0.029) | (0.036) | (0.036) |
| Comparison group | All workers | Female workers | Cleaning workers |
| Observations | 428,170 | 188,079 | 66,093 |
| R-squared | $0.3\overline{13}$ | 0.402 | 0.350 |

Note: Each column reports the results of estimating Equation 2 when the dependent variable is an indicator for whether contributions to the pension system are made out of the worker's salary and the DiD parameter is replaced by a series of interactions between year and an indicator for being a domestic worker. All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners. Controls include age, migrant status, household size, marital status, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects.

Standard errors clustered at the MSA level in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table C2: Changes in labor earnings after policy reform

| | | Monthly income | ne | | Hourly wage | |
|--------------------------------------|-------------|-----------------|------------------|---------------|----------------|------------------|
| | (1) | (2) | (3) | (4) | (5) | (9) |
| $2009 \times \text{Domestic worker}$ | 0.006 | 0.018 | 0.052 | -0.013 | -0.009 | 0.019 |
| | (0.018) | (0.018) | (0.033) | (0.015) | (0.017) | (0.027) |
| $2010 \times \text{Domestic worker}$ | -0.011 | -0.005 | 0.016 | -0.020 | -0.019 | -0.007 |
| | (0.021) | (0.021) | (0.029) | (0.016) | (0.017) | (0.021) |
| $2011 \times \text{Domestic worker}$ | -0.016 | -0.013 | -0.021 | -0.034^{**} | -0.033^{**} | -0.034^{**} |
| | (0.017) | (0.017) | (0.018) | (0.013) | (0.014) | (0.014) |
| $2013 \times \text{Domestic worker}$ | 0.021 | 0.024° | 0.020 | 0.040*** | 0.049*** | 0.039** |
| | (0.013) | (0.014) | (0.019) | (0.014) | (0.015) | (0.018) |
| $2014 \times \text{Domestic worker}$ | 0.051*** | 0.056*** | 0.045* | 0.100*** | 0.113*** | 0.095*** |
| | (0.016) | (0.018) | (0.024) | (0.014) | (0.016) | (0.023) |
| $2015 \times \text{Domestic worker}$ | 0.044* | 0.036 | 0.028 | 0.098 | 0.102*** | ***060.0 |
| | (0.025) | (0.025) | (0.032) | (0.022) | (0.023) | (0.026) |
| Domestic worker | -0.663*** | -0.615*** | -0.950*** | -0.328*** | -0.320*** | -0.229*** |
| | (0.029) | (0.028) | (0.047) | (0.039) | (0.042) | (0.045) |
| Constant | 5.589*** | 5.462*** | 5.770*** | 0.695*** | 0.779*** | 0.759*** |
| | (0.031) | (0.053) | (0.054) | (0.024) | (0.034) | (0.044) |
| Companicon groun | All workers | Fomela workers | Cleaning workers | All workers | Fomela workers | Cleening workers |
| Observations | 428.170 | 188.079 | 66.093 | 428.170 | 188.079 | 66.093 |
| R-squared | 0.468 | 0.519 | 0.384 | 0.424 | 0.466 | 0.288 |

Table C3: Changes in hours of work after policy reform

| | | Hours of work per week | week | Inv | Involuntary part-time worker | e worker |
|--------------------------------------|-------------|------------------------|------------------|----------------------|------------------------------|------------------|
| | (1) | (2) | (3) | (4) | (5) | (9) |
| $2009 \times \text{Domestic worker}$ | 0.550* | 0.741** | 0.808 | 0.017 | 0.014 | -0.003 |
| | (0.315) | (0.309) | (0.618) | (0.011) | (0.012) | (0.012) |
| $2010 \times \text{Domestic worker}$ | 0.436 | 0.514 | 0.608 | 0.013 | 0.009 | -0.006 |
| | (0.360) | (0.373) | (0.644) | (0.010) | (0.010) | (0.012) |
| $2011 \times \text{Domestic worker}$ | 0.458 | 0.521* | 0.476 | -0.001 | -0.002 | -0.000 |
| | (0.302) | (0.290) | (0.445) | (0.009) | (0.009) | (0.012) |
| $2013 \times \text{Domestic worker}$ | -0.476 | -0.784* | -0.561 | -0.004 | -0.004 | -0.002 |
| | (0.375) | (0.405) | (0.559) | (0.009) | (0.009) | (0.011) |
| $2014 \times \text{Domestic worker}$ | -1.113*** | -1.559*** | -1.065** | 0.008 | 0.006 | 0.005 |
| | (0.288) | (0.323) | (0.474) | (0.010) | (0.010) | (0.011) |
| $2015 \times \text{Domestic worker}$ | -1.198** | -1.713*** | -1.399** | 0.004 | 0.005 | 0.013 |
| | (0.437) | (0.474) | (0.656) | (0.012) | (0.012) | (0.015) |
| Domestic worker | -7.618*** | -6.319*** | -15.655*** | 0.090*** | 0.091*** | 0.165*** |
| | (1.158) | (1.024) | (0.772) | (0.015) | (0.016) | (0.028) |
| | | | | 0 | 0 | 0 |
| Constant | 39.179*** | 33.263*** | 40.302*** | 0.089 | 0.108*** | 0.126*** |
| | (0.690) | (1.223) | (1.285) | (0.012) | (0.018) | (0.026) |
| | | | | 0 | 0 | 0 |
| Comparison group | All workers | Female workers | Cleaning workers | All workers | Female workers | Cleaning workers |
| Observations | 428,170 | 188,079 | 66,093 | 428,170 | 188,079 | 66,093 |
| R-squared | 0.295 | 0.229 | 0.157 | 0.062 | 0.075 | 0.072 |

Note: Each column reports the results of estimating Equation 3 when the dependent variable is the number of hours of work per week (Columns 1 to 3) or an indicator for working less hours than desired (Columns 4 to 6) and the DiD parameter is replaced by a series of interactions between year and an indicator for being a domestic worker. All workers refers to all employees from sectors other than domestic workers, Female workers refers to all employed women. Cleaning workers refers to non-domestic workers who are employed as cleaners. Controls include age, migrant status, household size, marital status, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects and year-MSA fixed effects. ** *p<0.05, ** *p<0.05, ** *p<0.05, ** *p<0.01, *** *p<0.01, ***

Table C4: Effect of domestic workers' reform on spouse's labor supply

| | Par | ticipation | Fe | ormality |
|----------------------------------|-------------|------------------|-------------|------------------|
| | (1) | (2) | (3) | (4) |
| 2000 G G D .: 1 | 0.016 | 0.000 | 0.010 | 0.026 |
| 2009 x Spouse of Domestic worker | 0.016 | 0.020 | 0.012 | 0.036 |
| 0010 C (D /: 1 | (0.013) | (0.016) | (0.026) | (0.038) |
| 2010 x Spouse of Domestic worker | 0.009 | 0.019 | 0.013 | 0.026 |
| | (0.011) | (0.020) | (0.026) | (0.041) |
| 2011 x Spouse of Domestic worker | 0.008 | 0.013 | -0.001 | 0.022 |
| | (0.010) | (0.020) | (0.019) | (0.030) |
| 2013 x Spouse of Domestic worker | 0.012 | 0.004 | 0.012 | 0.028 |
| | (0.012) | (0.016) | (0.020) | (0.032) |
| 2014 x Spouse of Domestic worker | -0.002 | 0.018 | 0.001 | 0.001 |
| | (0.010) | (0.018) | (0.027) | (0.036) |
| 2015 x Spouse of Domestic worker | 0.010 | 0.013 | $0.037^{'}$ | 0.067^{*} |
| - | (0.012) | (0.021) | (0.029) | (0.037) |
| Spouse of domestic worker | -0.010 | -0.013 | -0.092*** | -0.084*** |
| • | (0.009) | (0.015) | (0.021) | (0.025) |
| Constant | 1.073*** | 1.215*** | 0.554*** | 0.492*** |
| | (0.040) | (0.048) | (0.063) | (0.064) |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers |
| Observations | 83,975 | 20,467 | 53,205 | 11,368 |
| R-squared | 0.158 | 0.183 | 0.166 | 0.185 |
| 16-5quared | 0.100 | 0.100 | 0.100 | 0.100 |

Note: Each column presents the result of estimating Equation 3 when the dependent variable is either a dummy for participating in the labor lote: Each column presents the result of estimating Equation 3 when the dependent variable is either a dummy for participating in the labor force (i.e. employed or unemployed but looking for a job, columns 1 and 2) or a dummy for whether pension contributions are made out of the worker's salary, among employed individuals (columns 3 and 4). The sample is composed of all household members categorized as male household head in the period 2009-2014. All workers refers to spouses of female workers from any sector other than domestic workers. Cleaning workers refers to spouses of female non-domestic workers who are employed as cleaners. Controls include gender, age, migrant status, household size, literacy status, years of education, MSA fixed effects, year fixed effects, occupation fixed effects (only in columns 3 and 4) and year-MSA fixed effects.

Standard errors clustered at the MSA level in parentheses.

**** p<0.01, *** p<0.05, * p<0.1

Table C5: Effect of domestic workers' reform on spouse's income and working time

| | Log of | Log of real income | Log c | Log of real wage | Hours of | Hours of work per week |
|--|-----------------------|----------------------------|--------------------|----------------------------|--------------------|----------------------------|
| | (1) | (2) | (3) | (4) | (5) | (9) |
| 2009 x Spouse of Domestic worker | -0.048* | -0.033 | -0.052** | -0.029 | -0.294 | -0.479 |
| | (0.023) | (0.037) | (0.025) | (0.043) | (0.655) | (1.051) |
| $2010 \times \text{Spouse of Domestic worker}$ | -0.027 | -0.048 | -0.049 | **770.0- | 0.742 | 1.322 |
| | (0.029) | (0.042) | (0.031) | (0.038) | (0.795) | (1.092) |
| $2011 \times \text{Spouse of Domestic worker}$ | -0.018 | -0.012 | -0.022 | -0.018 | 0.117 | 0.773 |
| | (0.024) | (0.040) | (0.026) | (0.043) | (0.722) | (1.071) |
| $2013 \times \text{Spouse of Domestic worker}$ | 0.032 | 0.045 | 0.026 | 0.009 | -0.074 | 1.220 |
| | (0.027) | (0.044) | (0.024) | (0.045) | (0.670) | (1.452) |
| $2014 \times \text{Spouse of Domestic worker}$ | -0.014 | -0.061* | -0.007 | -0.044 | -0.704 | -1.074 |
| | (0.024) | (0.033) | (0.026) | (0.032) | (0.566) | (1.022) |
| $2015 \times \text{Spouse of Domestic worker}$ | 0.035* | -0.037 | 0.055** | 0.016 | -1.157** | -2.020 |
| | (0.021) | (0.030) | (0.021) | (0.040) | (0.544) | (1.406) |
| Spouse of domestic worker | -0.116*** | -0.035 | -0.121*** | -0.052* | 0.658 | 1.049 |
| | (0.017) | (0.021) | (0.016) | (0.027) | (0.462) | (0.807) |
| Constant | 6.161*** | 6.323*** | 0.942*** | 1.035*** | 49.774*** | 51.183*** |
| | (0.070) | (0.095) | (0.069) | (0.076) | (1.467) | (2.038) |
| | , | | , | | , | |
| Comparison group Observations | All workers 53,205 | Cleaning workers 11,368 | All workers 53,205 | Cleaning workers 11,368 | All workers 53,205 | Cleaning workers 11,368 |
| R-squared | 0.333 | 0.285 | 0.377 | 0.288 | 0.224 | 0.186 |

Note: All columns present the results of estimating Equation 3 when the dependent variable is either the logarithm of monthly income in 2003 ARS (columns 1 and 2), the logarithm of hourly wage in 2003 ARS (columns 3 and 4), or the number of hours of work per week (columns 5 and 6). The sample is composed of all household members categorized as male household head in the period 2009-2015. All workers refers to spouses of female workers from any sector other than domestic workers. Cleaning workers refers to spouses of female non-domestic workers who are employed as cleaners. Controls include gender, age, migrant status, household size, literacy status, years of education, MSA fixed effects, year fixed effects, cocupation from the MSA level in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table C6: Effect of domestic workers' reform on children's labor supply

| | Par | ticipation | Fo | ormality |
|---------------------------------|-------------|------------------|-------------|------------------|
| | (1) | (2) | (3) | (4) |
| | 0.004 | 0.010 | 0.010 | 0.000* |
| 2009 x Child of domestic worker | -0.001 | 0.010 | -0.016 | -0.062* |
| | (0.013) | (0.021) | (0.021) | (0.036) |
| 2010 x Child of domestic worker | 0.019* | 0.016 | -0.001 | -0.014 |
| | (0.009) | (0.023) | (0.026) | (0.047) |
| 2011 x Child of domestic worker | 0.014 | 0.014 | 0.002 | -0.002 |
| | (0.013) | (0.027) | (0.024) | (0.055) |
| 2013 x Child of domestic worker | -0.009 | -0.041* | -0.030 | -0.047 |
| | (0.011) | (0.020) | (0.028) | (0.036) |
| 2014 x Child of domestic worker | 0.000 | -0.022 | 0.006 | 0.005 |
| | (0.014) | (0.027) | (0.028) | (0.039) |
| 2015 x Child of domestic worker | 0.009 | -0.001 | -0.002 | $0.032^{'}$ |
| | (0.017) | (0.025) | (0.036) | (0.069) |
| Child of domestic worker | 0.069*** | 0.037^{*} | -0.038** | -0.009 |
| | (0.011) | (0.018) | (0.015) | (0.032) |
| Constant | -1.469*** | -1.444*** | -0.595*** | -0.470*** |
| Constant | (0.117) | (0.177) | (0.191) | (0.165) |
| | | , | | |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers |
| Observations | 110,901 | 27,837 | 18,498 | 5,766 |
| R-squared | 0.185 | 0.190 | 0.275 | 0.284 |

Note: Each column presents the result of estimating Equation 3 when the dependent variable is either a dummy for participating in the labor force (columns 1 and 2) or a dummy for whether pension contributions are made out of the worker's salary, among those employed (columns 3 and 4). The sample is composed of all household members categorized as children between 16-21 years old and those between 22 and 25 years old who are in school during the period 2009-2015. All workers refers to children of workers from any sector other than domestic workers. Cleaning workers refers to children of non-domestic workers who are employed as cleaners. Controls include gender, age, migrant status, household size, literacy status, years of education, and fixed effects by MSA, year, occupation (columns 3 and 4) and MSA-by-year.

Standard errors clustered at the MSA level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C7: Effect of domestic workers' reform on girls' labor supply

| (3) (4) 036 -0.059 -0.114 |
|---|
| 026 0.050 0.114 |
| |
| 030 	 -0.039 	 -0.114 	 031) 	 (0.038) 	 (0.071) |
| 0031) (0.038) $(0.071)014$ -0.010 $-0.106*$ |
| 0.014 0.010 0.010 0.000 0.000 |
| 0.023 0.002 0.002 0.002 |
| 0.0000 0.0000 0.0000 0.0000 0.0000 |
| 0.000 (0.0044) (0.002) 0.018 -0.105 |
| (0.013) (0.040) (0.077) |
| 0.030 0.040 0.033 |
| 0.012 0.004 0.035 0.035 0.049 0.066) |
| 0007 	 -0.006 	 0.043 |
| 007 -0.000 0.043 0.043 0.043 |
| 0.034 0.003 0.003 0.018 |
| 0022 0001 00018 00018 00018 00018 00018 |
| (0.023) (0.038) |
| 23*** -0.188* -0.434*** |
| (0.107) 	(0.108) |
| g workers All workers Cleaning workers |
| 256 6,906 2,241 |
| 165 0.327 0.269 |
| 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0 |

Note: Each column presents the result of estimating Equation 3 when the dependent variable is either a dummy for participating in the labor force (columns 1 and 2) or a dummy for whether pension contributions are made out of the worker's salary, among those employed (columns 3 and 4). The sample is composed of all female household members categorized as children between 16-21 years old and those between 22 and 25 years old who are in school during the period 2009-2015. All workers refers to children of workers from any sector other than domestic workers. Cleaning workers refers to children of non-domestic workers who are employed as cleaners. Controls include gender, age, migrant status, household size, literacy status, years of education, and fixed effects by MSA, year, occupation (columns 3 and 4) and MSA-by-year.

Standard errors clustered at the MSA level in parentheses

Standard errors clustered at the MSA level in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table C8: Effect of domestic workers' reform on boys' labor supply

| | Participation | | Formality | |
|---------------------------------|---------------|------------------|-------------|------------------|
| | (1) | (2) | (3) | (4) |
| | | | | |
| 2009 x Child of domestic worker | 0.015 | -0.019 | 0.009 | -0.063 |
| | (0.022) | (0.033) | (0.031) | (0.076) |
| 2010 x Child of domestic worker | 0.038* | 0.019 | 0.001 | 0.031 |
| | (0.021) | (0.041) | (0.039) | (0.075) |
| 2011 x Child of domestic worker | -0.008 | -0.039 | 0.012 | -0.010 |
| | (0.016) | (0.034) | (0.026) | (0.060) |
| 2013 x Child of domestic worker | 0.002 | -0.046 | -0.040 | -0.054 |
| | (0.017) | (0.028) | (0.034) | (0.060) |
| 2014 x Child of domestic worker | 0.012 | -0.019 | 0.005 | -0.062 |
| | (0.022) | (0.043) | (0.032) | (0.064) |
| 2015 x Child of domestic worker | 0.014 | -0.000 | 0.008 | $0.014^{'}$ |
| | (0.024) | (0.049) | (0.061) | (0.129) |
| Child of domestic worker | 0.080*** | 0.048 | -0.057*** | -0.007 |
| | (0.019) | (0.030) | (0.020) | (0.055) |
| Constant | -1.746*** | -1.801*** | -0.865*** | -1.017*** |
| Constant | (0.108) | (0.181) | (0.096) | (0.179) |
| | , | . , | , | , , |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers |
| Observations | $55,\!871$ | $13,\!581$ | 11,580 | 3,539 |
| R-squared | 0.234 | 0.259 | 0.272 | 0.232 |

Note: Each column presents the result of estimating Equation 3 when the dependent variable is either a dummy for participating in the labor force (columns 1 and 2) or a dummy for whether pension contributions are made out of the worker's salary, among those employed (columns 3 and 4). The sample is composed of all male household members categorized as children between 16-21 years old and those between 22 and 25 years old who are in school during the period 2009-2015. All workers refers to children of workers from any sector other than domestic workers. Cleaning workers refers to children of non-domestic workers who are employed as cleaners. Controls include gender, age, migrant status, household size, literacy status, years of education, and fixed effects by MSA, year, occupation (columns 3 and 4) and MSA-by-year.

Standard errors clustered at the MSA level in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table C9: Effect of domestic workers' reform on children's income and working time

| | Log of | Log of real income | Log | Log of real wage | Hon | Hours of work |
|---|-------------|--------------------|-------------|------------------|--------------------------------------|--------------------|
| | (1) | (2) | (3) | (4) | (2) | (9) |
| 9000 r. Obild of domoctic wooders | 0.097 | 0.013 | ****** | 6000 | ************************************ | 0.481 |
| 2003 A CIIIIU OI UOIIIESEIC WOLKEI | 0.03 | 0.012 | -0.00 | 60.0- | 6.1.95 | 0.401 |
| | (0.048) | (0.080) | (0.040) | (0.059) | (0.742) | (1.685) |
| $2010 \times \text{Child of domestic worker}$ | 0.053 | 0.035 | -0.075 | 0.030 | 3.621*** | -0.163 |
| | (0.054) | (0.071) | (0.044) | (0.066) | (1.118) | (1.734) |
| $2011 \times \text{Child of domestic worker}$ | 0.072 | 0.077 | -0.003 | 0.059 | 1.594 | 0.331 |
| | (0.053) | (0.069) | (0.034) | (0.057) | (1.052) | (1.302) |
| $2013 \times \text{Child}$ of domestic worker | 0.043 | 0.036 | -0.048 | 0.019 | 2.284** | -0.120 |
| | (0.045) | (0.081) | (0.038) | (0.074) | (0.964) | (1.717) |
| $2014 \times \text{Child}$ of domestic worker | 0.046 | -0.017 | 0.002 | -0.017 | 0.762 | -0.231 |
| | (0.051) | (0.069) | (0.036) | (0.047) | (0.829) | (1.437) |
| 2015 x Child of domestic worker | | | | | | |
| Child of domestic worker | -0.094** | -0.052 | -0.016 | -0.035 | -1.748** | 0.272 |
| | (0.035) | (0.051) | (0.027) | (0.039) | (0.688) | (1.056) |
| Constant | 4.237*** | 3.974*** | 0.508* | **069.0 | 10.431*** | -3.336 |
| | (0.174) | (0.197) | (0.263) | (0.294) | (2.809) | (7.052) |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers | All workers | Cleaning workers |
| Observations | 18,498 | 5,766 | 18,498 | 5,766 | 18,498 | $5,\overline{7}66$ |
| R-squared | 0.319 | 0.356 | 0.296 | 0.287 | 0.216 | 0.263 |

Note: All columns present the results of estimating Equation 3 when the dependent variable is either the logarithm of monthly income in 2003 ARS (columns 1 and 2), the logarithm of hourly wage in 2003 ARS (columns 3 and 4), or the number of hours of work per week (columns 5 and 6). The sample is composed of all household members categorized as children between 16-21 years old and those between 22 and 25 years old who are in school during the period 2009-2015. All workers refers to children of non-domestic workers who are employed as cleaners. Controls include gender, age, migrant status, household size, literacy status, years of education, and fixed effects by MSA, year, occupation and MSA-by-year.

Standard errors clustered at the MSA level in parentheses.

Table C10: Effect of domestic workers' reform on girls' income and working time

| | Log of | Log of real income | Log | Log of real wage | Hon | Hours of work |
|---|-------------|--------------------|-------------|------------------|-------------|------------------|
| | (1) | (2) | (3) | (4) | (5) | (9) |
| $2009 \times \text{Child of domestic worker}$ | -0.014 | -0.119 | -0.162** | -0.150 | 2.609* | -2.624 |
| | (0.066) | (0.126) | (0.063) | (0.093) | (1.429) | (3.045) |
| $2010 \times \text{Child of domestic worker}$ | 0.067 | 0.007 | -0.110 | -0.030 | 3.432* | -0.662 |
| | (0.062) | (0.112) | (0.072) | (0.113) | (1.728) | (3.257) |
| $2011 \times \text{Child of domestic worker}$ | 0.053 | -0.052 | -0.025 | -0.003 | 1.421 | -1.096 |
| | (0.071) | (0.100) | (0.063) | (0.121) | (1.611) | (2.594) |
| $2013 \times \text{Child of domestic worker}$ | 0.078 | 0.033 | -0.038 | 0.013 | 2.371** | -0.328 |
| | (0.056) | (0.091) | (0.067) | (0.109) | (1.102) | (2.457) |
| $2014 \times \text{Child of domestic worker}$ | 0.037 | -0.019 | -0.016 | -0.005 | 0.603 | -2.016 |
| | (0.067) | (0.087) | (0.056) | (0.096) | (1.339) | (2.341) |
| $2015~\mathrm{x}$ Child of domestic worker | | | | | | |
| Child of domestic worker | -0.046 | -0.005 | 0.054 | 0.008 | -1.988 | 0.708 |
| | (0.045) | (0.077) | (0.048) | (0.073) | (1.207) | (1.989) |
| Constant | 4.117*** | 3.671*** | 0.723*** | 0.635*** | 3.379 | -3.214 |
| | (0.132) | (0.165) | (0.090) | (0.166) | (2.792) | (4.745) |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers | All workers | Cleaning workers |
| Observations | 6,906 | 2,231 | 906'9 | 2,231 | 6,906 | 2,231 |
| R-squared | 0.388 | 0.456 | 0.330 | 0.358 | 0.226 | 0.305 |

Note: All columns present the results of estimating Equation 3 when the dependent variable is either the logarithm of monthly income in 2003 ARS (columns 1 and 4), the logarithm of hourly wage in 2003 ARS (columns 3 and 4), or the number of hours of work per week (columns 5 and 6). The sample is composed of all female household members categorized as children between 16-21 years old and those between 22 and 25 years old who are in school during the period 2009-2015. All workers refers to children of workers than domestic workers. Cleaning workers refers to confident of non-domestic workers who are employed as cleaners. Controls include gender, age, migrant status, household size, literacy status, years of education, and fixed effects by MSA, year, occupation and MSA-by-year.

Standard errors clustered at the MSA level in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table C11: Effect of domestic workers' reform on boys' income and working time

| | | (3) | (4) | (5) | (9) |
|---|----------------------|-------------|------------------|-------------|------------------|
| | | ~ % % | | | |
| | | -0.00 | -0.071 | 2.822*** | 1.425 |
| | | (0.028) | (0.047) | (0.997) | (2.213) |
| | | -0.027 | -0.042 | 3.603*** | -0.301 |
| | 0.085 (0.091) | (0.053) | (0.072) | (1.255) | (2.829) |
| ZULL X CHIID OF COLLESTIC WOLKER 0.003 | (0.091) | -0.055 | 0.073 | 1.579 | 0.244 |
| (0.070) | | (0.048) | (0.069) | (1.208) | (1.901) |
| 2013 x Child of domestic worker -0.011 | -0.002 | 0.004 | 0.078 | 1.682 | -0.656 |
| (0.051) | (0.115) | (0.056) | (0.085) | (1.327) | (2.196) |
| $2014 \times \text{Child of domestic worker}$ 0.059 | 0.012 | -0.062 | 0.007 | 0.827 | 0.572 |
| (0.063) | (0.099) | (0.044) | (0.086) | (1.141) | (1.884) |
| 2015 x Child of domestic worker | | | | | |
| Child of domestic worker -0.105*** | * -0.063 | -0.058** | -0.071 | -1.262 | 0.669 |
| (0.037) | (0.069) | (0.028) | (0.047) | (0.834) | (1.609) |
| Constant 4.199*** | * 3.911*** | 0.347 | 0.649 | 12.635*** | -8.272 |
| (0.239) | | (0.395) | (0.482) | (4.402) | (9.981) |
| Comparison group All workers | ers Cleaning workers | All workers | Cleaning workers | All workers | Cleaning workers |
| | | 11,580 | 3,521 | 11,580 | 3,521 |
| R-squared 0.267 | 0.292 | 0.304 | 0.319 | 0.151 | 0.177 |

Note: All columns present the results of estimating Equation 3 when the dependent variable is either the logarithm of monthly income in 2003 ARS (columns 1 and 2), the logarithm of hourly wage in 2003 ARS (columns 3 and 4), or the number of hours of work per week (columns 5 and 6). The sample is composed of all male household members categorized as children between 16-21 years old and those between 22 and 25 years old who are in school during the period 2009-2015. All workers refers to children of workers than domestic workers. Cleaning workers refers to children and MSA-by-year.

year, occupation and MSA-by-year.
Standard errors clustered at the MSA level in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table C12: Effect of domestic workers' reform on children's schooling

| | Attendance | | Years of education | |
|---|-------------|------------------|--------------------|------------------|
| | (1) | (2) | (3) | (4) |
| 2009 x Child of domestic worker | -0.008 | -0.005 | -0.078 | -0.019 |
| | (0.013) | (0.016) | (0.059) | (0.081) |
| 2010 x Child of domestic worker | 0.008 | $0.023^{'}$ | 0.000 | $0.004^{'}$ |
| | (0.010) | (0.016) | (0.055) | (0.086) |
| 2011 x Child of domestic worker | 0.024* | 0.047** | -0.071 | -0.098 |
| | (0.014) | (0.018) | (0.057) | (0.100) |
| 2013 x Child of domestic worker | 0.022* | 0.046** | -0.011 | $0.015^{'}$ |
| | (0.011) | (0.017) | (0.069) | (0.095) |
| 2014 x Child of domestic worker | 0.013 | 0.027 | 0.109 | 0.138 |
| | (0.012) | (0.021) | (0.071) | (0.109) |
| $2015 \times \text{Child of domestic worker}$ | 0.028** | 0.060*** | 0.066 | 0.232* |
| | (0.012) | (0.018) | (0.082) | (0.120) |
| Child of domestic worker | -0.057*** | -0.034** | -0.412*** | -0.123 |
| | (0.009) | (0.013) | (0.051) | (0.076) |
| Constant | 1.056*** | 1.362*** | -9.751*** | -8.404*** |
| 0.000 | (0.055) | (0.093) | (0.292) | (0.383) |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers |
| Observations | 103,710 | 26,073 | 103,710 | 26,073 |
| R-squared | 0.129 | 0.164 | 0.451 | 0.382 |

Note: All columns present the results of estimating Equation 3 when the dependent variable is an indicator for school attendance (columns 1 and 2) and years of education (columns 3 and 4). The sample is composed of all household members categorized as children between 13-18 years old in the period 2009-2015. All workers refers to children of workers from any sector other than domestic workers. Cleaning workers refers to children of non-domestic workers who are employed as cleaners. Controls include gender, age, migrant status, household size, literacy status, and fixed effects by MSA, year and MSA-by-year. Standard errors clustered at the MSA level in parentheses.

**** p<0.01, *** p<0.05, ** p<0.1

Table C13: Effect of domestic workers' reform on girls' schooling

| | Attendance | | Years of education | |
|---|-------------|------------------|--------------------|------------------|
| | (1) | (2) | (3) | (4) |
| 2009 x Child of domestic worker | -0.011 | -0.014 | -0.069 | 0.012 |
| 2009 x Child of domestic worker | (0.011) | (0.021) | (0.075) | (0.123) |
| 2010 x Child of domestic worker | -0.002 | 0.005 | -0.039 | -0.076 |
| Zoro ir cimia or domosoro worner | (0.012) | (0.022) | (0.062) | (0.115) |
| 2011 x Child of domestic worker | 0.009 | 0.034 | -0.068 | -0.100 |
| | (0.015) | (0.021) | (0.069) | (0.107) |
| 2013 x Child of domestic worker | 0.003 | 0.015 | -0.109 | -0.247** |
| | (0.014) | (0.025) | (0.089) | (0.118) |
| $2014 \times \text{Child}$ of domestic worker | -0.007 | -0.008 | 0.072 | 0.090 |
| | (0.019) | (0.033) | (0.088) | (0.130) |
| 2015 x Child of domestic worker | -0.014 | 0.016 | -0.064 | 0.186 |
| | (0.017) | (0.030) | (0.085) | (0.136) |
| Child of domestic worker | -0.033*** | -0.011 | -0.302*** | -0.010 |
| | (0.012) | (0.020) | (0.057) | (0.086) |
| Constant | 0.948*** | 1.144*** | -10.743*** | -9.974*** |
| | (0.065) | (0.098) | (0.309) | (0.499) |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers |
| Observations | 50,997 | 13,130 | 50,997 | 13,130 |
| R-squared | 0.120 | 0.150 | 0.493 | 0.429 |

Note: All columns present the results of estimating Equation 3 when the dependent variable is an indicator for school attendance (columns 1 and 2) and years of education (columns 3 and 4). The sample is composed of all female household members categorized as children between 13-18 years old in the period 2009-2015. All workers refers to children of workers from any sector other than domestic workers. Cleaning workers refers to children of non-domestic workers who are employed as cleaners. Controls include gender, age, migrant status, household size, literacy status, and fixed effects by MSA, year and MSA-by-year. Standard errors clustered at the MSA level in parentheses.

**** p<0.01, *** p<0.05, ** p<0.1

Table C14: Effect of domestic workers' reform on boys' schooling

| | Attendance | | Years of education | |
|---------------------------------|-------------|------------------|--------------------|------------------|
| | (1) | (2) | (3) | (4) |
| 2009 x Child of domestic worker | -0.007 | 0.009 | -0.087 | -0.040 |
| | (0.017) | (0.020) | (0.082) | (0.119) |
| 2010 x Child of domestic worker | 0.016 | 0.041 | $0.030^{'}$ | $0.120^{'}$ |
| | (0.015) | (0.026) | (0.072) | (0.108) |
| 2011 x Child of domestic worker | 0.038* | 0.060** | -0.082 | -0.092 |
| | (0.020) | (0.023) | (0.072) | (0.124) |
| 2013 x Child of domestic worker | 0.038** | 0.080*** | 0.082 | 0.296** |
| | (0.015) | (0.024) | (0.099) | (0.118) |
| 2014 x Child of domestic worker | 0.031* | 0.059** | 0.150* | 0.189 |
| | (0.017) | (0.026) | (0.086) | (0.124) |
| 2015 x Child of domestic worker | 0.069*** | 0.102*** | 0.202* | 0.293* |
| | (0.016) | (0.028) | (0.108) | (0.153) |
| Child of domestic worker | -0.080*** | -0.058*** | -0.523*** | -0.246*** |
| | (0.013) | (0.015) | (0.062) | (0.087) |
| Constant | 1.134*** | 1.554*** | -9.171*** | -7.190*** |
| | (0.059) | (0.122) | (0.351) | (0.434) |
| Comparison group | All workers | Cleaning workers | All workers | Cleaning workers |
| Observations | 52,713 | 12,943 | 52,713 | 12,943 |
| R-squared | 0.141 | 0.194 | 0.413 | 0.345 |

Note: All columns present the results of estimating Equation 3 when the dependent variable is an indicator for school attendance (columns 1 and 2) and years of education (columns 3 and 4). The sample is composed of all male household members categorized as children between 13-18 years old in the period 2009-2015. All workers refers to children of workers from any sector other than domestic workers. Cleaning workers refers to children of non-domestic workers who are employed as cleaners. Controls include gender, age, migrant status, household size, literacy status, and fixed effects by MSA, year and MSA-by-year. Standard errors clustered at the MSA level in parentheses.

**** p<0.01, *** p<0.05, ** p<0.1