

# Direct and Spillover Effects of Enforcing Labor Standards: Evidence from Argentina

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## Abstract

This paper studies how increases in labor standards and enforcement affects workers and their families. Using a policy in Argentina that targeted domestic workers and their employers, I find a 36% increase in formality rates of domestic workers, a 4% increase in monthly earnings and a 3.4% reduction in hours of work per week. Allowing for heterogeneity shows that effects are driven by those in the upper half of the distribution of outcomes. The policy had effects on other members of the domestic worker's households: spouses of domestic workers reduced their hours of work by 2% and their monthly earnings by 3% after the policy and the labor force participation of young adult children decreased by 7.5%, an effect driven mostly by girls. The reform also helped close the educational gender gap: school attendance and years of education increased by 3% among boys of secondary school age, and secondary school completion raised by 20% among older boys. Taken together, the results suggest that higher labor standards and its enforcement can have sizable impacts among low-skilled workers as well as their families.

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# 1 Introduction

In developing countries, informal employment accounts for 60% of total employment (ILO, 2018). Labor informality poses a great challenge for governments for it reduces tax collection (Ulyssea, 2018) and the capacity to identify beneficiaries of welfare spending (Gerard and Gonzaga, 2016). Yet, the enforcement of labor regulations has ambiguous effects on workers. On one hand formal jobs are associated with higher wages, job security and social benefits (Camacho, Conover, and Hoyos, 2013). On the other hand, the costs that firms incur to comply with labor regulations and worker's preferences for informal jobs are pointed out as the reasons for the existence of a large informal sector (Djankov, La Porta, Lopez-de-Silanes, and Shleifer, 2002; Maloney, 2004). The problem of whether labor regulations are desirable becomes even more complex when one considers how enforcement of labor regulations affect other members of the targeted worker's household, in terms of their labor supply, sector of employment, consumption and investment decisions.

In this paper I evaluate a policy introduced in Argentina that strengthened the labor standards of domestic workers and the cost of noncompliance for their employers on workers and their families. Until 2013, labor standards granted domestic workers fewer rights than those of other workers, and employers faced lower sanctions if they did not comply with these regulations. The policy removed most of these differences, increasing workers' rights and employer's penalties in case of noncompliance. It also increased the probability of detection of noncompliers. The government actively publicized the reform, raising awareness among employers about domestic workers' rights and the costs of noncompliance.

I begin by looking at how the reform to labor standards affected the labor market outcomes of domestic workers. Conventional models of dual labor markets predict that following higher labor standards and an increase in the cost of noncompliance the change in formality rates would be undefined. However, labor demand would decrease, either in the form of higher unemployment or lower hours of work. In turn, the effects on earnings are undefined: higher (lower) formality rates should drive up (down) wages per hour, while the impact on earnings per month depends on how the effect on hourly wages interacts with that on employment.

To test these predictions, I use individual level data from a household survey between 2010 and 2015 to compare the labor market outcomes of domestic workers with those of similar workers

(women employed in blue-collar, service occupations) in a difference-in-difference (DID) framework. The underlying identification assumption is that treatment did not change the composition of either affected or comparison groups, and that in the absence of treatment the labor market outcomes of domestic workers would have evolved similarly to those of the comparison group.

I find that formality rates of domestic workers increased by 6 percentage points, or 36%. Compared to other studies surveyed recently by Jessen and Kluve (2019), the percent increase in registration is large, mostly due to the low levels that prevailed before the reform was introduced. Also, consistent with the theory I find a reduction of 0.8 hours of work per week among domestic workers (which translates to a 3.4% reduction), but no significant changes in unemployment rates, suggesting that labor demand in the sector is inelastic along the extensive margin. Regarding earnings, I find an increase of 4% in income per month, which together with the reduction in hours of work implies that wages per hours increased almost 8%.

These results are robust to using other comparison groups (such as female wage workers in all occupations, as well as male and female wage workers in service or any occupation) and different time windows. Treatment effects at different deciles of the outcome variables (implemented using the changes-in-changes framework of Athey and Imbens, 2006) show that hours of work decreased the most among those working longer hours, the increase in monthly earnings is higher among those in the middle of the income distribution, and the effect on wages per hour increases monotonically by decile. Taken together, the results suggest that strengthening labor standards coupled with stricter enforcement do not have a negative impact on workers. On the contrary, domestic workers experienced an increase in formality rates and earnings, and a reduction in working time after the reform.

Restricting the study of the effects of the policy to targeted workers only may under- or over-estimate the full effects of the policy. The collective household model (Chiappori, 1992) predicts that other household members would reduce their labor supply as a consequence of the increase in earnings and (under the assumption of leisure complementarity across household members) the reduction in hours of work of domestic workers. Additionally, because other family members can enjoy some of the benefits received by a formal worker, they have lower incentives to participate in the formal sector themselves (Galiani and Weinschelbaum, 2012).

I first look at the spillover effects of the policy on labor market outcomes of spouses and children.

I use the same difference-in-differences framework to separately compare the outcomes of male spouses and children of domestic workers with those of spouses and children of women employed in blue-collar occupations in the service sector, respectively. I find that after the reform spouses of domestic workers reduced their hours of work by a similar amount than domestic workers themselves. This was accompanied by a reduction in monthly earnings, leaving wages per hours unchanged as one would expect. Additionally, I observe a significant reduction in labor force participation among children of domestic workers: after the reform they are 2.4 percentage points (7.5%) less likely to be in the labor force, an effect mainly driven by a reduction of 3 percentage points (12.5%) among girls. The decrease in labor force participation of girls is not associated with an increase in schooling or home production. This may indicate the time out of work is instead devoted to leisure as observed previously by Oster and Thornton (2011) and Devoto, Duflo, Dupas, Parienté, and Pons (2012), among others. Unfortunately, lack of detailed time-use information prevents me from determining which activities are being substituted for work.

Spillover effects can extend beyond the labor market. The increase in earnings and reduction in hours of work of parents has been shown to improve schooling among children (Dahl and Lochner, 2012; Bono, Francesconi, Kelly, and Sacker, 2016), with stronger effects when the income recipient is female and households are poor. To the extent that formal jobs increase job security, the higher rates of registration of domestic workers could reinforce the impacts described above. In fact, I find evidence of improvements in school attendance (3.1%) and years of education (3.2%) among boys of secondary school age (12-18), and increases in secondary school completion (20%) among boys aged 18 to 25. The reason why effects are concentrated among boys is that they have worse educational outcomes at baseline than girls, something that has been documented previously (Edo, Marchionni, and Garganta, 2017) and is linked to cultural factors.

These results suggest that restricting the analysis of the effect of labor regulations to workers directly targeted by them can underestimate the total impact of these regulations and lead to mistaken conclusions about their benefits. A back-of-the-envelope-calculation suggests that the reform was cost-effective, and the overall costs for the government are not significantly higher than the benefits once future obligations and earnings are taken into account. Hence, when assessing the impact of changes in labor regulations, researchers should also consider the effects on individuals indirectly affected by them.

This paper relates to studies of labor regulations and reforms, and their effect on the labor market. Most of the existing research in developing countries focus on the introduction of minimum wages (e.g. Dinkelman and Ranchhod, 2012; Bhorat, Kanbur, and Mayet, 2013), although some studies have analyzed other regulations such as firing costs (Adhvaryu, Chari, and Sharma, 2013) and payroll taxes (Cruces, Galiani, and Kidyba, 2010). Another strand of the literature has studied the effects of enforcing such regulations, such as Ronconi (2010) in Argentina, Almeida and Carneiro (2012) in Brazil, and recently by Samaniego de la Parra (2019) in Mexico, among others. Closely related to this study, de Melo Costa, de Holanda Barbosa, and Hirata (2016) analyze a similar labor reform to domestic worker’s regulations that took place in Brazil, although in that setting no changes in enforcement were introduced.

With the notable exception of de Melo Costa et al. (2016), these studies find that stricter labor standards while keeping enforcement constant do not increase unemployment or informality and can actually increase workers’ earnings, but high firing costs may reduce job creation during periods of economic growth. On the other hand, higher enforcement of existing regulations raise compliance, but can in some cases reduce the earnings of workers who are paid above the minimum wage. The labor market effects I find among domestic workers can be seen as the result of the interaction between higher standards and enforcement, suggesting that these policies act as complements in improving the economic conditions of workers. Moreover, compliance with labor standards increased without the need of inspections, but rather increasing the expected cost of noncompliance using public campaigns that have proven cost-effective in other contexts (Castro and Scartascini, 2015; Bott, Cappelen, Sorensen, and Tungodden, 2017). In addition, with the exception of Samaniego de la Parra (2019) (who looks at labor market outcomes of spouses) studies focus only on the effects of inspections on targeted workers.

A large literature has documented the causal link between parent’s socioeconomic conditions and investment in children’s health (Duflo, 2003; Qian, 2008; Atkin, 2009) and schooling (Yang, 2008; Baird, McIntosh, and Özler, 2011; Benhassine, Devoto, Duflo, Dupas, and Pouliquen, 2015), as well as labor force participation (Duryea, Lam, and Levison, 2007; Edmonds and Schady, 2012). Children in my sample are relatively older compared to those considered in the literature because in middle income countries primary school completion is nearly universal and child labor is not as prevalent. However, dropout rates are still high in secondary school among low-income households.

Moreover, the heterogeneous treatment effects by gender are in line with those found previously, with the difference that in the case of Argentina girls are more likely than boys to complete secondary school.

The rest of the paper is structured as follows: In Section 2, I describe the regulations of wage workers in general and those of domestic workers, before and after the reform took place. In Section 3, I present a simple theoretical framework to analyze the effects that the reform could have on workers and their families. Section 4 describes the data used and the empirical strategy implemented. Section 5 presents the results of the reform to domestic workers, while Section 6 shows the spillover impacts on other household members. Finally, Section 7 presents the conclusions.

## **2 Background - Employment regulations and domestic worker's reform**

This section describes the main regulations of wage employment in Argentina. Because these regulations were different for domestic workers and other wage workers before the policy reform under study, I first describe the employment regulations for all but domestic workers. Then, I describe the type of jobs and employment arrangements of domestic workers, as well as the regulations to their work before the reform was enacted. Finally I describe the changes in regulations that took place in 2013, when the reform was enacted. A summary of these regulations and changes is presented in Table 1.

### **2.1 Regulations to wage employment of non-domestic workers**

All wage workers in Argentina are entitled to a salary that cannot be lower than the minimum wage set by the Federal Government. Moreover, those in unionized occupations cannot receive a lower salary than that established by collective bargaining. Workers have the right to a minimum of two weeks of paid holidays per year, paid sick leave and 90 days of paid maternity leave for women.<sup>1</sup> Workers asked to work more than eight hours per day or 48 hours per week must receive overtime compensation, which is set at 50% over the regular wage per hour. If a worker is fired without cause, s/he has the right to be informed at least 30 days before the labor relationship ends and has

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<sup>1</sup>Men only have 2 days of paid paternity leave.

the right to a severance payment equal to one monthly salary for each year of tenure in the job.

Whenever an employer hires a worker s/he must register the labor relationship to the Federal Administration of Public Revenue (AFIP). Every month, employers must pay to the tax authority 26.5% of the monthly gross salary of the employee in the form of health insurance and pension contributions.<sup>2</sup> The employer also has to deduct 17% for pension and health insurance from the employee's gross salary and transfer it to AFIP. In addition to this, s/he has to carry an occupational accident insurance policy covering each worker. The health insurance contribution provides the worker and his/her family with a health insurance policy, while the pension contribution allows a worker to receive a contributory pension when s/he retires.

To receive a contributory pension, workers must be at least 65 years old (60 years for women) and have contributed to the system for at least 30 years. The amount of this pension is a proportion of the worker's average salary in the 10 years before s/he retires or the minimum pension set by the Government every 6 months, whichever is higher. However, since 2005 all individuals who had not met the contributions requirement by the time they retired could apply for a non-contributory pension equivalent to 80% of the minimum contributory pension.

If an employer fails to register a worker (or does it after a labor relationship started) and s/he is detected, s/he has to pay the worker an amount equal to 25% of his/her monthly gross salary for each month the worker has been employed. This amount corresponds to the payroll contributions that the employer did not make. In addition to this, the employer has to pay a fine to AFIP that depends on the number of workers that are not registered. In 2013, that fine could be as high as ARS 7500 per worker, which was equivalent to approximately 2.6 times the Federal minimum wage (ARS 2850 in 2013). Detection occurs either through inspections or anonymous reports by employees.

In addition to the sanctions stipulated for hiring a worker of the books, if an unregistered worker is fired s/he has the right to receive twice the severance payment that s/he would be entitled to if s/he had been registered. In order to receive this payment, the worker has to sue her former employer. Anecdotal evidence suggests that judges tend to favor the employee because she is considered the weakest part of the labor relationship, although there are no official statistics regarding ruling.<sup>3</sup>

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<sup>2</sup>To be precise, the taxes correspond to pension contributions (16%), health insurance contributions (6%), contributions to the state-run health insurance system for the elderly (2%), and the unemployment insurance fund (1.5%)

<sup>3</sup>The following news article reports that firms win only 1 every 10 trials initiated by workers <https://www.clarin.com>.

Because trials can take between 2 and 3 years, employers and employees often reach an agreement over the severance payment the former will pay the latter, even before going to court.

## 2.2 Domestic Workers and Labor Standards Before 2013

Approximately one million people are employed as domestic workers (approximately 7% of the total salaried workforce), of which 89% are cleaning ladies and 9% are caregivers. Women constitute 98% of all domestic workers, and almost 1 out of 6 salaried women is employed as a domestic worker. They have lower levels of education than the average worker and are more than twice as likely to be foreign migrants.<sup>4</sup>

Most domestic workers are employed by only one household, as shown in Figure 1. However, as Figure 2 shows, they are predominantly part-time workers: the average working time is 25 hours per week, and the median worker is employed 20 hours per week. Together with their demographic characteristics, these factors partially explain why most domestic workers live in low-income households, and are therefore not subject to income taxation. Positions are not typically advertised in newspapers or job boards but rather filled through word of mouth and referrals, so workers face a thin labor market.

As in most developing countries, until 2013 domestic workers were exempted from the regulations and enjoyed fewer rights than other wage workers (ILO, 2016). Among the reasons suggested for these differences are the belief that the employer (a household) does not make a profit out of the domestic worker's job, and its association with servitude work from the colonial era (ILO, 2016).

Regular hours of work were capped at 12 per day, and minimum wage was set by the Government usually at or below the Federal minimum wage. If an employee was dismissed, she had to be notified ten days in advance, and severance payment in case of dismissal without cause consisted of half a monthly salary per year of work, regardless of whether the worker was registered or not. With the exception of live-in domestic workers (who constitute less than 3% of all domestic workers) there was no reference to minimum paid holidays or paid sick leave. Also, there was no mention of paid

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com/economia/empresas-solo-ganan-juicios-laborales\_0\_BJ1LsCSTvXx.html. On the other hand, this article mentions that the number of trials in the labor jurisdiction multiplied by two from 2010 to 2014, reaching more than 120 thousand <https://www.lanacion.com.ar/economia/en-cuatro-anos-se-duplicaron-los-juicios-laborales-nid1734898>.

<sup>4</sup>This does not mean that they are not allowed to hold a formal job. Migratory regulations in Argentina are relatively lax, and most migrants come from countries with which Argentina has agreements that allow them to arrive and lawfully live in the country before having a job.



maternity leave whatsoever.

Employers were not required to carry an occupational accident insurance policy, and the only payroll taxes that had to be paid were a lump sum that depended on how many hours per week the worker was hired for. The maximum contribution was set at ARS 95 per month (which corresponds to approximately 3% of the minimum wage) for workers employed for 16 hours or more per week. This contribution provided the worker with a health insurance policy for herself (not her family) and access to a pension in the contributory system. If a worker was employed for fewer hours, the contribution only consisted of the pension component, and the worker had to pay out of pocket to have access to health insurance. Like other wage employees, domestic workers were given access to a reduced, non-contributory pension in case they had not met the contribution requirements by age 60.

Formality rates of domestic workers are the lowest among all wage employees in the country: while approximately 35% of wage workers are employed off the books, 85% of domestic workers were not registered in 2013. Even after AFIP introduced a tax break for employers of domestic workers to encourage registration in 2006, the trend in formality rates among domestic workers since then was not different from that of other sectors of the economy.

There are two main reasons behind these high levels of informality. First, detection of labor informality among domestic workers was nearly impossible. Inspectors cannot enter an individual's home to check for unregistered workers, and because there is typically only one worker per household, employers would know who reported them and would likely retaliate. Second, in the event an employer was detected there were no sanctions set in place. Finally, and similar to the reasons why regulations were different for domestic workers than for any other wage worker, there was little awareness about the obligation of employers to register a worker (Oelz, 2014; Groisman and Sconfienza, 2016).

## **2.3 The Reform to Domestic Worker's Labor Standards**

In April 2013, the President signed a bill that had been sent to Congress in 2010 with the goal of eliminating most of the differences between the regulations to domestic worker's employment and that of other wage workers. Some exceptions remained: minimum wages were still set by the Government, and contributions continued to be fixed amounts per month based on the hours of

work per week the employee was hired for.<sup>5</sup> Although domestic workers were granted paid sick and maternity leave, the latter was covered by the Government instead of the employer.

The reform received substantial media attention and the Government made public campaigns to raise awareness of the changes and the requirement for employers to register their employees.<sup>6</sup>

Regarding informal employment, employers who were detected would be required to pay only the fine to AFIP (and not the one to the worker corresponding to the missing contributions) of up to ARS 7500, but these fines were waived for 60 days since the enactment of the law. Moreover, a few weeks after the law passed AFIP announced that it would send letters to households with a yearly income over ARS 500,000 per year (fewer than 1% of households) or ARS 300,000 in assets (1 million individuals or 2.5% of the population). These letters informed recipients that AFIP assumed they were employing a domestic worker, and thus were compelled to either register the worker, or prove that they did not have any employee in order to avoid sanctions.<sup>7</sup> Figure 3 presents an example of this letter.

Ultimately, letters were sent only to individuals who satisfied both the income and assets conditions, but the decision was made public only days before the letters were sent. Although this substantially reduced the universe of letter recipients to approximately 200,000 households, the fact that the campaign was made public raised awareness about the capacity of the tax authority to detect potential evaders.<sup>8</sup> In fact, in addition to the large number of studies showing the effectiveness of these messages to increase tax compliance (see Mascagni, 2018 and Slemrod, 2018 for reviews), there is a growing literature showing significant spillover effects of law enforcement on noncompliers who are not directly targeted (Rincke and Traxler, 2011; Brollo, Kaufmann, and La Ferrara, 2017).

As an indication of the attention caught by the reform, Figure 4 shows the relative number of searches on Google for the terms “domestic worker” (*empleada doméstica*) in Argentina, obtained

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<sup>5</sup>Contributions increased by 44% to ARS 135 for the first time since 2011. In the same period of time inflation was estimated at 59%.

<sup>6</sup>See [https://www.clarin.com/trabajo/regimen-trabajo-domestico-ley\\_0\\_r1cE4TYPXg.html](https://www.clarin.com/trabajo/regimen-trabajo-domestico-ley_0_r1cE4TYPXg.html) and <https://www.lanacion.com.ar/sociedad/promulgan-la-ley-para-empleadas-domesticas-nid1572054> for articles in the main national newspapers about the enactment of the law. The following video from the national news agency explains the procedures for employers to register a domestic worker <https://www.youtube.com/watch?v=tXX8W4lxXOo>.

<sup>7</sup>It was never specified how individuals could prove they did not employ a worker. However, after the letters were sent AFIP sent inspectors to the homes of some individuals who had not responded to the letter to determine whether they had an unregistered employee.

<sup>8</sup>These letters continued to be sent to a growing number of people. For example, in 2018 650,000 letters were sent according to this report <https://www.lanacion.com.ar/economia/empleos/la-afip-manda-cartas-para-inducir-el-blanqueo-de-empleo-domestico-y-dice-que-hubo-36000-registros-nid2154549>

from Google Trends. The largest number of searches corresponds to May 2013, the month after the bill was signed by the President. The second highest month in terms of searches corresponds to October 2014, when the requirement by employers to carry an occupational accident insurance policy became mandatory.

Regarding the effect of the reform on compliance with the regulations, a first approximation can be observed in Figure 5. The vertical axis shows the share of workers who are registered each year, separately for domestic workers and for female workers in other blue-collar service occupations (cleaners, caregivers, waitresses, etc.) who are not subject to the reform because their employer is a firm.

The pre-reform period is characterized by small increases in formality rates for both groups of workers. However, in 2013 (the year of the reform) the rate of formality among domestic workers increases almost 4 percentage points followed by a 2 percentage point increase in 2014. In comparison, formality rates among other workers continued increasing at a similar rate as it had been before the reform took place.

### 3 Theoretical Framework

#### 3.1 Hiring decision in a dual labor market

The reform detailed in the previous section and its consequences can be analyzed using a simple model. Anecdotal evidence suggests that domestic workers are usually hired through recommendations rather than vacancy postings, and employers make take-it-or-leave-it offers to employees, including whether they will be registered or not. Hence, I assume in my model that labor supply of domestic workers is perfectly inelastic and model only the demand side of the market.

Consider an employer who derives utility from consumption of goods ( $C$ ) and household services ( $H$ ) such that:

$$U(C; H) = \alpha \ln C + \beta \ln H \tag{1}$$

with  $0 < \alpha < 1$ ,  $0 < \beta < 1$ , and  $\alpha + \beta = 1$ .

Demand for household services can be either registered to the social security administration or

not. If registered, the employer has to pay the worker a wage  $\bar{w}$  per hour, a fixed cost  $\kappa$  (which corresponds to payroll taxes and non-wage benefits that registered workers receive), but can deduct from her income taxes a share  $\delta$  of her expenditure on household services. If not reported, the employer pays a salary  $w < \bar{w}$  per hour and does not pay the fixed cost  $\kappa$ , but has no tax break and she faces a probability of being detected by the Government and charged a fine. Let  $\varphi$  be the expected fine the employer has to pay for hiring an unregistered worker.

I model firing costs in the following way: there is an exogenous probability  $\pi_i$  that the labor relationship ends and a cost  $\nu_i$  that the employer has to pay if that happens, with  $i \in \{r, u\}$ . To keep matters simple, this cost  $\nu_i$  includes the present value of severance payments and the cost of rehiring labor.

While  $\pi_r < \pi_u$  to account for the fact that informal labor relationships are more likely to finish than formal ones,  $\nu_r > \nu_u$  such that, for the time being,  $\pi_r \nu_r = \pi_u \nu_u$ . Although the monetary cost of firing a worker in the pre-reform period was very similar, workers in the informal sector have to sue their employer and wait for a favorable ruling in order to receive the severance payment.

The employer has an exogenous income level  $y$ , over which she pays a share  $\tau(y)$  in the form of taxes such that  $\tau'(y) > 0$ . The problem faced by the employer is therefore:

$$\max U(C; H) \quad s.t. \begin{cases} 0 \leq H \leq \bar{H} \\ 0 \leq C \\ y(1 - \tau(y)) = C + (\bar{w}H + \kappa) \times (1 - \delta\tau(y)) + \pi_r \nu_r & \text{if registered} \\ y(1 - \tau(y)) = C + wH + \varphi + \pi_u \nu_u & \text{if unregistered} \end{cases}$$

The employer solves this problem by solving for  $(C^*; H^*)$  under each hiring condition. Demand for household services is:

$$\text{If reporting: } H^r = \frac{y(1 - \tau(y)) - \kappa(1 - \delta\tau(y)) - \pi_r \nu_r}{\bar{w}(1 - \delta\tau(y))} \beta$$

$$\text{If not reporting: } H^u = \frac{y(1 - \tau(y)) - \varphi - \pi_u \nu_u}{w} \beta$$

Once the optimal demand for household services is determined, the employer chooses the sector of employment that yields the higher utility. The value functions for this problem are:

If reporting:  $V^r = \Lambda - \beta \ln \bar{w} + \ln [y(1 - \tau(y)) - \kappa(1 - \delta\tau(y)) - \pi_r \nu_r] - \beta \ln (1 - \delta\tau(y))$

If not reporting:  $V^u = \Lambda - \beta \ln w + \ln [y(1 - \tau(y)) - \varphi - \pi_u \nu_u]$

were  $\Lambda = \alpha \ln \alpha + \beta \ln \beta$ .

Hence, the decision to hire formally or informally depends on the tax rate (which is itself a function of the level of income), the cost of hiring formally, the firing costs, the rate of deduction and the expected cost of detection.

Before the reform there were no penalties for hiring a domestic worker off the books ( $\varphi = 0$ ). It is straightforward to show that for employers who do not pay income taxes (90% of adults for whom  $\tau = 0$ ) it is always a best response to hire a worker off the books.

A similar conclusion can be reached for the majority of employers subject to a positive income tax rate. For three quarters of them, the effective tax rate is less than 10% (Valente, 2016), putting a low upper bound on the tax break they can benefit from if they register a domestic worker.

The policy under study set in place sanctions for employers who failed to report a labor relationship and increased the probability of detection for high income employers. Additionally, severance payments doubled for employers with a registered worker and quadrupled if the employee was not registered. These changes can be modeled as an increase in  $\varphi$ , while  $\nu_r$  multiplied by two and  $\nu_u$  multiplied by four.

Because the cost of not registering a worker increased substantially more than those of registering her, some employers became better off by reporting a previously unreported labor relationship. At the same time, because the cost of hiring increased irrespective of reporting status, demand for household services (i.e. hours of work of domestic workers) should decline.

In addition to the increase in sanctions to employers not complying with the law, the reform increased non-wage benefits for domestic workers, although most of these costs were absorbed by the Government. This change can be modelled as a small increase in  $\kappa$ , with the expected result of further reducing the demand for household services in the formal sector.

### 3.2 Spillover effects of formality on children's education

Domestic workers tend to live in households of low socio-economic status. In 2012, the average monthly income of domestic workers was 31.6% that of other workers. Moreover, 38% of them were

the head of the household, and this situation meant that 60% of households where the household head was a domestic worker belonged to the bottom 3 deciles of the household income distribution (Groisman and Sconfienza, 2012). Low income households usually suffer from liquidity and credit constraints, which can hinder investments such as those in children's health and education. This has been the justification for introducing CCT programs in many developing countries.

Liquidity constraints can be relaxed not only by increasing household income, but also by reducing the variability in income received. A formal job is usually considered more stable than an unregistered one since in principle firing costs are higher. Using a very simple model of parental investment, it is possible to derive predictions about the spillover impacts of the policy under study on children.

Consider a worker  $j$  who derives utility from both her consumption and that of her children:

$$U_j = U(c_j, C_k) \quad (2)$$

Where  $C_k = \{c_1, c_2, \dots, c_K\}$  is the vector of consumption from each child. Following Atkin (2009) child  $k$ 's consumption is a function of parental characteristics  $X_j$ , parental investment  $I_k$  made during childhood, and the rate of return  $\rho$ :

$$c_k = f(\rho, I_k, X_j) \quad (3)$$

I consider a simple two-period model carrying some of the notation from the previous subsection. In period 1, worker  $j$  receives income  $wH$  with probability  $(1 - \pi_i)$ ,  $i \in \{r, u\}$ . As before,  $\pi_r < \pi_u$ . She allocates that income between consumption  $c_j$  and investment  $I_k$  at price  $p_I$ . In the second period, she receives  $wH$  with certainty and a share of the firing cost  $\theta\nu_i$  if she was fired in the previous period. Hence, her budget constraints are:

$$\begin{aligned} (1 - \pi_i)wH &= c_j + I_k p_I && \text{In period 1} \\ wH + \pi_i \theta \nu_i &= c_j && \text{In period 2} \end{aligned}$$

Given this setting, child  $k$ 's reduced form consumption is:

$$c_k = f(\rho, (1 - \pi_i)wH, X_j) \quad (4)$$

Ceteris paribus, child consumption will be higher if the parent is employed in the formal sector because the expected income that can be devoted to investment is higher. However, the reform under study is also expected to reduce the number of hours of work, so it is unclear in which direction expected income would change.

In the following section, I detail the data and the empirical strategy used to test the predictions of the model presented here.

## 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.](#)). The survey covers the 32 largest metropolitan areas (*aglomerados urbanos*) 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.

The survey has a specific question regarding whether a person is a domestic worker, which is used here to define the affected group of workers. In turn, all salaried workers are asked if their employer makes pension contributions for their work, and those who answer negatively are considered informal.<sup>9</sup> This is the standard “legalistic” classification of an informal worker (Tornarolli, Battistón, Gasparini, and Gluzmann, [2014](#)). It should be noted that individuals are not asked about who their employer is and no information is collected that could allow the Government to link respondents to their employers. Therefore, workers do not have an incentive to misreport employment and/or informality status.

For this paper I use data between 2010 and the first half of 2015. The survey was interrupted for almost one year since July 2015, which is why I do not extend the analysis further. On the other

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<sup>9</sup>More precisely, the question asks if pension contributions are deducted from their salary. It is assumed that if this is the case, the employer is also paying their required share of the contributions.

hand, the reason for starting in 2010 is to avoid the recession that occurred in 2009 (where GDP fell by 6%). Because of the recession, workers whose wages are set through collective bargaining fell in real terms in 2009, but recovered in 2010, while those of domestic workers (which are set by the Government) remained constant, hence creating pre-trend differences between affected and unaffected workers. Results starting in 2009 are shown in the online appendix and are qualitatively similar to those presented here.

Monetary values have been expressed in 2008 Argentinian pesos (ARS). There is ample evidence that the national statistical institute falsified the inflation figures by a significant margin (see Cavallo, Cruces, and Perez-Truglia, 2016 for a detailed description of the issue). 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 use PriceStat’s chained index (see Cavallo and Bertolotto, 2016, and Cavallo and Rigobon, 2016), an inflation series that merges official data between 1943 and 2007 with data obtained by scraping the prices of millions of products sold in the country since 2007.

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. Using this structure, Table 2 shows the proportion of registered and unregistered domestic workers and workers in other occupations conditional on their registration status in the previous year.

Before the reform, an average of 8.9% of domestic workers who reported not being registered in a given year were registered the year after (column 1), while the average for women in other blue collar workers in service occupations was 25.5% (column 2). In the years after the reform, 12.5% of informal domestic workers were registered when they were resurveyed one year later, an increase of 3.6 percentage points or 40 percent from the pre-reform period average. For unregistered non-domestic workers, the probability of being formal conditional on being registered the year before remained relatively unchanged at around 24%.

Among individuals who were registered in any given year, 64.8% of domestic workers (column 3) and 95.1% of non-domestic workers (column 4) had a formal job the year after (switches from a formal to an informal job usually involve a job change). In the post-reform period, these figures were 68.2% (an increase of 3.4 percentage points) and 92.8% (a 2.3 percentage-point reduction),



respectively.

These figures suggest that the reform increased the likelihood that domestic workers become registered, as well as the likelihood that an employer registers a new hire. Unfortunately, the small number of domestic workers who appear 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.

## 4.2 Empirical Strategy

Because the policy reform affected only one, well-defined group of workers and all these workers were treated at the same time, this policy can be analyzed using a difference-in-differences framework (Angrist and Krueger, 1999). Throughout this paper I use the following specification to estimate the impact of the reform on labor market outcomes of the employees:

$$Y_{ijmt} = \beta_0 + \beta_1 DW_{ijmt} + \beta_2 DW_{ijmt} \times Reform_t + \Gamma X_{ijmt} + \theta_t + \nu_j + \mu_m + \psi_{tm} + \varepsilon_{ijmt} \quad (5)$$

where  $Y_{ijmt}$  is the outcome of interest for individual  $i$  working in sector  $j$  from metropolitan area (MA)  $m$  in year  $t$ . I estimate the impact of the reform on formality rates, income and hours of work of domestic workers, as well as their spouses and young adult children above the legal age to work (16-25). I also study the spillover effects of the reform on educational outcomes of children of secondary school age and above (12-25).

$DW_{ijmt}$  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).  $X_{ijmt}$  is a set of worker's characteristics (which unless otherwise specified comprises age, age squared, country of birth, household size, marital status, literacy status, years of education and years of education squared). In turn,  $\theta_t$ ,  $\nu_j$  and  $\mu_k$  are fixed effects by year, occupation and MA of residence, respectively. Finally,  $\psi_{tk}$  estimates the interaction between year and MA to capture local labor market trends.

The main parameter of interest  $\beta_2$  captures the effect of the policy change on the target population. In all cases, following Bertrand, Duflo, and Mullainathan (2004) I cluster the standard errors at the MA level to control for serial correlation across time and adjust the p-values for multiple

hypothesis testing using Hochberg’s step-up procedure (Benjamini and Yekutieli, 2001).

Given that I have data for multiple years both before and after the reform, it is also possible to estimate a specification which replaces the interaction term between the domestic worker and the post-reform indicators with interactions between an indicator for being a domestic worker and a dummy for each year. Such analysis is presented in Appendix A, showing very similar results to those of my preferred specification.

#### 4.2.1 Comparison group

Choosing the appropriate comparison group is not a trivial task in this case. Although identification does not require that treatment and comparison 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. On the other hand, since workers can self-select into similar occupations, if the comparison group is very similar to the treatment group in terms of the skills used, workers could switch occupations (and thus treatment status) as a response to the reform, violating one of the assumptions needed for identification of treatment effects.

Because more than 98% of domestic workers in my sample are women, I keep only female domestic workers and compare their outcomes before and after the reform with those of blue collar female workers in other service occupations. The comparison group is thus composed of cooks, waiters, cleaners, etc., who perform similar tasks than those of domestic workers, but were not affected by the reform since their place of work is not a household. The results are similar when using female wage workers in all occupations as the comparison group (shown in the Online Appendix).

Table 3 presents summary statistics for female domestic workers and female blue-collar workers in service occupations. Domestic workers are on average 40.5 years old, one year older than individuals in the comparison group. Eight percent of them are foreign migrants, almost twice as much as female workers in service occupations.

In terms of education, they have on average 8.9 years of schooling, which is one year less than women in the comparison group and correspond to primary school plus almost two years of secondary school. In fact, 90% of domestic workers finished primary school (five percentage points less than female workers in service occupations), but only 31% have finished secondary school (vs. 42% of women in the comparison group).

Regarding labor market outcomes, the average domestic worker is a part-time worker, with less than 25 hours of work per week, 10 hours less than the average woman in blue-collar service occupations. It is in part because of this that monthly salaries of domestic workers are less than half of those of individuals in the comparison group (ARS 470 vs ARS 1092). However, even after taking into account the difference in working time, hourly wages of domestic workers are 30% lower than for workers in the comparison group. On the other hand, domestic workers have on average 49 months of tenure in their job, 10 more months than female workers in service occupations.

As it was mentioned in Section 2.2, at baseline only 15% of domestic workers are registered, while 63% of individuals in the comparison group are. However, the difference in health insurance coverage is not as large: 42% of domestic workers have healthcare coverage versus 72% of women in other blue-collar service occupations. The difference between contributions to health insurance and coverage can be attributed to coverage through a spouse or parent who has a formal job.

### **4.3 Identification assumptions**

Even though the differences in observable characteristics between affected and unaffected workers are substantial, this is not an issue in order to obtain unbiased estimates of the effect of the policy reform. However, identification relies on two crucial assumptions: no changes in group composition and parallel trends. Here, I discuss each of these assumptions in more detail and I show different tests to reduce the concern that these assumptions could be violated in this context.

#### **4.3.1 Stability of group composition**

The first assumption refers to the fact that the characteristics that could be correlated with the outcomes of interest should not change as a result of the treatment for individuals in either the affected or unaffected group. Because the data is used as a repeated cross section, determining whether the treatment generated changes in the composition of treatment and control groups is not straightforward.

One possibility is that the reform changed the type of individuals who decide to supply labor as domestic workers. In order to test this hypothesis, I regress each individual characteristic on a domestic worker indicator, a post-reform indicator and an interaction between them, controlling for year, MA and occupation fixed effects. The difference-in-differences estimate for each regression is

shown in Table 4. After controlling for multiple hypothesis testing, I do not find evidence that any of the observable characteristics of domestic workers changed after the reform.

Another way in which the assumption of stability of group composition would be violated is if individuals changed occupations due to the reform. Figure 6 plots the share of female workers in every wave of the survey for each of the occupations that constitute the comparison group, as well as domestic workers. If the reform changed the benefits of working in certain occupations (e.g. be a domestic worker), there should be a change in the composition of the survey in terms of occupations. However, the proportion of workers in each category remains flat over time. Figure 7, which plots the number of workers surveyed by occupation shows a very similar pattern.

In addition to these checks, I take advantage of the rotating panel structure of the data to construct transition matrices of the probability that a person is a domestic worker given their status in the labor force and their occupation in the previous year. These transition probabilities are presented in Table 5, showing no changes on the probability that a person is employed as a domestic worker after the reform.

#### 4.3.2 Parallel trends

The second assumption required for the internal validity of the empirical strategy, known as “parallel trends” states that, in the absence of the policy, the evolution of the outcome variables for the affected and comparison groups would have been similar. It is not possible to directly test this assumption, because in the post-reform period individuals are either affected or unaffected. However, one can find evidence to support this assumption by looking at the behavior of the variables of interest in periods before the reform takes place.

Figure 5, shown before, provides a graphical evidence that there are no pre-trend differences between affected and unaffected groups in terms of formality rates. In addition to this, Figure 8 presents the unconditional means of the number of hours of work per week in the main occupation (Panel A), the natural logarithm of hourly wages in the main occupation (Panel B), of income per month in the main occupation (Panel C) and in all occupations (Panel D), and the natural logarithm of total income per month (Panel E), respectively. Once again, although the levels are different across the affected and comparison groups, there is no indication of pre-trend differences between them.

In addition to the graphical evidence presented, I formally test for pre-trend differences it in two ways. First, in Table 6 I show the difference-in-differences estimate when the dependent variable is an indicator that takes value 1 if the respondent have deductions for pension (column 1) and health insurance contributions (column 2) in their jobs, but setting the treatment period before the reform actually took place. In March 2011, the House of Representatives approved the Bill and it was expected it would be enacted shortly after.<sup>10</sup> However, the Senate introduced changes to the original Bill and approved it only a year later, when it was sent back to the House where it was approved in 2013. Hence, I consider the year 2011 as the reform period and run the analysis between 2010 and 2012. The corresponding DiD estimates are small and statistically indistinguishable from zero, which suggests that there was no anticipation effect to the reform.

Second, I estimate the impact of the reform on the labor market outcomes of domestic workers replacing the interaction between a domestic worker indicator and a post-reform dummy by multiple interactions between a domestic worker indicator and yearly dummies. In the presence of pre-trend differences, the interactions corresponding to pre-reform years should be statistically different from zero. Appendix A presents the results of this analysis, showing that in most cases, the interaction coefficients before 2013 are not statistically different from zero.<sup>11</sup>

## 5 Labor market effects of the reform for domestic workers

In this section, I present the results of the analysis regarding the effects of the reform on the labor market outcomes of domestic workers. Table 7 starts by showing the effect of the reform to labor regulations of domestic workers on the likelihood that their employer makes contributions to the pension (column 1) and health insurance (column 2) system, two indicators that the labor relationship is registered to the tax authorities.

The estimates point to an increase of 5.8 percentage points in the probability that, following the reform, a domestic worker is registered. Given a baseline value of 16%, this corresponds to an increase of 36% in formality rates. The figures for health insurance contributions are lower at 5.2

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<sup>10</sup>See [https://www.bbc.com/mundo/noticias/2011/04/110331\\_argentina\\_empleadas\\_domesticas\\_ley\\_vh](https://www.bbc.com/mundo/noticias/2011/04/110331_argentina_empleadas_domesticas_ley_vh) about the approval of the Bill by the House of Representatives and <https://www.iprofesional.com/legales/115491-Servicio-domestico-senadores-votaran-la-reforma-al-regimen> about the expectation that the Senate would also approve the Bill.

<sup>11</sup>Unlike the difference-in-differences estimates presented in the main tables, p-values of the estimates reported in these tables are not adjusted for multiple hypothesis testing.

percentage points or 35% with respect to the baseline mean, because workers hired for fewer than 16 hours per week did not receive health insurance as part of their employer’s contributions.

These effects are on the upper end of those found in previous studies, and are particularly larger than those estimated by de Melo Costa et al. (2016) for the Brazilian reform to domestic worker’s regulations. Two likely reasons for this are that in Argentina formality rates were lower at baseline, and that the reform in Brazil did not alter the penalties or the probability of detection for employers hiring off the books.

In turn, column 3 estimates the change in the probability that a worker has health insurance coverage. The result points to a positive effect, although smaller than the effects on formality rate and statistically indistinguishable from zero. This is because many domestic workers were already covered by the health insurance policy of a registered worker in their household (e.g. a spouse or parent), as evidenced by the higher share of domestic workers who had coverage at baseline compared to those who were registered.

Formality rates of domestic workers remain below those of other occupations even two years after the reform. This is because for many employers, based on their level of income and assets, the probability of detection either did not change or did not increase enough with respect to pre-reform levels to make it more convenient to register their employee. However, given that almost 80% of domestic workers are employed by only one household, the observed increase means that more than 50 thousand employers registered a worker who was previously off the books.

Because the cost of employing a domestic worker increased regardless of registration, some employers might lay off their employees, producing an increase in unemployment. This behavior could bias the estimates shown in Table 7 if it affects domestic workers in one sector more than in the other. I test if this was the case in column 1 of Table 8, where the dependent variable is indicator that takes value 1 if the individual is unemployed, and the sample is comprised of both employed and unemployed workers who had a previous job, so it is possible to determine their last occupation.

The result suggests that the reform did not generate significant changes in employment along the extensive margin. The DiD coefficient is positive but small at 0.2 percentage points (or a 2.2% increase from baseline), and statistically indistinguishable from zero. Nevertheless, since the standard error is large, I cannot rule out an increase in unemployment of 1.4 percentage points

(which corresponds to a 15% increase from baseline). To study how this would affect the other results, in Appendix B I run all the regressions including unemployed individuals with a previous job (I assume they are not registered, they have 0 labor income and 0 hours of work). All estimates are robust to the inclusion of unemployed workers.

On the other hand, column 2 of Table 8 shows that hours of work of domestic workers decreased by 0.8, or 3.2% following the reform. Hence, employers may have chosen to reduce labor demand on the intensive rather than the extensive margin as a consequence of the increase in the cost of hiring a worker. Nevertheless, I do not observe a significant increase in the likelihood that a domestic worker is willing to work more hours (column 3).

## 5.1 Earnings

Even though most domestic workers are part-time workers and hours of work decreased as a consequence of the reform, domestic workers did not become more likely to be involuntary part-time workers. The reason for this can be found in changes in earnings, shown in Table 9. Column 1 presents the estimates of the percentage change in monthly income from the main job for domestic workers after the reform, showing a marginally significant but large increase of 4%. Because of the reduction in hours of work per week, however, hourly wages (which are measured as monthly income from the main job over hours of work per week in the main job) increased by a highly significant 7.8% (column 2).

As further evidence that the reform affected earnings of domestic workers positively, in columns 3 and 4 of Table 9 I consider the change in monthly income from all jobs (instead of only the main occupation) and total earnings (labor and non-labor), respectively. Earnings from all jobs increased by 4.1%, slightly more than earnings from the main occupation. In turn, total earnings increased by 4.5%, suggesting that domestic workers also saw an increase in non-labor earnings. Nevertheless, in this case the adjusted q-value is above conventional significance thresholds.

To understand why the point estimate for total earnings is 10% larger than that of labor earnings, in Table 10 I estimate the change in the probability of receiving (odd columns) and on the amount received conditional on reception (even columns) for various sources of non-labor income. Because of the large number of individuals in my sample receiving zero non-labor income, changes in the amount received conditional on reception are estimated using a tobit model. Since all values are

transformed to logs, I input a value of zero to those who do not receive income from a given non-labor source (this corresponds to receiving 1 ARS, which is a negligible amount).

The first column shows that the probability of receiving any type of non-labor income following the reform did not change, although the estimate is not precise, with a 95% confidence interval ranging between a decrease of 3% and an increase of 2.4%. Moreover, conditional on receiving any non-labor income, the amount received decreased by a significant 0.2%. However, these figures hide large differences depending on the source of non-labor income received.

The probability of receiving a pension increased slightly, and conditional on receiving it the amount of the transfer increased by 7.7%. This could be related to a higher awareness by domestic workers about their eligibility for certain pensions as part of the public campaigns regarding domestic workers' rights that took place at the time the reform was enacted. On the other hand, there is some evidence of a decrease in the likelihood of receiving welfare transfers, as well as a 1.5% reduction in the amount received. Similarly, there is a small and marginally significant reduction of 0.9% in the amount received from alimony.

## 5.2 Treatment effect heterogeneity

In this section I examine the treatment effect heterogeneity of the labor market outcomes along their distribution. One would expect the effects for domestic workers to be different depending on how the reform affected their employers (especially with respect to the increase in detection rates), so the average treatment effects presented in the previous sections may not be representative of how the policy affected certain groups of workers.

First, I estimate the effects of the reform on hours of work and the different measures of income at each decile of the distribution of the outcome variable. For this, I use Athey and Imbens' *changes-in-changes* (CIC) model (Athey and Imbens, 2006). This model is a generalization of the standard difference-in-differences model that allows one to recover the entire distribution of the counterfactual outcome instead of only its expected value. Moreover, in contrast to the quantile difference-in-differences (QDID) model, which compares individuals across groups and time according to their quantile, the CIC model compares individuals across groups according to their outcomes and across time according to their quantiles. This is a more realistic comparison given that the distribution of outcomes at baseline are different for the affected and unaffected groups.



The results of the analysis are presented in Figure 9, where I plot the point estimate and confidence interval of the effect for each decile of the distribution of the corresponding outcome, together with the average treatment effect estimated using this framework. For more detail, point estimates and standard errors for each quantile can be found in Appendix C.

As expected, the decrease in hours of work (Panel A) is larger the higher their hours of work per week are. In particular, the effect observed at the mean is driven by a large decrease in hours of work experienced by individuals in the top 3 deciles of the distribution, while those at the bottom did not experience any significant reduction in hours of work. This is consistent with the fact that higher income employers were more likely to be targeted by the tax authority, and they also have a higher demand for domestic workers' services.

On the other hand, the change in income per month from the main job (Panel B) is more uniform across deciles, with larger increases around the middle of the distribution, and even some decreases in income for those in the first decile. As a consequence, the change in wages per hour from the main job (Panel C) increases monotonically across deciles.

Finally, changes in income per month from all jobs (Panel D) and total income per month (Panel E) are quite similar across deciles, and confidence intervals are large enough to always contain a null effect.

In addition to the analysis by quantiles, it is interesting to observe how the average treatment effects found previously compare to those for formal and informal workers separately. This is shown in Appendix D, where I present the results from a triple difference model that includes an indicator that takes value 1 if the individual is a formal worker. The results suggest a negative association between the reform and the hours of work and earnings of formal domestic workers with respect to informal ones. However, it should be noted that these estimates cannot be given a causal interpretation because the composition of domestic workers along the formality dimension changed as a consequence of the reform.

## 6 Spillover effects of the reform

The analysis from the previous section showed that, after the reform, formality rates of domestic workers increased, and although unemployment rates did not increase hours of work decreased for

a large group of domestic workers. In turn, earnings per hour increased for all domestic workers, while monthly earnings increased for almost all domestic workers.

Each of these impacts can affect other members of the domestic worker's family along different dimensions and in different ways. In particular, this section will analyze the effects on the labor market outcomes of spouses and children, as well as the impacts on educational outcomes of children of domestic workers.

The affected group of spouses is comprised of male individuals married to or living with a domestic worker, while the comparison group is composed of male individuals married to or living with a woman included in the comparison group used for the main analysis. Table 11 provides summary statistics for each of these samples. As it was the case with domestic workers, their spouses have different demographic and socio-economic characteristics than men in my comparison group before the policy was introduced. However, the differences are smaller in magnitude than those observed among domestic workers. Moreover, in Table 12 I show the sectors where most spouses of domestic workers are employed, together with the share employed in each sector and the corresponding figure for individuals in the comparison group. The 15 categories listed include more than 90% of workers in both the affected and comparison group, although their distribution across occupations is somewhat different, with a larger share of spouses of domestic workers employed in construction and manufacturing (rows 1, 3, 5 and 7), and a smaller share employed as cleaners, administrative and personal services (rows 8, 9 and 10).

In the case of children, I will focus on those aged 12-25, therefore capturing effects on adolescents and young adults. While primary school attendance and completion (which occurs between 12 and 13 years) have been almost universal for various decades (Edo et al., 2017), secondary school dropout rates are high, especially among children living in poor households. According to the data from the EPH 10% of respondents of secondary school age (12 to 18) were not attending school in 2012 (in comparison, only 1% of children of primary school age were not attending school in that year). Moreover, only 56% of respondents aged 18 or more had finished secondary school in 2012.

Moreover, labor force participation is negligible for children of primary school age (as it can be seen in Figure 11), but starts to increase after that even though the legal age to work is 16. On the other hand, as Figure 11 shows, the upper bound of 25 years corresponds to the 90th percentile of the age distribution among individuals in the survey who are categorized as children

of the household head. The results, however, are robust to different upper bounds of the age range of children considered.

Table 13 presents summary statistics for the sample of children. Although there are some differences between affected and unaffected groups, they are smaller than those observed for domestic workers. In addition, Table 14 shows the main occupations held by children who are in the labor force, also depicting small differences in the distribution of occupations.

The following subsection describes how the impacts observed among domestic workers could affect different labor market outcomes of spouses and children and presents the results of the analysis. In turn, subsection 6.2 explains how the effects of the reform on domestic workers could influence the educational outcomes of children and the results I find on along this dimension.

## 6.1 Spillover effects of the reform in the labor market

There are various reasons to believe that the effects that the policy had on the labor market outcomes of domestic workers could have affected the decisions of other household members.

First, formal jobs include amenities that are enjoyed by all household members. For example, a pay stub gives individuals access to formal markets of credit and housing. These markets are usually cheaper and of better quality (in the case of the housing market) than informal ones. Additionally, in Argentina if a person is entitled to a pension from the contributory system because her employer made the required contributions by the time she retires, her spouse can receive this pension if the original beneficiary dies. Therefore, access of one family member to a formal job reduces the incentives for other members to work in the formal sector themselves (Galiani and Weinschelbaum, 2012). Although empirical evidence of this prediction is lacking, studies have found disincentives towards formal employment of the extension of health care coverage (Camacho et al., 2013; Bosch and Campos-Vazquez, 2014; Bergolo and Cruces, 2014) and relatively large cash transfer programs for the unemployed (Gasparini, Haimovich, Olivieri, et al., 2009).

Second, the increase in earnings perceived by domestic workers can affect the labor supply decisions of other household members. On one hand, models of collective labor supply (Chiappori, 1992) predict that the increase in earnings produces an income effect on other household members, thus reducing their labor supply either at the intensive or extensive margins. On the other hand, the increase in earnings by domestic workers may also increase their bargaining power inside the

household. If spouses wanted to preserve their previous bargaining power, we would expect they increase their labor supply and earnings.

Finally, the reduction in hours of work of domestic workers could also affect labor supply among other household members. If leisure of other household members enters the utility function of each individual as a complement, we would expect that spouses and/or children of domestic workers would reduce their labor supply. Goux, Maurin, and Petrongolo (2014) found evidence of this in France, where spouses of workers that whose workweek was reduced also reduced their hours of work, although by a lower amount.

In summary, the existing theoretical and empirical literature suggest that the reform could have a negative impact on formality rates of spouses and children of domestic workers. In terms of labor supply, I expect a reduction among children of domestic workers, while the impact for spouses is a-priori undetermined.

Table 15 shows the labor market impacts of the reform on spouses of domestic workers. The comparison group in this case is composed of men whose spouse has a blue-collar service occupation. All the estimates are imprecise and most are small in magnitude, although it should be noticed that I cannot rule out a decrease of 1 hour of work per week (column 3), which corresponds to a 2.1% decrease from the pre-reform mean. I also cannot rule out a 3 percent decrease in income per month, leaving wages per hour practically unaffected.

As further evidence that the reduction in labor supply and earnings of spouses is a consequence of the increase in earnings of domestic workers, I repeat the estimation on hours of work and earnings per month, but this time pooling together the values of the couple. Table 16 presents the results, showing that in all cases the coefficients are smaller than those observed for domestic workers (particularly in the case of earnings per month) and always statistically indistinguishable from zero, suggesting that the effects observed for domestic workers and their spouses compensate almost exactly.

In turn, table 17 shows the difference-in-differences estimates of the labor market outcomes for children of domestic workers. Panel A shows the result for all children, while Panels B and C reports the estimates for female and male children respectively. I cannot rule out a large decrease of 2.4 percentage points (almost 7.5% from pre-reform mean) in labor force participation (column 1), an impact that is mostly driven by women, for whom I observe a 3 percentage point or 12.5%

reduction. The decrease in labor force participation implies that, when looking at other labor market outcomes, the assumption of stability of group composition no longer holds by construction. Hence, the remaining results on labor market outcomes of children should be taken with caution. In any case, the estimates are imprecise and not statistically different from zero once I adjust the p-values to account for multiple hypothesis tests.

While there is no evidence of a change in formality rates, the results suggest a decrease in hours of work per week driven by boys. Regarding earnings, I observe an increase of 1% in earnings per month and 3.6% in wages per hour for girls. Nevertheless, this result could be explaining by low-income female children dropping out of the labor force at higher rates than high income children. In the case of boys, the increases are larger, at 3% and 3.7% respectively.

In summary, there is some evidence that the reform had considerable impacts on the labor market outcomes of other members of the household of the workers targeted by the reform. Unfortunately, the relatively small sample size does not allow me to obtain precise estimates, but the magnitude of the estimates suggests that policymakers should not neglect the potential spillover effects of the measures taken to increase formality rates in the economy.

## 6.2 Spillover effects of the reform on education

Children of domestic workers are in a particularly unfavorable position in terms of their level of education. In the years prior to the reform only 87% of those of secondary school age were attending school, and 45% of those aged 18 or more had completed secondary school. Boys are particularly disadvantaged, with attendance rates of 84% and secondary school completion rates of only 36%. There are various reasons to think that this and other outcomes could have improved as a consequence of the impacts the reform had on domestic workers.

The first reason is the increase in income experienced by domestic workers. Family income has been found to positively affect child development and schooling in particular, especially among children of low income households (Milligan and Stabile, 2011; Løken, Mogstad, and Wiswall, 2012; Dahl and Lochner, 2012). Moreover, in the last two decades, researchers and policymakers have pointed at financial constraints as one of the causes for low levels of school enrollment among the poor (Schultz, 2004), motivating the introduction of conditional cash transfer programs.

Moreover, to the extent that formal jobs are more stable than informal ones, reducing the risk

that a person loses her job can increase investment of other household members, especially when the household faces credit constraints. Hence, the increase in formality rates among domestic workers has the potential to reinforce the income channel developed in the previous paragraph.

Finally, the reduction in working time implies that workers have more time they can devote to child care, so we could expect a further improvement in educational outcomes of children. Recent studies in developed countries have shown a negative impact of labor supply on child development. While the majority of studies focus on young children (Carneiro, Løken, and Salvanes, 2015; Bono et al., 2016), Agostinelli and Sorrenti (2018) find improvements in tests scores also among adolescents. Although these papers use data from developed countries, they find the causal impact of labor supply on child development to be stronger among poor households, which suggests that similar results should be expected in the context I study.

In Table 18 I show the results of estimating the impacts of the reform on educational outcomes of children of domestic workers using the same DiD framework as in the previous Sections. In column 1, the dependent variable is an indicator that takes value 1 if the individual is attending school. The sample is composed of children of secondary school age (12-18) who have not yet finished secondary school. I find a small and noisy increase of 1.1% for the overall sample (Panel A) that is driven by a 2.6% increase in attendance rates among boys (Panel B), while there is no impact for girls (Panel C).

The noise observed in attendance rates can be due to the fact that some interviews take place during the holiday months (December through February). In order to obtain a more precise measure of changes in schooling, in column 2 I estimate the impact of the reform on the years of education of children of secondary school age. As Panel A shows, I find a small and not statistically significant increase of 1.7% in years of education for all children, but when looking at girls and boys separately (Panels B and C, respectively), I find a noisy 0.44% reduction for the former, and a statistically significant increase of 3.1% for the latter.

Although important, changes in years of education may not have large consequences in the labor market if there is no improvement in secondary school completion rates. In order to test if the reform had any impact along this dimension, in column 3 I regress an indicator that takes value 1 if the respondent has finished secondary school on the interaction between a post-reform period dummy and an indicator that takes value 1 if the respondent is the child of a domestic worker. Here,

the sample comprises all individuals aged 18 to 25 who are children of the head of the household.

Once again, the estimate for the entire sample is positive but imprecise, pointing to a 8.4% increase in the share of individuals who finished secondary school. However, while I do not observe any impact for female children, the estimate is large and statistically significant for boys: after the reform, secondary school completion rates for this subpopulation increased by 7.3 percentage points, or 20%. The effect is driven mostly by those of 18 years, but the estimate is robust to different age ranges.

Taken together, these results suggest that the improvement of labor regulations and working conditions of disadvantage workers can have large positive impacts on other household members (especially secondary income earners) that should be considered when evaluating the overall effects of such policies.

## 7 Conclusion and Discussion

In developing countries, the design and enforcement of labor regulations is subject to intense debates. For governments, tax collection diminishes and welfare spending becomes less effective if a large proportion of employees are not registered to the authorities by their employer. Additionally, policymakers see enforcement as a means to improve the level of protection and standard of living of workers. Thus, it is common for governments to implement policies to increase the enforcement of regulations. Critics argue that enforcement of high labor standards can harm workers because firms could pass the cost of these regulations to their employees, so measures intended to benefit workers could reduce employment and earnings.

Assessing the effect of labor regulations and their enforcement becomes more complicated when one considers that worker's families can also be affected by these policies. This is not only because formal jobs include non-wage amenities that can be enjoyed by this members, but also because, under the assumption that formal jobs are more stable, formality also reduces the volatility of household income. Despite this, the vast majority of existing studies have only focused on the direct effects to workers (Ronconi, 2010; Almeida and Carneiro, 2012; Adhvaryu et al., 2013).

This paper sheds light on the question of how labor standards affect workers and their families. To do this I take advantage of a reform that increased both the labor standards of domestic workers

and the enforcement of compliance with these standards by their employers. I find that after the reform compliance with labor standards improved, increasing formality rates and monthly earnings of domestic workers while reducing their hours of work. The results indicate that the reform increased the bargaining power of domestic workers, shifting part of the surplus from the labor relationship from employers to employees. This is in line with studies that find positive effects of labor regulations (such as minimum wage laws) when employers have market power (Card and Krueger, 1994).

These findings are of particular relevance in light of the recent push towards increasing the rights of domestic workers around the world: countries such as Brazil, Chile, Ecuador and Mexico have in recent years passed similar legislation to assimilate the labor standards of domestic workers to those of other wage employees, and in the U.S. the National Domestic Workers Alliance (NDWA) has advocated to raise the labor standards for domestic workers.<sup>12</sup>

Because domestic work is a female-dominated occupation, the improvement in their labor market outcomes is important in terms of women empowerment and intra-household decision making. A substantial number of studies have documented the positive relationship between access to wage employment women's well being (Jensen, 2012; Majlesi, 2016; Cunningham and Shah, 2017). Lack of detailed data on household decision making prevents me from analyzing this, but future work should explore whether the reform induced changes in women's bargaining power within the household.

I do however take advantage of the availability of data linking individuals within each household to study how the reform affected other members of domestic worker's families. I find that other household members also benefited from the reform. Male spouses decreased their hours of work and young adult children of domestic workers reduced their labor force participation, while boys (a group that has traditionally lagged behind in terms of education) increased their educational quantity both along the intensive margin (years of education) and extensive margin (level of education).

A back-of-the-envelope calculation indicates that for every Argentine Peso spent to send letters to potential employers, the government increased its tax revenue by ARS 7.75.<sup>13</sup> Although these

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<sup>12</sup>See the NDWA website at <https://www.domesticworkers.org> and [this](#) article from the New York Times explaining the work of NDWA for more information.

<sup>13</sup>Pomeranz (2015) calculates the cost of sending one certified letter to be \$1 in Chile, which translates to approximately ARS 5.8 in 2013. Since 200,000 letters were sent and 60,000 domestic workers were registered, this implies a "compliance rate" of 0.3. In turn, contributions for workers hired for 16 hours a week or more were set at ARS 135 in May 2013



taxes entitle workers to health insurance coverage and a pension, this does not necessarily translate into higher public expenditures.

According to the results of this paper, a significant portion of domestic workers already had healthcare coverage through another family member, and for those without coverage a health insurance policy implies lower use of the public healthcare system that the government provides free of charge. On the other hand, informal workers are already entitled to a noncontributory pension that amounts to 80% of the minimum pension from the contributory system. Because pension contributions for domestic workers do not depend on their salary, the difference per worker between the higher pensions and the amount of the contribution amounts to ARS 225 per month in 2013.<sup>14</sup>

Even though this is a considerable deficit, it does not take into account the increase in tax revenue that the government could obtain from the increases in education of domestic workers' children. The latest estimates available for the country suggest that a year of education is associated with an increase in wages of 6% (Jaume and Willén, 2019), which means that an increase of one quarter of a year of schooling is expected to raise wages by 1.5%.<sup>15</sup> In turn, Battistón, García-Doménch, and Gasparini (2014) estimates the secondary school premium to be approximately 20% with respect to secondary school dropouts. The earnings increase and the corresponding raise in tax collection could at least partially offset the deficit in pensions.

In summary, the above figures suggest that by strengthening the labor standards of low-skilled workers and improving the enforcement of these standards, governments can improve the living standards of both those workers and their families at a relatively low cost.

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<sup>14</sup>This assumes that each worker contributes for 30 years (the minimum required to access a contributory pension) and receives pensions for 15 years, from the time she turns 60 until age 75.

<sup>15</sup>Jaume and Willén (2019) acknowledge that this figure is lower than that found by previous studies.

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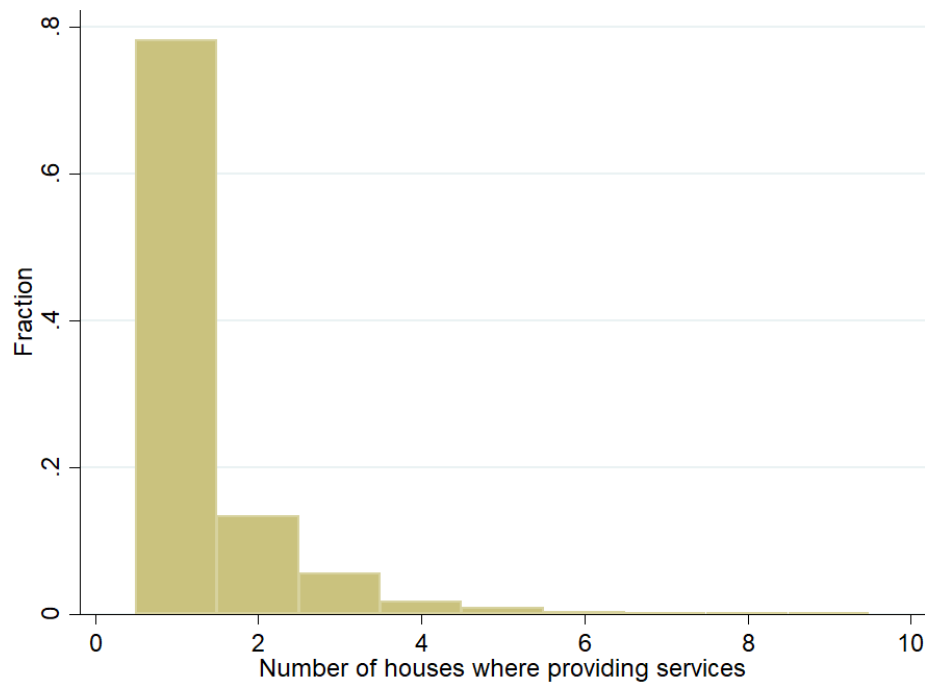
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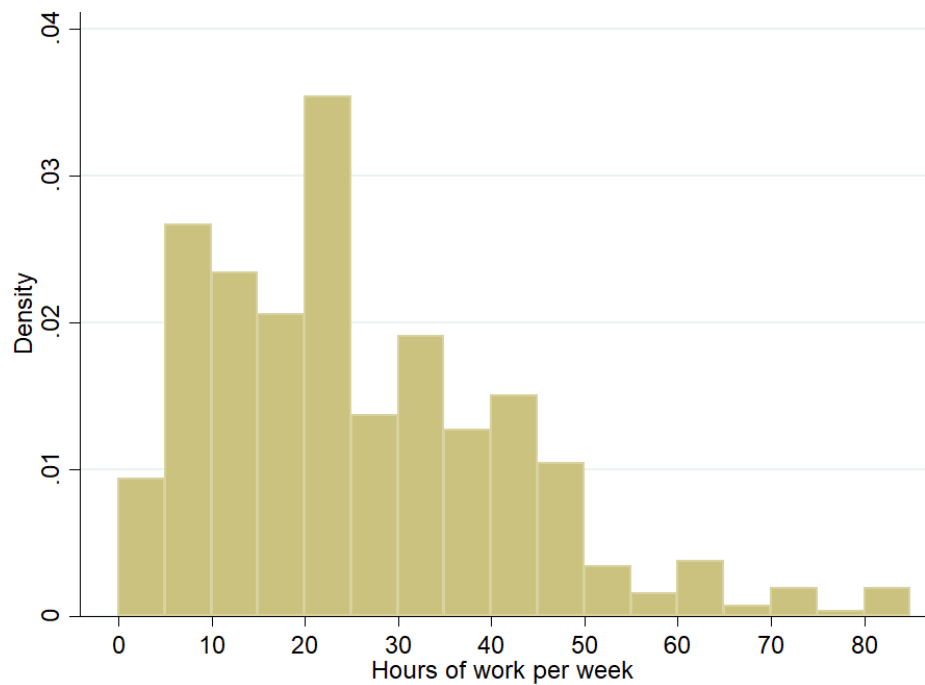
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Figure 1: Number of houses where domestic workers are employed



Note: The graph shows the distribution of hours of work per week as reported by domestic workers for the years 2009 to 2012. Hours of work per week are binned in intervals of 5 hours.

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



Note: The graph shows the histogram of the number of employers as reported by domestic workers for the years 2009 to 2012.

Figure 3: Letter sent by the tax authority compelling potential employers to register a domestic worker

**i AFIP**  
2013 - AÑO DEL BICENTENARIO DE LA ASAMBLEA GENERAL CONSTITUYENTE DE 1813

Sr./Sra.:  
CUIT/CUIL:  
Domicilio  
( ) CABA  
CABA

Buenos Aires, 30 de Mayo de 2013

**N° DE REFERENCIA DE ESTA CAMPAÑA: 1699**  
CORREO OFICIAL  
DEVOLUCIONES - CGC B18422AC - MONTE GRAJADE

Referencia: Registro Especial de Personal de Casas Particulares.

De las acciones de control y cruces de información que realiza esta Administración Federal surge que usted es potencial empleador de personal de casas particulares.

A partir de la vigencia del nuevo "Registro especial de personal de casas particulares" (Resolución General N° 3491) toda relación laboral debe inscribirse en el Registro Especial de Seguridad Social. El trámite se realiza a través de [www.afip.gob.ar](http://www.afip.gob.ar) hasta el 30 de Junio de 2013 inclusive.

Recuerde que el obligado que no registra la relación laboral estará en infracción y sujeto a la aplicación de las sanciones que prevé la Ley N° 11.683 texto ordenado 1998 y sus modificaciones.

Para obtener mayor información sobre el Régimen Especial de Contrato de Trabajo para el Personal de Casas Particulares podrá acceder a: [www.afip.gov.ar/casasParticulares/](http://www.afip.gov.ar/casasParticulares/) o comunicarse telefónicamente al 0800-222-2526.

Atentamente,

**Dirección General de los Recursos de la Seguridad Social**  
**ADMINISTRACION FEDERAL DE INGRESOS PUBLICOS**  
Número de referencia de esta campaña: 1699

[www.afip.gob.ar](http://www.afip.gob.ar)

**INFORMACION** **0810 - 999 - 2347 (AFIP)**  
De lunes a viernes de 8 a 20 hs.  
[mayuda@afip.gob.ar](mailto:mayuda@afip.gob.ar)

From the control and information cross-checks that this Administration performs we believe you are a potential employer of a domestic worker.

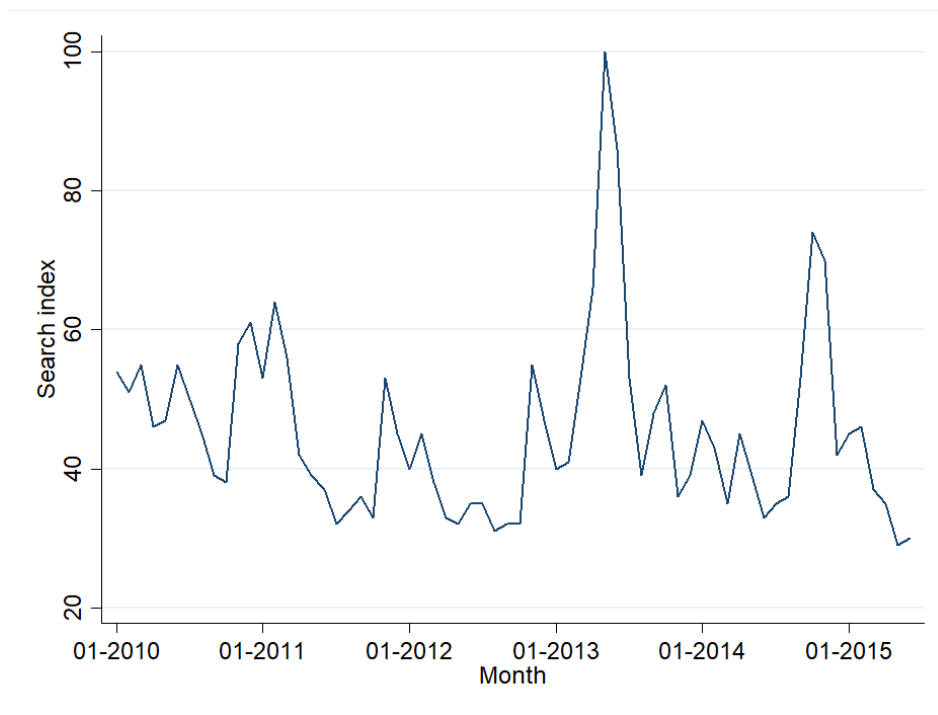
Since the implementation of the Special Registry of Domestic Workers (General Resolution N. 3491) it is mandatory to register all labor relationships in the Social Security's Special Registry. The procedure is fulfilled through [www.afip.gob.ar](http://www.afip.gob.ar) until June 30<sup>th</sup> 2013.

Remember that failure to register the labor relationship is considered a contravention subject to the sanctions specified in Law 11683 text ordered 1998 and its modifications.

Note: The image shows the letter that the tax authority (AFIP) sent to potential employers of domestic workers compelling them to register such employee. The letter specifies which laws and procedures contain the sanctions employers would face if they do not comply with the regulations.

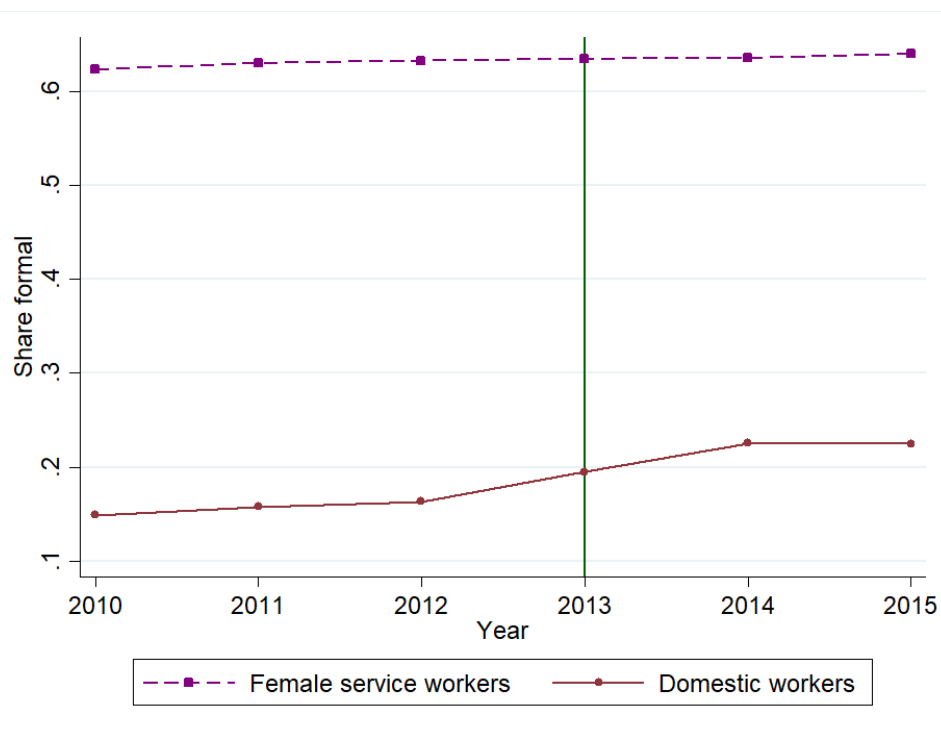


Figure 4: Index of searches for “domestic worker” over time



Note: The figure shows the relative number of searches for the term “domestic worker” (*empleada doméstica*) on Google. The highest mark (registered in May 2010, the month after the reform to labor rights passed) corresponds to the month in which the term was searched for the most.

Figure 5: Share of registered workers



Note: The Figure shows, for each year, the share of formal workers among female domestic workers and female workers in other blue-collar service occupations. Formality status is reported by the respondent as the answer to the question of whether they have deductions for the pension system at their job.

Figure 6: Share of workers by occupation



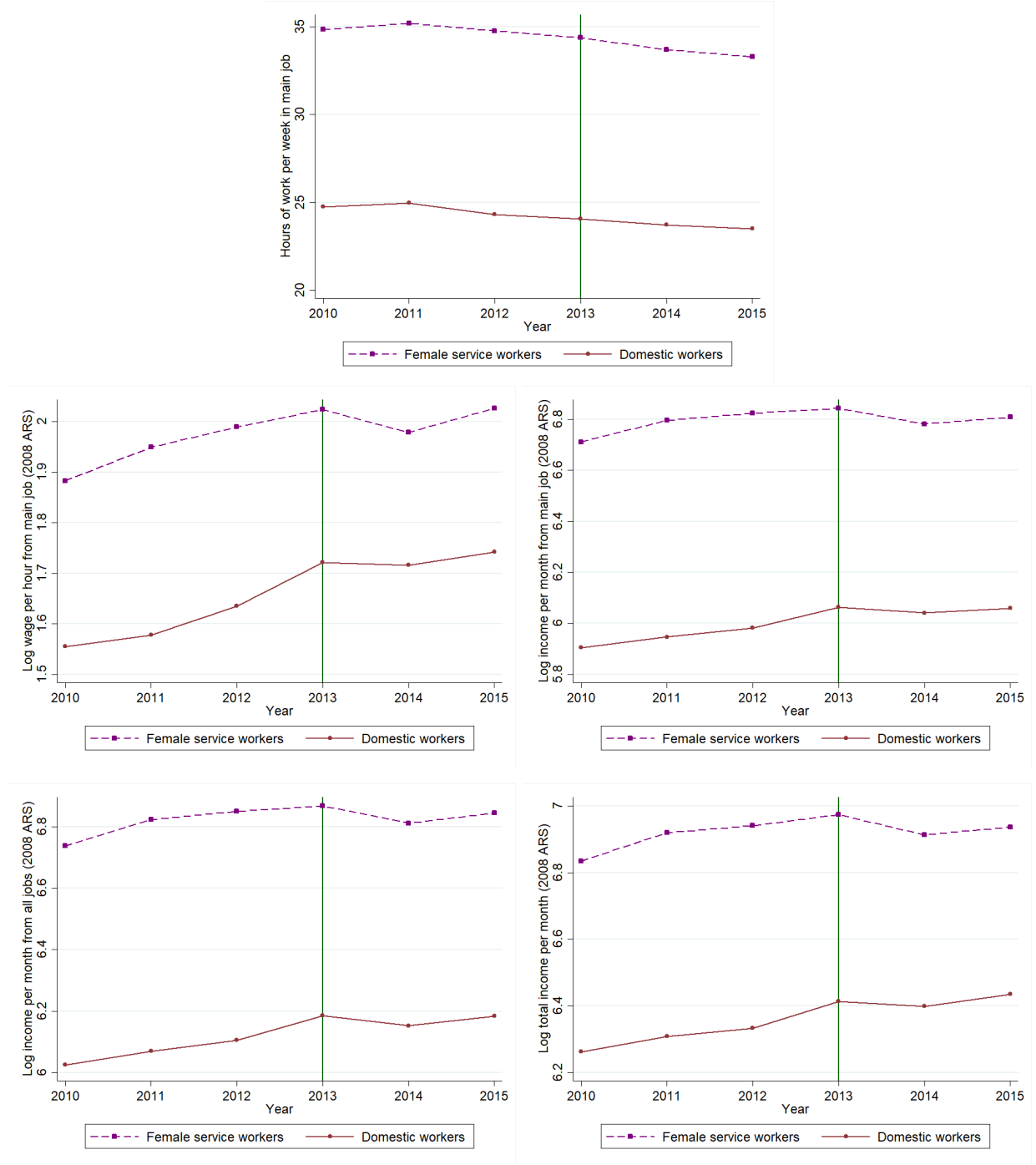
Note: The Figure shows the share of domestic workers and of workers in each occupation of the service sector for every wave in which the survey was conducted. Occupation is self-reported by survey respondents.

Figure 7: Number of workers by occupation



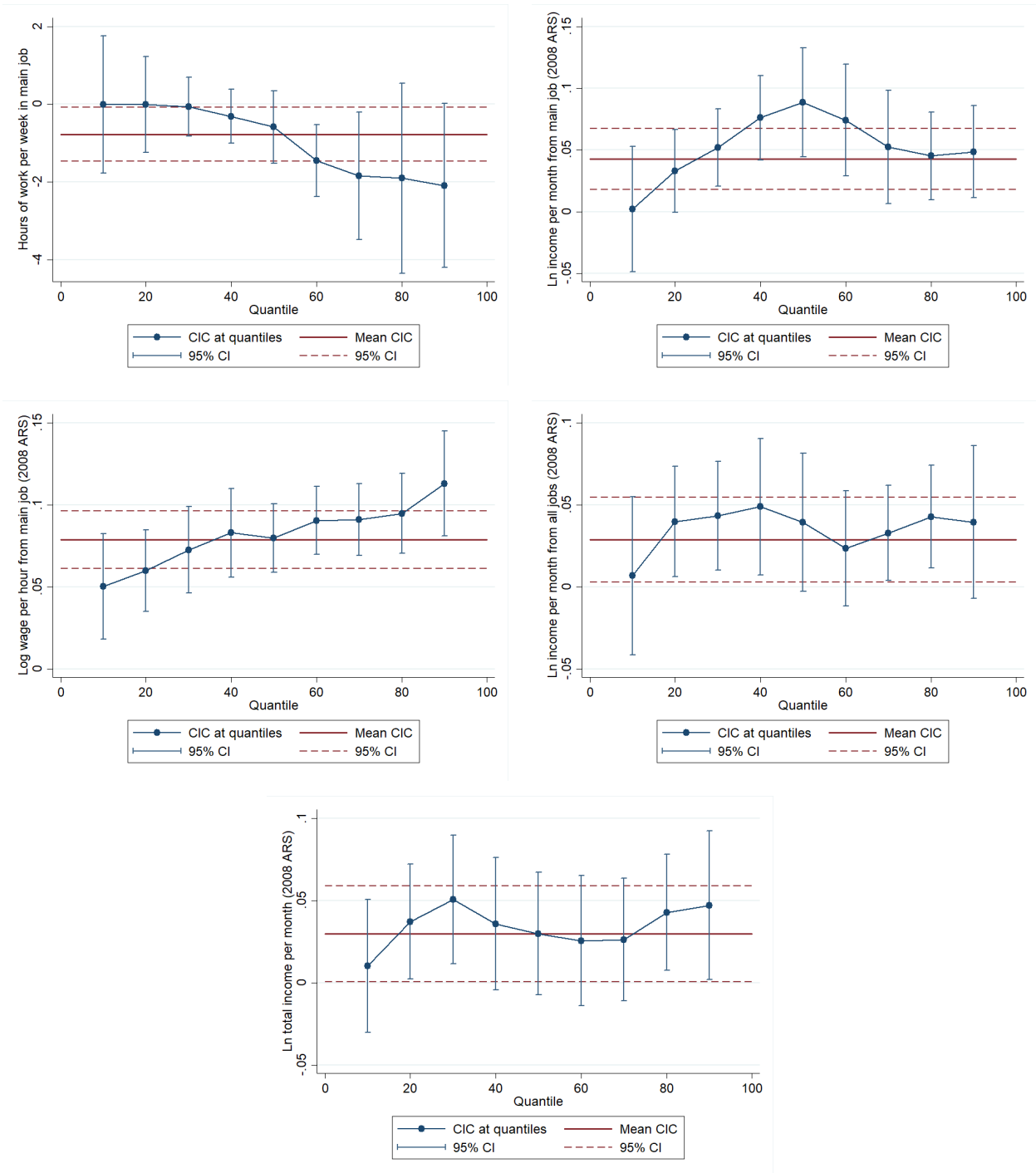
Note: The Figure shows the number of domestic workers and of workers in each occupation of the service sector for every wave in which the survey was conducted. Occupation is self-reported by survey respondents.

Figure 8: Means of labor market outcomes per year and occupation



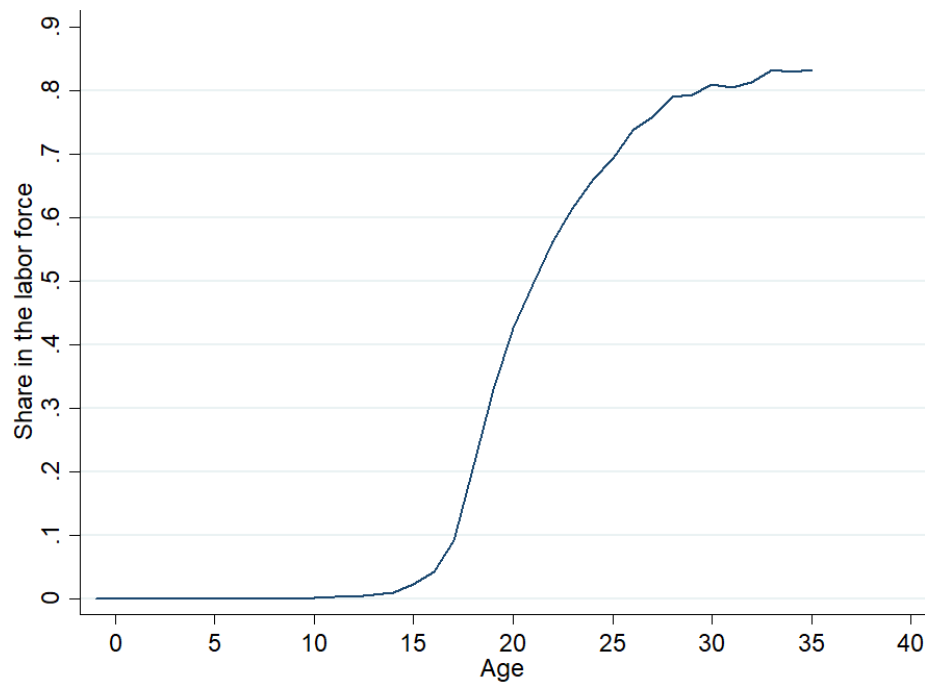
Note: The Figure shows, for each year, the average number of hours of work per week in the main occupation (Panel A) mean natural logarithm of wages per hour in the main occupation (Panel B), the mean natural logarithm of income per month from the main occupation (Panel C), and from all occupations (Panel D), and the average natural logarithm of total income per month (Panel E), for domestic workers and female workers in blue-collar service occupations separately. Logarithms taken from monetary values expressed in Argentine Peso of 2008.

Figure 9: Changes-in-changes estimates of labor market outcomes of domestic workers by decile



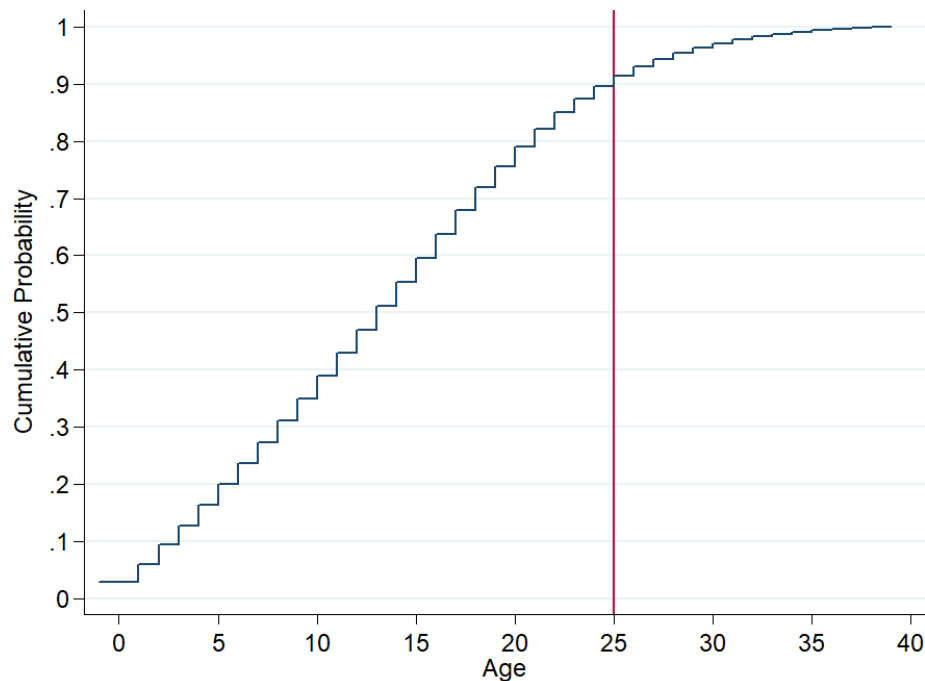
The figures show the Changes-in-changes coefficients and confidence intervals for each decile of the distribution of hours of work per week in the main job (Panel A) the natural logarithm of income per month from the main job (Panel B), the natural logarithm of the wage per hour from the main job (Panel C), the natural logarithm of the income per month from all jobs (Panel D), and the natural logarithm of the total income per month (Panel E). Monetary values correspond to Argentine Pesos of 2008.

Figure 10: Share of children in the labor force, by age



Note: The Figure shows the share of individuals who are employed or looking for a job by age. The sample is composed of individuals categorized as children of the household head.

Figure 11: Distribution of children's age



Note: The Figure shows the CDF of the age of individuals in the sample categorized as children of the household head.

Table 1: Labor regulations by occupation and time

	Domestic workers before reform		Domestic workers after reform		Other workers
Minimum wage	Set by Government (Federal minimum or below)	Set by Government (Federal minimum or below)	Set by Government (Federal minimum or below)	Federal minimum or collective bargaining	
Health and pension contributions	Fixed sum	Fixed sum	Fixed sum	26.5% of gross salary	
Maximum hours of work	12/day	8/day and 48/week	8/day and 48/week	8/day and 48/week	
Paid holidays per year	Minimum of 2 weeks only for live-in workers	Minimum of 2 weeks	Minimum of 2 weeks	Minimum of 2 weeks	
Paid sick leave	Only for live-in workers	All workers	All workers	All workers	
Paid maternity leave	No	Yes (paid by Government)	Yes (paid by employer)	Yes (Paid by employer)	
Accident insurance policy	Not required	Mandatory for each worker	Mandatory for each worker	Mandatory for each worker	
Fines to employers for hiring off the books	Not specified	ARS 7500	ARS 7500	25% of salary per month of employment plus ARS 7500	
Severance payment in case of dismissal	1/2 monthly salary per year of work	1 monthly salary per year of work	1 monthly salary per year of work	1 monthly salary per year of work	
Severance payment to unregistered workers	1/2 monthly salary per year of work	2 monthly salaries per year of work	2 monthly salaries per year of work	2 monthly salaries per year of work	

*Note:* The Table shows the main labor regulations to all workers except domestic workers (column 1), domestic workers before the reform took place (column 2) and the changes introduced by the reform (column 3). The reform to domestic worker's regulations took place in April 2013.



Table 2: Share of registered workers in each year by registration status the previous year and type of worker.

Period	Year	Not registered the previous year		Registered the previous year	
		Domestic workers (1)	Other workers (2)	Domestic workers (3)	Other workers (4)
Pre-reform	2011	0.081	0.254	0.672	0.941
	2012	0.097	0.256	0.623	0.962
	Average	0.089	0.255	0.648	0.951
Post-reform	2013	0.114	0.265	0.649	0.940
	2014	0.124	0.204	0.716	0.930
	2015	0.136	0.250	0.680	0.913
	Average	0.125	0.240	0.682	0.928

*Note:* The table shows, for each year, the proportion of workers who are registered, depending on their registration status as reported in the previous year and their type of work. Other workers refers to wage workers with occupations in the service sector.

Table 3: Summary statistics

	Domestic workers	Female service workers	Difference
<b>Demographics</b>			
Age	40.50	39.22	-1.286***
Share internal migrant	0.19	0.19	0.007
Share foreign migrant	0.08	0.05	-0.030***
Household size	4.32	4.37	0.046
Has health insurance	0.42	0.72	0.298***
<b>Education</b>			
Literacy (share)	0.99	1.00	0.004***
Ever attended school (share)	0.99	1.00	0.003***
Complete primary school (share)	0.90	0.95	0.048***
Complete secondary school (share)	0.31	0.42	0.114***
Complete higher education (share)	0.02	0.05	0.029***
Years of education	8.91	9.88	0.970***
<b>Work</b>			
Hours of work per week	24.66	34.94	10.274***
Monthly income (2008 ARS)	469.76	1091.99	622.231***
Hourly wage (2008 ARS)	5.89	8.41	2.518***
Health insurance contribution	0.16	0.62	0.459***
Pension contribution	0.15	0.63	0.477***
<b>Observations</b>	19180	9799	

*Note:* Mean refers to the mean of the variable for the corresponding group in the pre-reform period (2010-2012). The column Difference shows the difference in the variable mean in the pre-reform period between affected and comparison groups, with stars representing the statistical significance of the difference. Domestic workers refers to female respondents who identify themselves as domestic workers. Female service workers refers to female wage workers in blue collar service occupations.

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

Table 4: Estimates of the effect of the reform on observable characteristics

	Age (1)	Internal migrant (2)	Foreign migrant (3)	Household size (4)	Married (5)	Divorced (6)	Widow (7)	Literate (8)	Attended school (9)	Primary school (10)	Secondary school (11)	Tertiary school (12)	Years of education (13)
Domestic worker x Reform	0.449 (0.307)	0.005 (0.009)	-0.001 (0.005)	0.048 (0.056)	0.020 (0.017)	0.003 (0.010)	-0.009 (0.005)	-0.001 (0.002)	-0.001 (0.001)	0.002 (0.006)	-0.015 (0.011)	0.004 (0.005)	-0.028 (0.073)
Observations	53693	53693	53693	53693	53693	53693	53693	53693	53693	53693	53693	53693	53693
q-value	1	1	1	1	1	1	1	1	1	1	1	1	1
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32	32	32	32	32	32	32	32	32	32

*Note:* The table shows the difference-in-differences estimate for each characteristic. Internal and foreign migrant are indicators that take value 1 if the individual is an internal or foreign migrant, respectively. Married, divorced and widow are indicators that take value 1 if the respondent is married, divorced or widow, respectively. Attended school is an indicator that takes value 1 if the respondent ever attended school. Primary school, secondary school and tertiary education are indicators that take value 1 if the respondent finished each level of education. The comparison group is composed of female wage worker in blue-collar service occupations. Controls include occupation, metropolitan area (MA) and year fixed effects. Standard errors clustered at the MA level. Stars correspond Hochberg's q-values used to adjust for False Discovery Rate.  
\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table 5: Share of individuals employed as domestic workers each year by occupation and labor force status in the previous year.

Year	Domestic worker	Female service worker	Inactive
2011	0.901	0.020	0.386
2012	0.904	0.022	0.405
2013	0.906	0.017	0.372
2014	0.920	0.022	0.375
2015	0.903	0.023	0.414

*Note:* The table shows, for each year, the proportion of individuals who are employed as domestic workers, depending on their occupation and labor force participation status in the previous year. Female service worker refers to women employed in blue-collar occupations in the service sector.

Table 6: Effect of policy reform on formality status - Placebo tests

	Contribution to Pension System (1)	Contribution to Health Insurance (2)
Domestic worker $\times$ Reform	-0.009 (0.014)	-0.002 (0.014)
Mean dependent variable	0.15	0.14
R-squared	0.327	0.342
Observations	28,997	28,997
Controls	Yes	Yes
Year Fixed Effects	Yes	Yes
Occupation Fixed Effects	Yes	Yes
MA Fixed Effects	Yes	Yes
Year by MA Fixed Effects	Yes	Yes
Number of clusters	32	32

*Note:* The Table shows difference-in-differences estimates of the probability that the respondent makes contributions to the pension system (column 1) and to health insurance (column 2). The post-reform period is set in 2011, when the bill was approved by the House of Representatives and it was expected to pass, and the regression is run for the years 2010-2012. Domestic workers refers to female respondents who identify themselves as domestic workers. Mean dependent variable corresponds the average for the affected group in the pre-reform period. The comparison group is composed of female wage workers in blue collar service occupations. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 7: Effect of policy reform on formality status

	Contribution to Pension System (1)	Contribution to Health Insurance (2)	Health insurance coverage (3)
Domestic worker $\times$ Reform	0.058*** (0.012)	0.052*** (0.013)	0.009 (0.015)
Mean dependent variable	0.16	0.15	0.42
R-squared	0.311	0.324	0.257
Observations	53,691	53,691	53,691
q-value	0.000	0.000	1.000
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes
Number of clusters	32	32	32

*Note:* In columns 1 and 2, the dependent variable is an indicator that takes value 1 when the individual reports their employer makes contributions to contributions to the pension system (column 1) and health insurance (column 2). In column 3, the dependent variable is an indicator that takes value 1 if the individual has health insurance coverage. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Means of dependent variable correspond to averages for the affected group in the pre-reform period. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Standard errors clustered at the Metropolitan Area (MA) level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.

\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table 8: Effect of policy reform on unemployment and hours of work

	Unemployment (1)	Hours of work per week in main job (2)	Involuntary part-time worker (3)
Domestic worker $\times$ Reform	0.002 (0.006)	-0.828** (0.269)	0.004 (0.007)
Mean dependent variable	0.09	24.66	0.17
R-squared	0.090	0.187	0.094
Observations	58,828	53,691	53,691
q-value	1.000	0.015	1.000
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes
Number of clusters	32	32	32

*Note:* Dependent variable in column 1 is an indicator that takes value 1 if the individual is unemployed, and the sample includes all employed and unemployed individuals with a previous job. Dependent variable in column 2 is the number of hours of work per week in the main job, and the sample includes all employed individuals. Dependent variable in column 3 is an indicator that takes value 1 if the respondent is willing to work more hours. In all cases, the coefficients are difference-in-differences estimates from an OLS regression. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Mean dependent variable corresponds to average for the affected group in the pre-reform period. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.

\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table 9: Changes in earnings after policy reform

	Income per month from main job (1)	Wage per hour from main job (2)	Income per month from all jobs (3)	Total income per month (4)
Domestic worker $\times$ Reform	0.040* (0.017)	0.078*** (0.014)	0.041* (0.016)	0.045 (0.020)
Mean dependent variable	469.76	5.89	535.27	674.16
R-squared	0.427	0.305	0.417	0.373
Observations	53,691	53,691	53,691	53,691
q-value	0.093	0.000	0.059	0.449
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32

*Note:* Dependent variable is the natural logarithm of income from the main job (column 1), the hourly wage from the main job (column 2), income from all jobs (column 3) and total income (column 4). In all cases, the coefficients are difference-in-differences estimates from an OLS regression. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Mean dependent variables correspond to average for the affected group in the pre-reform period and are expressed in Argentina Pesos of 2008. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Standard errors clustered at the Metropolitan Area (MA) level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.

\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table 10: Changes in non-labor earnings after policy reform

	Any non-labor income			Pension			Welfare			Alimony		
	Reception (1)	Amount (2)		Reception (3)	Amount (4)		Reception (5)	Amount (6)		Reception (7)	Amount (8)	
Domestic worker $\times$ Reform	-0.003 (0.014)	-0.02*** (0.004)		0.002 (0.006)	0.077*** (0.004)		-0.004 (0.008)	-0.015*** (0.003)		0.001 (0.005)	-0.009* (0.004)	
Mean dependent variable	0.35	383.78		0.09	652.14		0.22	193.13		0.07	424.48	
R-squared	0.119			0.246			0.137			0.091		
Observations	53,691	53,691		53,691	53,691		53,691	53,691		53,691	53,691	
q-value	1.000	0.000		1.000	0.000		1.000	0.000		1.000	0.089	
Controls	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Year Fixed Effects	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Occupation Fixed Effects	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
MA Fixed Effects	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Year by MA Fixed Effects	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Number of clusters	32	32		32	32		32	32		32	32	

*Note:* The dependent variable in odd columns is an indicator that takes value 1 if the individual received non-labor income from the corresponding source, and the coefficients are difference-in-differences estimates from an OLS regression. Dependent variable in even columns is the natural logarithm of the amount of non-labor income from the corresponding source, and the coefficients are marginal effects from a Tobit regression conditional on positive earnings. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Mean dependent variables correspond to average for the affected group in the pre-reform period and for earnings are expressed in Argentina Pesos of 2008. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Standard errors clustered at the Metropolitan Area (MA) level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.  
\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table 11: Summary statistics of male spouses

	Spouses of domestic workers	Spouses of female service workers	Difference
<b>Demographics</b>			
Age	45.48	44.20	-1.280***
Share internal migrant	0.22	0.26	0.040***
Share foreign migrant	0.08	0.05	-0.031***
Household size	4.32	4.26	-0.057
Has health insurance	0.52	0.73	0.210***
<b>Education</b>			
Literacy	0.99	1.00	0.008***
Ever attended school	0.99	1.00	0.004**
Complete primary school (share)	0.88	0.93	0.048***
Complete secondary school (share)	0.24	0.32	0.084***
Complete higher education (share)	0.02	0.04	0.020***
Years of education	8.36	9.24	0.879***
<b>Work</b>			
Labor force participation (share)	0.89	0.91	0.020***
Hours of work per week	46.89	46.10	-0.794*
Monthly income (2008 ARS)	1542.92	1762.06	219.148***
Hourly wage (2008 ARS)	8.87	10.45	1.587***
Pension contribution	0.63	0.74	0.112***
Health insurance contribution	0.63	0.74	0.113***

*Note:* Mean refers to the mean of the variable for the corresponding group in the pre-reform period (2010-2012) for spouses in the sample. The column Difference shows the difference in the variable mean in the pre-reform period between affected and comparison groups, with stars representing the statistical significance of the difference. Spouses of domestic workers refers to male respondents married to or living with of domestic workers. Spouses of female service workers refers to male individuals married to or living with a wage worker in blue collar service occupations.

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



Table 12: Main occupations of spouses of domestic workers and share of sample in each occupation, by group

Sector of occupation	Spouses of domestic workers	Spouses of service workers
Building and Related Trades Workers	18.01	11.02
Drivers and Mobile Plant Operators	14.57	12.64
Metal, Machinery and Related Trades Workers	10.28	7.93
Labourers in Mining, Construction, Manufacturing and Transport	7.98	4.28
Sales Workers	7.45	7.17
Assemblers	7.45	5.94
Protective Services Workers	6.67	7.64
Cleaners and Helpers	5.59	10.25
General and Keyboard Clerks	3.75	5.45
Personal Services Workers	3.37	7.64
Agricultural, Forestry and Fishery Labourers	2.05	2.01
Science and Engineering Associate Professionals	1.82	2.07
Numerical and Material Recording Clerks	1.49	1.48
Business and Administration Associate Professionals	1.14	1.63
Food Preparation Assistants	1.12	3.05
<b>Total</b>	<b>92.74</b>	<b>90.20</b>

*Note:* The table shows the fifteen main sectors of employment (according to the ISCO 08 classification) of spouses of domestic workers who are wage employees, and the share of individuals employed in each sector. Column 2 show the share of spouses of female service workers who are employed in each occupation.

Table 13: Summary statistics of children

	Children of domestic workers	Children of female service workers	Difference
<b>Demographics</b>			
Age	17.84	17.88	0.037
Gender	0.50	0.51	0.003
Share internal migrant	0.07	0.07	-0.000
Share foreign migrant	0.01	0.01	-0.005***
Household size	5.51	5.33	-0.177***
Has health insurance	0.37	0.61	0.244***
<b>Education</b>			
Literacy	1.00	1.00	-0.001
Ever attended school	1.00	1.00	-0.000
Complete primary school (share)	0.89	0.91	0.015***
Complete secondary school (18 years or more, share)	0.46	0.50	0.043***
Years of education	9.36	9.54	0.184***
<b>Work</b>			
Labor force participation (share)	0.32	0.29	-0.026***
Hours of work per week	36.63	36.76	0.126
Monthly income (2008 ARS)	856.11	1000.47	144.360***
Hourly wage (2008 ARS)	6.30	7.22	0.912***
Pension contribution	0.30	0.39	0.093***
Health insurance contribution	0.30	0.40	0.100***

*Note:* Mean refers to the mean of the variable for the corresponding group in the pre-reform period (2010-2012) for children in the sample. The column Difference shows the difference in the variable mean in the pre-reform period between affected and comparison groups, with stars representing the statistical significance of the difference. Children of domestic workers refers to children whose mother is a domestic worker. Children of female service workers refers to whose mother is a wage worker in blue collar service occupations.

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

Table 14: Main occupations of children of domestic workers and share of sample in each occupation, by group

Sector of occupation	Children of domestic workers	Children of service workers
Cleaners and Helpers	18.04	15.66
Labourers in Mining, Construction, Manufacturing and Transport	17.52	13.26
Sales Workers	15.89	16.96
Building and Related Trades Workers	7.22	5.27
Metal, Machinery and Related Trades Workers	7.08	7.46
Assemblers	4.07	3.15
Food Preparation Assistants	3.62	5.64
Personal Care Workers	3.57	3.24
General and Keyboard Clerks	3.24	5.4
Personal Services Workers	3.06	4.13
Drivers and Mobile Plant Operators	2.85	2.8
Protective Services Workers	2.35	2.81
Customer Services Clerks	1.71	2.12
Numerical and Material Recording Clerks	1.71	2.01
Business and Administration Associate Professionals	1.2	1.06
<b>Total</b>	<b>93.13</b>	<b>90.97</b>

*Note:* The table shows the fifteen main sectors of employment (according to the ISCO 08 classification) of spouses of domestic workers who are wage employees, and the share of individuals employed in each sector. Column 2 show the share of spouses of female service workers who are employed in each occupation.

Table 15: Impact of domestic worker's reform on spouses' labor market outcomes

	Participation (1)	Formality (2)	Hours of work per week on main job (3)	Income per month from main job (4)	Wage per hour from main job (5)	Income per month from all jobs (6)	Total income per month (7)
Spouse of Domestic worker $\times$ Reform	-0.006 (0.009)	0.011 (0.020)	-0.853 (0.551)	-0.032 (0.018)	-0.013 (0.022)	-0.034 (0.017)	-0.029 (0.016)
Mean dependent variable	0.89	0.63	46.89	1542.92	8.87	1573.84	1603.55
R-squared	0.254	0.250	0.191	0.558	0.469	0.573	0.589
Observations	22,456	12,741	12,741	12,741	12,741	12,741	12,741
q-value	1.000	1.000	0.550	0.448	1.000	0.448	0.448
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32	32	32	32

*Note:* In column 1, dependent variable is an indicator that takes value 1 if the individual is working or looking for a job. In column 2, the dependent variable is an indicator that takes value 1 when the individual reports their employer makes contributions to the pension system. Dependent variable in column 3 is the number of hours of work per week in the main job. Dependent variable in columns 4, 5, 6 and 7 is the natural logarithm of income from the main job, the hourly wage from the main job, income from all jobs, and total income, respectively. Coefficients are difference-in-differences estimates from an OLS regression. The sample includes all spouses of female domestic workers and female workers from other blue-collar service sectors (column 1) and only those who are employed (columns 2 through 7). Mean dependent variables correspond to average for the affected group in the pre-reform period, and in the case of earnings they are expressed in Argentina Pesos of 2008. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.  
\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table 16: Impact of domestic worker's reform on income and hours of work of couples

	Hours of work per week on main job (1)	Income per month from main job (2)	Income per month from all jobs (3)	Total income per month (4)
Spouse of Domestic worker x Reform	-0.694 (0.927)	-0.004 (0.012)	-0.006 (0.010)	-0.005 (0.010)
Mean dependent variable	68.74	2010.88	2111.13	2213.27
R-squared	0.193	0.712	0.735	0.754
Observations	12,741	12,741	12,741	12,741
q-value	1.000	1.000	1.000	1.000
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32

*Note:* Dependent variable in column 1 is the combined number of hours of work per week in the main job of the household head and his/her spouse. Dependent variable in columns 2, 3 and 4 is the natural logarithm of the combined income from the main job, income from all jobs, and total income, respectively, of the household head and his/her spouse. Coefficients are difference-in-differences estimates from an OLS regression. The sample includes all employed spouses of female domestic workers and female workers from other blue-collar service sectors. Mean dependent variables correspond to average for the affected group in the pre-reform period, and in the case of earnings they are expressed in Argentina Pesos of 2008. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.  
\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table 17: Impact of domestic worker's reform on children's labor market outcomes

	Participation (1)	Formality (2)	Hours of work per week on main job (3)	Income per month from main job (4)	Wage per hour from main job (5)	Income per month from all jobs (6)	Total income per month (7)
<i>Panel A: All Children</i>							
Child of Domestic Worker $\times$ Reform	-0.024 (0.008)	0.004 (0.018)	-0.898 (0.807)	0.019 (0.027)	0.034 (0.023)	0.023 (0.026)	0.022 (0.027)
Mean dependent variable	0.32	0.30	36.63	856.11	6.3	869.13	884.34
R-squared	0.394	0.323	0.310	0.514	0.353	0.512	0.496
Observations	44,675	8,895	8,895	8,895	8,895	8,895	8,895
q-value	0.144	1.000	1.000	1.000	1.000	1.000	1.000
<i>Panel B: Female Children</i>							
Child of Domestic Worker $\times$ Reform	-0.03 (0.011)	-0.034 (0.045)	-0.937 (0.958)	0.010 (0.046)	0.036 (0.044)	0.016 (0.045)	0.014 (0.046)
Mean dependent variable	0.24	0.28	29.07	672.8	6.30	690.54	723.14
R-squared	0.304	0.363	0.330	0.525	0.359	0.519	0.503
Observations	22,119	3,315	3,315	3,315	3,315	3,315	3,315
q-value	0.250	1.000	1.000	1.000	1.000	1.000	1.000
<i>Panel C: Male Children</i>							
Child of Domestic Worker $\times$ Reform	-0.018 (0.013)	0.021 (0.022)	-0.895 (1.026)	0.030 (0.040)	0.037 (0.029)	0.032 (0.039)	0.031 (0.039)
Mean dependent variable	0.40	0.31	41.3	969.1	6.31	979.21	983.7
R-squared	0.476	0.340	0.202	0.487	0.396	0.492	0.491
Observations	22,556	5,571	5,571	5,571	5,571	5,571	5,571
q-value	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32	32	32	32

*Note:* In column 1, dependent variable is an indicator that takes value 1 if the individual is working or looking for a job. In column 2, the dependent variable is an indicator that takes value 1 when the individual reports their employer makes contributions to the pension system. Dependent variable in column 3 is the number of hours of work per week in the main job. Dependent variable in columns 4, 5, 6 and 7 is the natural logarithm of income from the main job, the hourly wage from the main job, income from all jobs, and total income, respectively. Coefficients are difference-in-differences estimates from an OLS regression. The sample includes all children of household heads aged 12 to 25 (column 1) and those who are employed (columns 2 through 7). Treated group corresponds to children whose mother is a domestic worker. Comparison group correspond to children whose mother is a worker in other blue-collar service occupations. Mean dependent variables correspond to average for the affected group in the pre-reform period, and in the case of earnings they are expressed in Argentina Pesos of 2008. Controls include age, age squared, gender, household size, marital status, years of education of the household head, years of education of the household head squared, and decile of per-capita family income. Standard errors clustered at the Metropolitan Area (MA) level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate. \*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table 18: Impact of domestic worker's reform on children's education

	Attendance (1)	Years of education (2)	Complete secondary school (3)
<i>Panel A: All Children</i>			
Child of Domestic Worker $\times$ Reform	0.011 (0.011)	0.091 (0.069)	0.031 (0.016)
Mean dependent variable	0.88	8.17	0.46
R-squared	0.146	0.421	0.169
Observations	23,894	23,894	23,383
q-value	1.000	0.954	0.529
<i>Panel B: Female Children</i>			
Child of Domestic Worker $\times$ Reform	-0.004 (0.016)	-0.084 (0.090)	-0.019 (0.022)
Mean dependent variable	0.91	8.35	0.56
R-squared	0.128	0.475	0.165
Observations	11,851	11,851	11,355
q-value	1.000	1.000	1.000
<i>Panel C: Male Children</i>			
Child of Domestic Worker $\times$ Reform	0.026 (0.018)	0.253* (0.090)	0.073*** (0.020)
Mean dependent variable	0.85	8.00	0.36
R-squared	0.175	0.381	0.142
Observations	12,043	12,043	12,028
q-value	0.877	0.061	0.006
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Occupation Fixed Effects	No	No	No
MA Fixed Effects	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes
Number of clusters	32	32	32

*Note:* Dependent variable is an indicator that takes value 1 if the individual is currently attending school (column 1), an indicator that takes value 1 if the individual has completed secondary education (column 2), and the number of years of education (column 3). Coefficients are difference-in-differences estimates from an OLS regression. For column 1 and 2, the sample includes all children of secondary school age (12 to 18) who have not finished secondary school, and those aged 18 and above, respectively. For column 3 the sample includes all children aged 12 to 25. Treated group corresponds to children whose mother is a domestic worker. Comparison group corresponds to children whose mother works in a blue-collar service occupation. Controls include age, age squared, gender, household size, decile of per-capita family income, years of education of the household head, and years of education of the household head squared. Standard errors clustered at the Metropolitan Area (MA) level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.

\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

## Appendix A   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:

$$Y_{ijkt} = \beta_0 + \beta_1 DW_{ijkt} + \sum_{t=2009}^{2015} \beta_t DW_{ijkt} \times I[Year = t] + \Gamma X_{ijkt} + \theta_t + \nu_j + \mu_k + \psi_{tk} + \varepsilon_{ijkt} \quad (6)$$

The omitted category is always the year 2012, the year prior to the introduction of the reforms. It should be noted that p-values reported in these tables have not been corrected for multiple hypothesis testing.



Table A1: Effect of policy reform on formality status

	Contribution to Pension System (1)	Contribution to Health Insurance (2)	Health insurance coverage (3)
2010 $\times$ Domestic worker	0.011 (0.017)	0.004 (0.016)	0.013 (0.013)
2011 $\times$ Domestic worker	0.004 (0.013)	0.003 (0.012)	0.007 (0.012)
2013 $\times$ Domestic worker	0.040** (0.019)	0.035** (0.017)	-0.007 (0.018)
2014 $\times$ Domestic worker	0.076*** (0.018)	0.065*** (0.017)	0.028 (0.017)
2015 $\times$ Domestic worker	0.082*** (0.023)	0.070*** (0.023)	0.034* (0.019)
Domestic worker	-0.286*** (0.026)	-0.297*** (0.025)	-0.157*** (0.021)
Constant	-0.059 (0.059)	-0.029 (0.064)	0.033 (0.059)
R-squared	0.311	0.324	0.257
Observations	53,691	53,691	53,691
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes
Number of clusters	32	32	32

*Note:* In columns 1 and 2, the dependent variable is an indicator that takes value 1 when the individual reports their employer makes contributions to contributions to the pension system (column 1) and health insurance (column 2). In column 3, the dependent variable is an indicator that takes value 1 if the individual has health insurance coverage. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Standard errors clustered at the Metropolitan Area (MA) level in parentheses.

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

Table A2: Effect of policy reform on employment outcomes

	Unemployment (1)	Hours of work per week in main job (2)	Involuntary part-time worker (3)
2010 x Domestic worker	0.000 (0.008)	0.443 (0.464)	0.000 (0.010)
2011 x Domestic worker	0.002 (0.008)	0.080 (0.391)	-0.000 (0.011)
2013 x Domestic worker	0.004 (0.010)	-0.637 (0.454)	0.000 (0.008)
2014 x Domestic worker	0.003 (0.010)	-0.799* (0.424)	0.001 (0.011)
2015 x Domestic worker	0.003 (0.013)	-0.373 (0.604)	0.017 (0.014)
Domestic worker	0.020 (0.015)	-6.277*** (0.849)	0.075*** (0.016)
Constant	0.343*** (0.032)	22.785*** (1.699)	0.275*** (0.021)
R-squared	0.090	0.187	0.094
Observations	58,828	53,691	53,691
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes
Number of clusters	32	32	32

*Note:* Dependent variable in column 1 is an indicator that takes value 1 if the individual is unemployed, and the sample includes all employed and unemployed individuals with a previous job. Dependent variable in column 2 is the number of hours of work per week in the main job, and the sample includes all employed individuals. Dependent variable in column 3 is an indicator that takes value 1 if the respondent is willing to work more hours. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses.

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

Table A3: Changes in earnings after policy reform

	Income per month from main job (1)	Wage per hour from main job (2)	Income per month from all jobs (3)	Total income per month (4)
2010 x Domestic worker	0.036* (0.020)	0.022 (0.019)	0.032 (0.019)	0.039** (0.019)
2011 x Domestic worker	-0.012 (0.018)	-0.015 (0.016)	-0.012 (0.020)	-0.009 (0.021)
2013 x Domestic worker	0.028 (0.018)	0.052** (0.019)	0.032* (0.016)	0.023 (0.017)
2014 x Domestic worker	0.061*** (0.019)	0.105*** (0.019)	0.054** (0.020)	0.068** (0.026)
2015 x Domestic worker	0.062** (0.029)	0.085*** (0.022)	0.065** (0.029)	0.090*** (0.032)
Domestic worker	-0.532*** (0.029)	-0.269*** (0.031)	-0.484*** (0.028)	-0.396*** (0.026)
Constant	5.378*** (0.067)	1.196*** (0.060)	5.257*** (0.068)	5.575*** (0.075)
R-squared	0.427	0.306	0.417	0.374
Observations	53,691	53,691	53,691	53,691
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32

*Note:* Dependent variable is the natural logarithm of income from the main job (column 1), the hourly wage from the main job (column 2), income from all jobs (column 3) and total income (column 4). In all cases, the coefficients are difference-in-differences estimates from an OLS regression. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses.

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

Table A4: Changes in non-labor earnings after policy reform

	Any non-labor income		Pension		Welfare		Alimony	
	Reception (1)	Amount (2)	Reception (3)	Amount (4)	Reception (5)	Amount (6)	Reception (7)	Amount (8)
2010 x Domestic worker	0.004 (0.013)	-0.005* (0.003)	-0.000 (0.008)	-0.063*** (0.003)	0.013 (0.010)	0.037*** (0.003)	-0.010 (0.007)	-0.112*** (0.003)
2011 x Domestic worker	0.002 (0.010)	-0.026*** (0.003)	-0.006 (0.007)	-0.122*** (0.003)	0.012 (0.010)	0.023*** (0.003)	-0.007 (0.006)	-0.059*** (0.003)
2013 x Domestic worker	-0.012 (0.016)	-0.093*** (0.003)	-0.002 (0.007)	-0.033*** (0.003)	0.009 (0.010)	0.071*** (0.003)	-0.016** (0.007)	-0.198*** (0.002)
2014 x Domestic worker	-0.004 (0.019)	-0.06*** (0.003)	0.000 (0.009)	0.053*** (0.003)	-0.003 (0.012)	-0.072*** (0.003)	-0.003 (0.007)	-0.036*** (0.003)
2015 x Domestic worker	0.028* (0.014)	0.149*** (0.003)	0.002 (0.007)	0.016*** (0.003)	0.013 (0.013)	0.058*** (0.003)	0.015 (0.011)	0.148*** (0.003)
Domestic worker	0.093*** (0.019)	0.543*** (0.006)	0.041*** (0.010)	0.393*** (0.006)	0.050*** (0.012)	0.338*** (0.005)	0.003 (0.009)	0.023*** (0.004)
Constant	0.368*** (0.056)		0.068 (0.048)		0.244*** (0.043)		0.085*** (0.020)	
R-squared	0.119		0.246		0.137		0.092	
Observations	53,691	53,691	53,691	53,691	53,691	53,691	53,691	53,691
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32	32	32	32	32

*Note:* The dependent variable in odd columns is an indicator that takes value 1 if the individual received non-labor income from the corresponding source, and the coefficients are difference-in-differences estimates from an OLS regression. Dependent variable in even columns is the natural logarithm of the amount of non-labor income from the corresponding source, and the coefficients are marginal effects from a Tobit regression conditional on positive earnings. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Standard errors clustered at the Metropolitan Area (MA) level in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A5: Impact of domestic worker's reform on spouses' labor market outcomes

	Participation (1)	Formality (2)	Hours of work per week on main job (3)	Income per month from main job (4)	Wage per hour from main job (5)	Income per month from all jobs (6)	Total income per month (7)
2010 x Spouse of Domestic worker	0.011 (0.014)	-0.000 (0.028)	1.015 (1.037)	-0.048 (0.031)	-0.063 (0.039)	-0.050 (0.031)	-0.044 (0.027)
2011 x Spouse of Domestic worker	0.006 (0.013)	0.007 (0.021)	0.900 (0.838)	-0.000 (0.028)	-0.021 (0.037)	0.002 (0.027)	-0.002 (0.024)
2013 x Spouse of Domestic worker	0.008 (0.011)	0.008 (0.025)	1.154 (0.848)	-0.011 (0.028)	-0.037 (0.026)	-0.019 (0.029)	-0.024 (0.028)
2014 x Spouse of Domestic worker	-0.005 (0.010)	0.004 (0.026)	-0.734 (0.656)	-0.075*** (0.024)	-0.056*** (0.025)	-0.069*** (0.025)	-0.056*** (0.022)
2015 x Spouse of Domestic worker	-0.008 (0.017)	0.041 (0.028)	-1.669 (1.092)	-0.061** (0.026)	-0.018 (0.029)	-0.068*** (0.028)	-0.059* (0.029)
Spouse of domestic worker	0.013 (0.009)	-0.009 (0.019)	1.017 (0.646)	0.118*** (0.017)	0.089*** (0.023)	0.118*** (0.020)	0.115*** (0.018)
Constant	0.629*** (0.053)	-0.208*** (0.062)	41.464*** (3.512)	5.483*** (0.099)	0.529*** (0.079)	5.469*** (0.103)	5.476*** (0.097)
R-squared	0.254	0.249	0.191	0.557	0.469	0.573	0.588
Observations	22,456	12,741	12,741	12,741	12,741	12,741	12,741
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32	32	32	32

Note: In column 1, dependent variable is an indicator that takes value 1 if the individual is working or looking for a job. In column 2, the dependent variable is an indicator that takes value 1 when the individual reports their employer makes contributions to the pension system. Dependent variable in column 3 is the number of hours of work per week in the main job. Dependent variable in columns 4, 5, 6 and 7 is the natural logarithm of income from the main job, the hourly wage from the main job, income from all jobs, and total income, respectively. The sample includes all spouses of female domestic workers and female workers from other blue-collar service sectors (column 1) and only those who are employed (columns 2 through 7). Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses.

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

Table A6: Impact of domestic worker's reform on children's labor market outcomes

	Participation (1)	Formality (2)	Hours of work per week on main job (3)	Income per month from main job (4)	Wage per hour from main job (5)	Income per month from all jobs (6)	Total income per month (7)
2010 x Child of domestic worker	0.018 (0.015)	0.012 (0.033)	0.328 (1.079)	0.019 (0.039)	0.005 (0.039)	0.011 (0.038)	0.024 (0.038)
2011 x Child of domestic worker	0.030** (0.014)	0.016 (0.036)	0.216 (1.127)	0.041 (0.039)	0.011 (0.037)	0.031 (0.036)	0.025 (0.035)
2013 x Child of domestic worker	-0.016 (0.013)	-0.008 (0.024)	-0.519 (1.364)	0.059 (0.047)	0.049 (0.048)	0.063 (0.045)	0.058 (0.044)
2014 x Child of domestic worker	-0.010 (0.016)	0.030 (0.029)	-0.502 (1.100)	0.041 (0.034)	0.042 (0.035)	0.034 (0.033)	0.038 (0.033)
2015 x Child of domestic worker	0.010 (0.017)	0.020 (0.048)	-1.649 (1.314)	-0.015 (0.053)	0.010 (0.054)	-0.017 (0.054)	-0.006 (0.053)
Child of domestic worker	0.028** (0.012)	-0.012 (0.022)	0.673 (0.777)	0.019 (0.028)	0.015 (0.031)	0.030 (0.026)	0.030 (0.027)
Constant	-0.994** (0.045)	-0.509*** (0.049)	7.354*** (1.842)	4.380*** (0.102)	0.721*** (0.074)	4.342*** (0.096)	4.357*** (0.088)
R-squared	0.393	0.323	0.309	0.514	0.352	0.512	0.496
Observations	44,683	8,895	8,895	8,895	8,895	8,895	8,895
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32	32	32	32

*Note:* In column 1, dependent variable is an indicator that takes value 1 if the individual is working or looking for a job. In column 2, the dependent variable is an indicator that takes value 1 when the individual reports their employer makes contributions to the pension system. Dependent variable in column 3 is the number of hours of work per week in the main job. Dependent variable in columns 4, 5, 6 and 7 is the natural logarithm of income from the main job, the hourly wage from the main job, income from all jobs, and total income, respectively. Coefficients are difference-in-differences estimates from an OLS regression. The sample includes all children of household heads aged 12 to 25 (column 1) and those who are employed (columns 2 through 7). Treated group corresponds to children whose mother is a domestic worker. Comparison group correspond to children whose mother is a worker in other blue-collar service occupations. Controls include age, age squared, gender, household size, marital status, years of education of the household head, years of education of the household head squared, and decile of per-capita family income. Standard errors clustered at the Metropolitan Area (MA) level in parentheses.  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A7: Impact of domestic worker's reform on female children's labor market outcomes

	Participation (1)	Formality (2)	Hours of work per week on main job (3)	Income per month from main job (4)	Wage per hour from main job (5)	Income per month from all jobs (6)	Total income per month (7)
2010 x Child of domestic worker	0.003 (0.021)	-0.083* (0.048)	0.709 (2.289)	-0.040 (0.086)	-0.092 (0.085)	-0.062 (0.086)	-0.032 (0.089)
2011 x Child of domestic worker	0.042** (0.019)	-0.032 (0.048)	1.388 (2.285)	-0.011 (0.078)	-0.097 (0.098)	-0.009 (0.076)	-0.020 (0.071)
2013 x Child of domestic worker	-0.032* (0.017)	-0.098** (0.047)	1.010 (2.106)	0.045 (0.067)	-0.024 (0.105)	0.050 (0.068)	0.029 (0.069)
2014 x Child of domestic worker	-0.014 (0.019)	-0.044 (0.063)	-0.918 (1.955)	0.007 (0.066)	0.004 (0.069)	-0.005 (0.064)	0.017 (0.069)
2015 x Child of domestic worker	0.015 (0.027)	-0.054 (0.072)	-2.243 (1.572)	-0.178* (0.090)	-0.090 (0.086)	-0.165* (0.088)	-0.135 (0.085)
Child of domestic worker	0.027** (0.013)	0.051 (0.037)	0.150 (1.812)	0.060 (0.060)	0.083 (0.070)	0.075 (0.056)	0.077 (0.062)
Constant	-0.740*** (0.049)	-0.342*** (0.082)	2.623 (3.291)	4.210*** (0.160)	0.990*** (0.132)	4.158*** (0.141)	4.108*** (0.125)
R-squared	0.303	0.363	0.330	0.526	0.359	0.519	0.503
Observations	22,122	3,315	3,315	3,315	3,315	3,315	3,315
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32	32	32	32

*Note:* In column 1, dependent variable is an indicator that takes value 1 if the individual is working or looking for a job. In column 2, the dependent variable is an indicator that takes value 1 when the individual reports their employer makes contributions to the pension system. Dependent variable in column 3 is the number of hours of work per week in the main job. Dependent variable in columns 4, 5, 6 and 7 is the natural logarithm of income from the main job, the hourly wage from the main job, income from all jobs, and total income, respectively. Coefficients are difference-in-differences estimates from an OLS regression. The sample includes all female children of household heads aged 16 to 25 (column 1) and those who are employed (columns 2 through 7). Treated group corresponds to children whose mother is a domestic worker. Comparison group correspond to children whose mother is a worker in other blue-collar service occupations. Controls include age, age squared, gender, household size, marital status, years of education of the household head, years of education of the household head squared, and decile of per-capita family income. Standard errors clustered at the Metropolitan Area (MA) level in parentheses.

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

Table A8: Impact of domestic worker's reform on male children's labor market outcomes

	Participation (1)	Formality (2)	Hours of work per week on main job (3)	Income per month from main job (4)	Wage per hour from main job (5)	Income per month from all jobs (6)	Total income per month (7)
2010 x Child of domestic worker	0.031 (0.022)	0.062 (0.056)	-0.392 (1.415)	0.032 (0.046)	0.049 (0.042)	0.036 (0.047)	0.032 (0.048)
2011 x Child of domestic worker	0.022 (0.023)	0.040 (0.055)	-0.982 (1.272)	0.044 (0.046)	0.059* (0.035)	0.036 (0.047)	0.031 (0.046)
2013 x Child of domestic worker	-0.000 (0.019)	0.039 (0.046)	-1.824 (1.775)	0.044 (0.061)	0.076 (0.052)	0.048 (0.061)	0.047 (0.059)
2014 x Child of domestic worker	-0.004 (0.025)	0.065 (0.043)	-0.543 (1.347)	0.071 (0.061)	0.079 (0.048)	0.069 (0.062)	0.060 (0.061)
2015 x Child of domestic worker	0.007 (0.025)	0.060 (0.087)	-1.800 (1.892)	0.044 (0.078)	0.043 (0.064)	0.040 (0.079)	0.041 (0.079)
Child of domestic worker	0.026 (0.019)	-0.044 (0.046)	1.394 (1.202)	0.009 (0.047)	-0.021 (0.040)	0.014 (0.047)	0.019 (0.047)
Constant	-1.084*** (0.046)	-0.629*** (0.069)	14.664*** (2.170)	4.607*** (0.105)	0.566*** (0.101)	4.590*** (0.104)	4.613*** (0.102)
R-squared	0.474	0.340	0.201	0.487	0.395	0.491	0.491
Observations	22,561	5,508	5,571	5,571	5,571	5,571	5,571
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32	32	32	32

*Note:* In column 1, dependent variable is an indicator that takes value 1 if the individual is working or looking for a job. In column 2, the dependent variable is an indicator that takes value 1 when the individual reports their employer makes contributions to the pension system. Dependent variable in column 3 is the number of hours of work per week in the main job. Dependent variable in columns 4, 5, 6 and 7 is the natural logarithm of income from the main job, the hourly wage from the main job, income from all jobs, and total income, respectively. Coefficients are difference-in-differences estimates from an OLS regression. The sample includes all male children of household heads aged 12 to 25 (column 1) and those who are employed (columns 2 through 7). Treated group corresponds to children whose mother is a domestic worker. Comparison group correspond to children whose mother is a worker in other blue-collar service occupations. Controls include age, age squared, gender, household size, marital status, years of education of the household head, years of education of the household head squared, and decile of per-capita family income. Standard errors clustered at the Metropolitan Area (MA) level in parentheses.  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



Table A9: Impact of domestic worker's reform on children's education

	Attendance (1)	Years of education (2)	Complete secondary school (3)
2010 x Child of domestic worker	0.028* (0.016)	0.036 (0.105)	-0.006 (0.033)
2011 x Child of domestic worker	0.033* (0.019)	-0.057 (0.097)	-0.013 (0.026)
2013 x Child of domestic worker	0.026* (0.015)	-0.047 (0.100)	0.040* (0.023)
2014 x Child of domestic worker	0.035* (0.017)	0.149 (0.100)	0.009 (0.025)
2015 x Child of domestic worker	0.035* (0.017)	0.199* (0.115)	0.026 (0.025)
Child of domestic worker	-0.019* (0.009)	0.028 (0.076)	0.017 (0.023)
Constant	1.467*** (0.044)	-1.431*** (0.277)	-0.505*** (0.049)
R-squared	0.146	0.421	0.169
Observations	23,894	23,894	23,383
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Occupation Fixed Effects	No	No	No
MA Fixed Effects	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes
Number of clusters	32	32	32

*Note:* Dependent variable is an indicator that takes value 1 if the individual is currently attending school (column 1), an indicator that takes value 1 if the individual has completed secondary education (column 2), and the number of years of education (column 3). For column 1 and 2, the sample includes all children of secondary school age (12 to 18) who have not finished secondary school, and those aged 18 and above, respectively. For column 3 the sample includes all children aged 12 to 25. Treated group corresponds to children whose mother is a domestic worker. Comparison group corresponds to children whose mother works in a blue-collar service occupation. Controls include age, age squared, gender, household size, decile of per-capita family income, years of education of the household head, and years of education of the household head squared. Standard errors clustered at the Metropolitan Area (MA) level in parentheses.

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

Table A10: Impact of domestic worker's reform on female children's education

	Attendance (1)	Years of education (2)	Complete secondary school (3)
2010 x Child of domestic worker	0.017 (0.020)	0.047 (0.164)	-0.027 (0.041)
2011 x Child of domestic worker	0.016 (0.021)	-0.085 (0.133)	-0.009 (0.037)
2013 x Child of domestic worker	0.006 (0.021)	-0.204* (0.110)	-0.014 (0.029)
2014 x Child of domestic worker	0.013 (0.026)	-0.003 (0.139)	-0.045 (0.034)
2015 x Child of domestic worker	-0.004 (0.023)	-0.071 (0.142)	-0.037 (0.038)
Child of domestic worker	0.002 (0.014)	0.125 (0.107)	0.052* (0.026)
Constant	1.342*** (0.047)	-2.387*** (0.379)	-0.485*** (0.071)
R-squared	0.128	0.475	0.165
Observations	11,851	11,851	11,355
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Occupation Fixed Effects	No	No	No
MA Fixed Effects	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes
Number of clusters	32	32	32

*Note:* Dependent variable is an indicator that takes value 1 if the individual is currently attending school (column 1), an indicator that takes value 1 if the individual has completed secondary education (column 2), and the number of years of education (column 3). Coefficients are difference-in-differences estimates from an OLS regression. For column 1 and 2, the sample includes all children of secondary school age (12 to 18) who have not finished secondary school, and those aged 18 and above, respectively. For column 3 the sample includes all children aged 12 to 25. Treated group corresponds to female children whose mother is a domestic worker. Comparison group corresponds to female children whose mother works in a blue-collar service occupation. Controls include age, age squared, gender, household size, decile of per-capita family income, years of education of the household head, and years of education of the household head squared. Standard errors clustered at the Metropolitan Area (MA) level in parentheses.

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

Table A11: Impact of domestic worker's reform on male children's education

	Attendance (1)	Years of education (2)	Complete secondary school (3)
2010 x Child of domestic worker	0.037 (0.024)	0.021 (0.156)	0.011 (0.042)
2011 x Child of domestic worker	0.051** (0.023)	-0.014 (0.160)	-0.015 (0.033)
2013 x Child of domestic worker	0.048** (0.022)	0.110 (0.128)	0.083*** (0.029)
2014 x Child of domestic worker	0.056*** (0.019)	0.305*** (0.108)	0.059* (0.034)
2015 x Child of domestic worker	0.071*** (0.023)	0.418*** (0.146)	0.079** (0.034)
Child of domestic worker	-0.039*** (0.013)	-0.059 (0.086)	-0.016 (0.033)
Constant	1.544*** (0.067)	-0.884*** (0.228)	-0.741*** (0.068)
R-squared	0.176	0.381	0.142
Observations	12,043	12,043	12,028
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Occupation Fixed Effects	No	No	No
MA Fixed Effects	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes
Number of clusters	32	32	32

*Note:* Dependent variable is an indicator that takes value 1 if the individual is currently attending school (column 1), an indicator that takes value 1 if the individual has completed secondary education (column 2), and the number of years of education (column 3). Coefficients are difference-in-differences estimates from an OLS regression. For column 1 and 2, the sample includes all children of secondary school age (12 to 18) who have not finished secondary school, and those aged 18 and above, respectively. For column 3 the sample includes all children aged 12 to 25. Treated group corresponds to male children whose mother is a domestic worker. Comparison group corresponds to male children whose mother works in a blue-collar service occupation. Controls include age, age squared, gender, household size, decile of per-capita family income, years of education of the household head, and years of education of the household head squared. Standard errors clustered at the Metropolitan Area (MA) level in parentheses.

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

## Appendix B Treatment effects including unemployed individuals

The following tables replicate the analysis shown in Tables 7 to 10 including unemployed individuals with a previous job. The affected group is composed of female domestic workers and unemployed women whose previous job was as a domestic worker. The comparison group is composed of women working in a blue-collar service occupation or those unemployed whose last job was in a blue-collar service occupation. Unemployed individuals are considered informal, with 0 hours of work and 0 income from the main job and all jobs, as well as 0 wage per hour. They are also considered involuntary part-time workers.

Table B1: Effect of policy reform on formality status

	Contribution to Pension System (1)	Contribution to Health Insurance (2)	Health insurance coverage (3)
Domestic worker x Reform	0.053*** (0.011)	0.048*** (0.012)	0.007 (0.013)
Mean dependent variable	0.15	0.15	0.42
R-squared	0.300	0.312	0.252
Observations	58,828	58,828	58,828
q-value	0.000	0.000	1.000
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes
Number of clusters	32	32	32

*Note:* In columns 1 and 2, the dependent variable is an indicator that takes value 1 when the individual reports their employer makes contributions to contributions to the pension system (column 1) and health insurance (column 2). In column 3, the dependent variable is an indicator that takes value 1 if the individual has health insurance coverage. Domestic workers refers to female respondents who identify themselves as domestic workers or those unemployed whose previous job was as domestic workers. The comparison group is composed of female wage workers in blue-collar service occupations and unemployed women whose previous job was in a blue-collar service occupation. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Standard errors clustered at the Metropolitan Area (MA) level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.  
\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table B2: Effect of policy reform on hours of work

	Hours of work per week on main job (1)	Involuntary part-time worker (2)
Domestic worker $\times$ Reform	-0.892** (0.288)	0.005 (0.009)
Mean dependent variable	24.71	0.17
R-squared	0.180	0.137
Observations	58,828	58,828
q-value	0.012	1.000
Controls	Yes	Yes
Year Fixed Effects	Yes	Yes
Occupation Fixed Effects	Yes	Yes
MA Fixed Effects	Yes	Yes
Year by MA Fixed Effects	Yes	Yes
Number of clusters	32	32

*Note:* Dependent column 1 is the number of hours of work per week in the main job. Dependent variable in column 3 is an indicator that takes value 1 if the respondent is willing to work more hours. In all cases, the coefficients are difference-in-differences estimates from an OLS regression. Domestic workers refers to female respondents who identify themselves as domestic workers or those unemployed whose previous job was as domestic workers. The comparison group is composed of female wage workers in blue-collar service occupations and unemployed women whose previous job was in a blue-collar service occupation. Mean dependent variable corresponds to average for the affected group in the pre-reform period. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.  
\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table B3: Changes in earnings after policy reform

	Income per month from main job (1)	Wage per hour from main job (2)	Income per month from all jobs (3)	Total income per month (4)
Domestic worker x Reform	0.022 (0.041)	0.069*** (0.017)	0.022 (0.041)	0.048 (0.037)
Mean dependent variable	464.80	5.82	529.03	657.27
R-squared	0.177	0.231	0.175	0.159
Observations	58,828	58,828	58,828	58,828
q-value	1.000	0.000	1.000	0.948
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32

*Note:* Dependent variable is the natural logarithm of income from the main job (column 1), the hourly wage from the main job (column 2), income from all jobs (column 3) and total income (column 4). In all cases, the coefficients are difference-in-differences estimates from an OLS regression. Domestic workers refers to female respondents who identify themselves as domestic workers or those unemployed whose previous job was as domestic workers. The comparison group is composed of female wage workers in blue-collar service occupations and unemployed women whose previous job was in a blue-collar service occupation. Mean dependent variable correspond to average for the affected group in the pre-reform period and are expressed in Argentina Pesos of 2008. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Standard errors clustered at the Metropolitan Area (MA) level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.

\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

Table B4: Changes in non-labor earnings after policy reform

	Any non-labor income		Pension		Welfare		Alimony	
	Reception (1)	Amount (2)	Reception (3)	Amount (4)	Reception (5)	Amount (6)	Reception (7)	Amount (8)
Domestic worker x Reform	-0.001 (0.014)	-0.009* (0.004)	0.003 (0.006)	0.091*** (0.004)	-0.003 (0.009)	-0.014*** (0.003)	0.002 (0.005)	-0.006 (0.004)
Mean dependent variable	0.33	380.23	0.09	648.43	0.20	192.83	0.06	426.02
R-squared	0.120		0.243		0.138		0.095	
Observations	58,828	69,828	58,828	69,828	58,828	69,828	58,828	69,828
q-value	1.000	1.000	1.000	0.000	1.000	0.000	1.000	0.000
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32	32	32	32	32

*Note:* The dependent variable in odd columns is an indicator that takes value 1 if the individual received non-labor income from the corresponding source, and the coefficients are difference-in-differences estimates from an OLS regression. Dependent variable in even columns is the natural logarithm of the amount of non-labor income from the corresponding source, and the coefficients are marginal effects from a Tobit regression conditional on positive earnings. Domestic workers refers to female respondents who identify themselves as domestic workers or those unemployed whose previous job was as domestic workers. The comparison group is composed of female wage workers in blue-collar service occupations and unemployed women whose previous job was in a blue-collar service occupation. Mean dependent variables correspond to average for the affected group in the pre-reform period and for earnings are expressed in Argentina Pesos of 2008. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Q-value corresponds to Hochberg's q-value to adjust for False Discovery Rate.  
\*\*\* q<0.01, \*\* q<0.05, \* q<0.1

## Appendix C Quantile Treatment Effects

The following table shows the impact of the reform on hours worked, monthly earnings and hours of work for each decile of the distributions. The effects correspond to Athey and Imbens' Changes-in-changes model (Athey and Imbens, 2006). This model uses the change experienced by the comparison group across time at each decile of the pre-reform period to construct a counterfactual distribution for the affected group in the absence of the policy.

Table C1: Labor market effects of policy reform - Quantile Treatment Effects

Quantile	Hours of work per week on main job (1)	Income per month from main job (2)	Wage per hour from main job (3)	Income per month from all jobs (4)	Total income per month (5)
10	-0.006 (0.902)	0.002 (0.026)	0.050*** (0.016)	0.007 (0.025)	0.010 (0.021)
20	-0.008 (0.627)	0.033* (0.017)	0.060*** (0.013)	0.040** (0.017)	0.037** (0.018)
30	-0.063 (0.384)	0.052*** (0.016)	0.073*** (0.013)	0.043** (0.017)	0.051** (0.020)
40	-0.312 (0.352)	0.076*** (0.017)	0.083*** (0.014)	0.049** (0.021)	0.036* (0.020)
50	-0.585 (0.477)	0.089*** (0.023)	0.080*** (0.011)	0.039* (0.021)	0.030 (0.019)
60	-1.452*** (0.471)	0.074*** (0.023)	0.090*** (0.011)	0.023 (0.018)	0.026 (0.020)
70	-1.846** (0.836)	0.052** (0.023)	0.091*** (0.011)	0.033** (0.015)	0.026 (0.019)
80	-1.906 (1.247)	0.045** (0.018)	0.095*** (0.012)	0.043*** (0.016)	0.043** (0.018)
90	-2.089* (1.079)	0.048** (0.019)	0.113*** (0.016)	0.039* (0.024)	0.047** (0.023)
Mean	-0.776** (0.354)	0.043*** (0.013)	0.079*** (0.009)	0.029** (0.013)	0.030** (0.015)
Observations	53,691	53,691	53,691	53,691	53,691
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes

*Note:* Estimates correspond to the treatment effect for the each quantile in the Changes-in-changes model (Athey and Imbens, 2006). Dependent variable is the number of hours of work per week in the main job (column 1), and the natural logarithm of the monthly income from the main job (column 2), the hourly wage in the main job (column 3), the monthly income from all jobs (column 4) and the total monthly income (column 5). Controls include age, migrant status, household size, literacy status, years of education, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Bootstrapped standard errors in parentheses.  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



## Appendix D Treatment effects by formality status

The following tables reproduced the analysis of the policy reform on the labor market outcomes of domestic workers by formality status. Formal workers are those who make contributions to the pension system.

Table D1: Effect of policy reform on hours of work

	Hours of work per week in main job (1)	Involuntary part-time worker (2)
Domestic worker $\times$ Reform	-1.126*** (0.271)	0.011 (0.007)
Domestic worker $\times$ Reform $\times$ Registered	-1.513*** (0.387)	-0.001 (0.008)
R-squared	0.237	0.109
Observations	53,691	53,691
Controls	Yes	Yes
Year Fixed Effects	Yes	Yes
Occupation Fixed Effects	Yes	Yes
MA Fixed Effects	Yes	Yes
Year by MA Fixed Effects	Yes	Yes
Number of clusters	32	32

*Note:* Dependent variable in column 1 is the number of hours of work per week in the main job, and the sample includes all employed individuals. Dependent variable in column 2 is an indicator that takes value 1 if the respondent is willing to work more hours. In all cases, the coefficients are difference-in-differences and triple differences estimates from an OLS regression. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses.

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

Table D2: Changes in earnings after policy reform

	Income per month from main job (1)	Wage per hour from main job (2)	Income per month from all jobs (3)	Total income per month (4)
Domestic worker x Reform	0.021 (0.017)	0.082*** (0.014)	0.024 (0.016)	0.040* (0.021)
Domestic worker x Reform x Registered	-0.046*** (0.017)	-0.010 (0.014)	-0.042** (0.018)	-0.052*** (0.017)
R-squared	0.512	0.324	0.489	0.414
Observations	53,691	53,691	53,691	53,691
Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32

*Note:* Dependent variable is the natural logarithm of income from the main job (column 1), the hourly wage from the main job (column 2), income from all jobs (column 3) and total income (column 4). In all cases, the coefficients are difference-in-differences and triple differences estimates from an OLS regression. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area level in parentheses. Standard errors clustered at the Metropolitan Area (MA) level in parentheses.  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table D3: Changes in non-labor earnings after policy reform

	Any non-labor income		Pension		Welfare		Alimony	
	Reception (1)	Amount (2)	Reception (3)	Amount (4)	Reception (5)	Amount (6)	Reception (7)	Amount (8)
Domestic worker x Reform	0.008 (0.014)	0.178*** (0.005)	0.005 (0.006)	0.105*** (0.004)	0.003 (0.009)	0.111*** (0.004)	0.003 (0.006)	-0.081*** (0.004)
Domestic worker x Reform x Registered	-0.007 (0.012)	0.418*** (0.014)	0.010* (0.006)	-0.099*** (0.01)	-0.014 (0.011)	0.88*** (0.015)	-0.002 (0.007)	-0.102*** (0.011)
R-squared	0.141		0.258		0.148		0.092	
Observations	53,691	63,611	53,691	63,611	53,691	63,611	53,691	63,611
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year by MA Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of clusters	32	32	32	32	32	32	32	32

*Note:* The dependent variable in odd columns is an indicator that takes value 1 if the individual received non-labor income from the corresponding source, and the coefficients are difference-in-differences estimates from an OLS regression. Dependent variable in even columns is the natural logarithm of the amount of non-labor income from the corresponding source, and the coefficients are marginal effects from a Tobit regression conditional on positive earnings. Domestic workers refers to female respondents who identify themselves as domestic workers. The comparison group is composed of female wage workers in blue collar service occupations. Controls include age, age squared, migrant status, household size, literacy status, years of education, years of education squared, marital status and decile of per-capita family income. Standard errors clustered at the Metropolitan Area (MA) level in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1