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Wage Effects of employer-mediated Transfers*

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Abstract

We explore how the way in which tax credits are disbursed affects employer's behavior, wages, and employment. We exploit a change in the payment system in Argentina that was gradually rolled out between 2003 and 2010. Under the old system, employers were in charge of delivering family allowances to their employees together with the monthly salary, and the transfer was deducted from employer social security contributions. For transparency purposes, the government eliminated the intermediary role of firms and started depositing the transfer directly into workers' bank accounts. Using employer-employee administrative data and an event-study approach, we show that the way tax credits are disbursed matters for the final economic incidence. Our evidence suggests that employers shift part of the incidence of the transfer by paying lower wages. We document larger wage effects in small and less unionized firms and we do not find evidence of pay equity concerns (e.g., effect mostly driven by new hires rather than incumbent workers). Our findings are therefore in line with the hypothesis that transfers are not *all* captured dollar for dollar by workers. These results raise questions about the use of employers as intermediaries to disburse the transfer; where less salient schemes may lead to capture by employers.

JEL CODES: H23, H31, H71, I38, J31, J32, J33

KEYWORDS: tax credits, family allowances, means-tested transfers, incidence, event study

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1 Introduction

Most countries provide some sort of financial aid to families with children. This type of social assistance was established in developed countries after World War II and in developing economies towards the end of the 20th century. The existing literature on this type of policies has mainly analyzed extensive and intensive labor supply responses to transfers itself, as well as the effects on children's outcomes such as education and health. However, very little is known about the effect of other features embedded in these programs like the timing of payments, the role of conditionalities, or the way the transfer is disbursed. Among these, the empirical question of who bears the economic incidence of work subsidies and family allowances is still poorly understood. In this article, we break new ground on these important issues and study whether the way family allowances (tax credits) are disbursed affects the wage of workers. We exploit an unusual reform in Argentina that shifted the *disbursement responsibility* of family allowances from employers to the social security administration (SSA).

In Argentina, registered wage earners with children less than 18 years old are entitled to a family allowance that they receive on a monthly basis (*asignaciones familiares*). This is a means-tested program for low-income workers that provides a fixed transfer per child that decreases as workers earn more through a wage earnings-based *notched* schedule with three brackets.¹ This transfer was historically disbursed by employers who could net these payments out from social security contributions (SSC) before remitting SSC to the tax authority. In 2003, for transparency reasons the government decided to replace this, sort of, intermediary role played by firms and to start depositing the transfer directly into workers' bank accounts. Because of the administrative burden of such a change, the government had to switch firms from the old to the new system gradually over the course of eight years (from 2003 to 2010).²

The gradual roll-out of the new payment system and the change in saliency of the transfer provide ideal variation and a unique opportunity to cast light on the labor market consequences derived from the way tax credits are paid. Under the old payment system, named *Sistema de Fondo Compensador* (SFC), the transfer was very salient to employers providing incentives to integrate the family allowance into the salary package of eligible workers, potentially shifting part of the incidence of the transfer in the form of lower wages. Moreover, since the credit appeared as an extra line on pay slips, it could make workers believe that the transfer was actually funded by the firm.³ In contrast, under the new system, named *Sistema Único de Asignaciones Familiares* (SUAF), the employer was not able

¹In that sense, this transfer is similar in spirit to the EITC in the U.S. but presents *notches* instead of kinks, and it is paid every month instead of at the end of the year.

²In the body of the paper, and also in more detail in the appendix, we explain that the transition was made through a set of memos and decrees published during the eight years that included annexes with the list of firms that had to switch at different dates. Therefore, from the point of view of the firm, this was a plausibly exogenous event.

³Summers (1989) introduced, somehow, the discussion on distributional consequences of mandated benefit programs.

to tag beneficiaries or see the amount of the transfer anymore. Naturally, given the staggered roll-out, we use an event study design where we align firms at the switching date and compare monthly wages of eligible and non-eligible workers before and after that date to identify wage effects.

To carry out our study, we use employer-employee administrative data containing the universe of wage earners registered in the social security records of Argentina for the period 2003-2010. These data are reported by employers to the tax authority every month, and thus provides high-frequency variation with firms switching to the new system during 84 consecutive months. It contains monthly information on total wage earnings, social security contributions, firm's sector, zip codes, and some demographic variables. Importantly, in this dataset we observe the exact amount of the monthly transfer received by each worker before firms switch to the new payment system. This is because when a firm was part of the SFC, it had to report the number of workers receiving the subsidy and the amount paid to each of them, so that the transfer could be deducted from payroll taxes. We also have access to another dataset of family relationships that allows us to link workers with their spouse and children. In this dataset, we also observe the exact date of birth for each child allowing us to flag eligible and non-eligible workers accurately.

Our results can be summarized as follows. In the first part of the paper we show that the way family allowances are disbursed is not neutral and affects gross wages. The monthly wage of workers with children increases by 5 pesos relative to workers without children when firms stop disbursing the transfer (and it is instead delivered by the SSA). This effect declines as we move up in the income distribution where the amount and salience of the transfer are smaller. In terms of the pass-through rate, our estimates imply that employers were capturing about 5-10 percent of the transfer by paying lower wages when they mediated the disbursement.

In the second part of the paper we explore some of the mechanisms where we document that the key piece of evidence is that the effect is driven by new hires rather than incumbent workers. Intuitively, when firms are no longer in charge of delivering the transfer, they cannot integrate it in the wage package anymore and thus the market wage of new hires with children goes up. The fact that the effect appears immediately in the first month post event, and that it is explained by new hires, go against a pay equity concern channel, since one would expect the effect to build up slowly and also to affect incumbents. In addition, we show that wage effects are stronger the higher the exposure of a firm to family allowances, and with less exposure to unions.

These findings therefore suggest that the way governments set up tax credit programs, like the EITC in the U.S., influences the final economic incidence. We find that wages do adjust to the way transfers are disbursed, rejecting the null hypothesis that transfers are *all* captured dollar for dollar by workers. This is an important result that sheds light on a topic still understudied but that is common in other countries. For instance, in Brazil, Chile, Paraguay, Italy, and Switzerland family allowances for employees in the formal sector are disbursed by employers.

Our results suggest that letting firms operate as mediators could have unintended consequences. Moreover, these results raise questions about the use of employers as intermediaries to disburse the transfer; where less salient schemes may lead to capture by employers.

This paper contributes to the literature on incidence, in general, and the incidence of tax credits, in particular. The basic idea behind an incidence analysis is to determine how the burden of a particular tax or subsidy is allocated among different agents. The standard model predicts that, in a partial equilibrium framework, the burden of a tax depends on the relative elasticity of supply and demand, where the more elastic side can shift the burden to the more inelastic one. This framework is largely based on classic references such as [Atkinson & Stiglitz \(2015\)](#), [Fullerton & Metcalf \(2002\)](#), [Kotlikoff & Summers \(1987\)](#) and [Musgrave \(1959\)](#). Modern approaches have extended the standard model by incorporating salience effects ([Chetty *et al.*, 2009](#)), remittance and compliance costs, as well as market rigidities and imperfect competition. For instance, recent evidence in other settings show that who remits the tax to the tax authority matters to explain the final incidence ([Kopczuk *et al.*, 2016](#), [Slemrod, 2008](#)).

We also contribute to recent research that casts doubts of the standard prediction in public finance that statutory incidence is totally irrelevant in determining final incidence. For payroll taxes, [Saez *et al.* \(2012\)](#) show that in Greece the economic incidence matches the statutory incidence i.e., full incidence of employer SSCs on employers and full incidence of employee SSCs on workers. Similarly, [Saez *et al.* \(2019\)](#) exploit a reduction of employer SSCs in Sweden and find that posted wages of treated workers did not change implying full incidence on employers. Our project looks at a slightly different question focusing on transfers rather than on taxes as most of the existing literature has done.⁴ The most interesting aspect is that we look at a change in the payment system (the *disbursement responsibility*) keeping other features constant.

To the best of our knowledge there are three papers closest to ours that evaluate the incidence of in-work subsidies, but with weaker research designs and poorer data. [Rothstein \(2010\)](#) and [Leigh \(2010\)](#) estimate the incidence of the EITC in the U.S. and [Azmat \(2019\)](#) analyzes a change in the payment system of the Working Family Tax Credit (WFTC) in the U.K.. The evidence is still not conclusive and there is room for more work on this area. The reason is that identification of wage effects is challenging, so our paper is a clear contribution on this end.⁵

Finally, our paper adds to a growing literature on the design of welfare programs and social protection policies. Some examples on this domain are [Jones \(2010\)](#) on the Advanced Earned Income Tax Credit (AEITC) in the U.S., and [Doornik *et al.* \(2018\)](#) on Unemployment Insurance (UI) in Brazil. The latter shows an extreme form of collusion with layoff and rehiring patterns between firms and workers that seek to extract rents from the UI system. Our results help to

⁴For instance, [Benzarti *et al.* \(2020\)](#) show that prices respond asymmetrically to VAT increases and decreases, suggesting that the direction of a tax change does matter for incidence.

⁵There are also various recent contributions on different incidence analysis including [Suárez Serrato & Zidar \(2016\)](#) [Fuest *et al.* \(2018\)](#), [Bozio *et al.* \(2018\)](#) and [Benzarti & Carloni \(2019\)](#).

inform policy debates on some of the consequences of decentralizing sensitive tasks prone to confusion and misunderstandings, such as the disbursement of tax credits.

The paper is organized as follows. In Section 2 we describe the institutional setting and the change in the remittance system. In Section 3 we revise the standard incidence terminology and conceptual framework. Section 4 introduces the data sources. The empirical strategy and main results are presented in Section 5. In Section 6 we explore the mechanisms and drivers of the wage effects that we document. Finally, section 7 ends with some concluding remarks.

2 Institutional setting

2.1 Family Allowances in Argentina (AAFF)

The family allowance program *Asignaciones Familiares* (AAFF) is the largest means-tested transfer in Argentina. It was introduced in 1996 and it is funded by social security contributions (SSC).⁶ It consists of a monthly child benefit paid to private employees with monthly wages below a certain threshold and with children less than 18 years old. The benefit amount varies by the number of children and decreases discretely by monthly wage bins.⁷

The parameters that characterize the AAFF transfer scheme for the early years of our data are presented in Figure 1a.⁸ There are 3 brackets and the transfer per child decreases as we move to the right (\$40, \$30, and \$20 per child). The figure shows the average tax rate for a worker with one children (blue line), 2 children (red line), and 3 children (green line). For instance, a worker with two kids right at the end of the first bracket, the transfer represents 16 percent of the monthly wage and if she earns a bit more, she starts to receive \$30 per child instead of \$40.⁹ This discontinuous drop in the transfer's amount as wages increase, could be described as a *notched* scheme to tax the transfer out.¹⁰

The AAFF program is based on a contributory system financed by employer's SSC. Indeed, there is a specific component within the employers' SSC devoted to funding this program. In general, the payroll tax has different components: family allowances which is 7.5 percent of employers SSCs, pension component

⁶See Law 24,714/1996. Prior to this program, there were some limited schemes (either firms designing their own system, or local government initiatives). See Annex B for more details.

⁷There is also a supplement transfer for workers living in less favorable areas; there are 4 zones under this classification. These areas are not very dense in terms of population, thus not many workers received this supplement.

⁸Table 6 provides a complete picture of this scheme by year including the evolution of the brackets and the exact transfer amount per child.

⁹In Figure 39 we present the distribution of monthly wages and show no bunching at these discontinuities. This constitutes suggestive evidence of no labor supply responses and no strategic collusion between employers and employees.

¹⁰This differs from the phase-out region present in the EITC which includes *kinks* i.e., discontinuity in that marginal rather than in the average tax rate.

(16 percent), health insurance for the elderly (2 percent), health insurance (5 percent), unemployment insurance (1.5 percent), life insurance (0.03 percent), and a worker compensation, against accidents, a percentage that varies by type of job.

The context of high and persistent inflation that Argentina experienced from 2004 onwards makes our setting very interesting because it makes it easier for employers to capture rents in real terms. This is because although nominal wages are typically downward rigid, real wages might not be. Moreover, because of this persistent inflation wages are renegotiated more often.¹¹ Figure 1b describes the evolution of the upper bracket thresholds from 2003 to 2011, jointly with the evolution of the minimum wage that serves as a reference point. Note that the nominal increase in the thresholds is a consequence of inflation. In addition, the minimum wage always lies below the lowest bracket meaning that there is room to eventually shift part of the incidence (Lee & Saez, 2012).

2.2 The reform: a staggered change in the payment system

The policy variation that we exploit in the paper comes from a reform that changed the way transfers are disbursed, and that was gradually rolled out between 2003 and 2010. The old and new systems are summarized in Figure 2 and described below. In a nutshell, it can be said that the benefit schedule didn't change at all and that the only thing that changed is how workers got the transfer.

2.2.1 The old system (SFC)

The original scheme of the AAFP program was such that transfers were disbursed indirectly by employers to eligible employees. This system was called at that time *Sistema de Fondo Compensador* (SFC), and the name comes from the fact that employers could *compensate* the transfer from the employer portion of social security contributions before remitting the money to the IRS. If the amount paid was greater than the tax bill, the firm could claim a refund. In this setting the employer was merely an intermediary in charge of disbursing funds from the public sector.¹² This implied that firms had the ability to distinguish between eligible and non-eligible workers and also to know precisely how much subsidy they were getting from the government. A key fact of this system is that the transfer was included as an extra concept on the worker's pay slip (see Figure 3 panel (a)); this was mandatory for all employers and established by law. This is relevant for the incidence analysis because it enhances the saliency of the transfer and it could also make workers believe that the transfer was part of the compensation and thus funded by the firm. Later on, we provide some anecdotal evidence that goes into this direction.

¹¹ Annex C presents a larger discussion on the macroeconomic context of Argentina during our period of analysis.

¹²In Annex D we present and list other experiences of firm-mediated transfers around the world.

2.2.2 The new system (SUAF)

The new payment system, named *Sistema Único de Asignaciones Familiares* (SUAF), was launched in June 2003 with the goal of replacing the existing SFC payment system (Memo 641/2003 ANSES). Under this scheme, the Social Security Administration (SSA or ANSES, for its acronym in Spanish) removed the intermediary role of firms and started depositing the subsidy directly into workers' bank accounts giving place to a new centralized payment system. In that way, the only duty of the firm was to remit monthly SSC to the IRS. This implied that employers were not able to tag beneficiaries or see the benefit amount anymore. In addition, the subsidy stopped being reported on workers' pay slip reducing the saliency of the transfer (see Figure 3 panel (b)). The reasons that motivated this reform, as stated by the government, were to make the system more transparent, to make sure beneficiaries effectively get the transfer, to control fraud, and to provide administrative relief to the firms. Since the SSA did not have enough operational capacity, they gradually incorporated firms into the new system instead of doing it in one step. Employers were switched from the old to the new system on a monthly basis from June 2003 to June 2010, when the whole transition process finished. Importantly, workers kept receiving the transfer, but it is paid through a different window and all of a sudden it becomes less salient to employers.¹³

2.2.3 Incorporation process and empirical roll-out

The incorporation of firms into the new system was determined by the SSA through official memos posted online. Hence, since employers could not choose when to switch, the switching date works as a plausibly exogenous event from the point of view of the firm. In a nutshell, the whole process can be described as follows (see Figure 4). The incorporation started with the SSA setting an *internal* incorporation schedule, where basically the SSA issues a list of targeted firms that will be gradually incorporated up to a certain point in time. Firms were then contacted by an officer and informed to present certain documentation to be incorporated into the system (payroll, beneficiaries, bank accounts). The last step, after checking everything was correct, consisted on the formal approval and incorporation into the new system. Employers were required to notify their employees through an individual form to be signed by both parties.¹⁴

In the data we observe the date when the firm stops disbursing the transfer under the old system. After this date, the payment variable becomes missing. Hence, we define the *event* as the month-year when the firm stops paying family allowances so that the last payment observed in micro-data will be at month $t-1$. Figures 5 illustrates the empirical roll out that emerges from our microdata. We plot the share of firms paying the transfer under the old system (SFC) and the

¹³In Figures 14 and 15 we show that spending and beneficiaries did not decrease during this transition.

¹⁴More details on the roll-out and the incorporation process can be found in Appendix E.

share of workers receiving the transfer through that system.¹⁵ As can be seen in panel (a), the transition was gradual.¹⁶ In panel (b), we further show that large firms switched first into the new system. Although the SSA was the one that determined the switching date, it seems that they targeted large firms initially. Nevertheless, our empirical strategy exploits within-firm variation to address any potential selection issue.

To sum up, the staggered change in the remittance duty and the saliency of the transfer provide ideal variation and a unique opportunity to cast light on the labor market consequences derived from the way tax credits are disbursed. In particular, it allows to study whether employers were capturing part of the transfers by lowering wages.

3 Conceptual framework

In this section we briefly describe a way to rationalize the mechanisms that could explain who bears the final incidence of a transfer. The economic incidence under the standard partial equilibrium model depends on the relative size of the elasticity of supply and demand of the good being taxed; where the more elastic side can shift the burden to the more inelastic one. Assuming that there is perfect information and competition, and that there is no compliance cost, this implies that the statutory incidence is totally irrelevant in determining final incidence.

We begin by defining some key concepts following the terminology proposed by Slemrod (2008). We understand *legal liability* as what the law says about who should pay the tax, or in other words, who the tax is levied on (generally called statutory or formal incidence). For example, employees should pay employees' SSCs. There is also the *remittance responsibility* that determines who is responsible for remitting the amount of the tax to the tax authorities. For example, employees SSCs are typically remitted by employers. And finally, the *economic incidence* refers to who actually bears the burden of the tax i.e., who is worse off as a result of it.

Having previous notions in mind, we then try to map these concepts into our context and see how the different elements change between the two payments systems to further understand the institutional setting but also as a preview of what could drive the potential behavioral responses. In Table 1 we list some key dimensions that may affect the final economic incidence. Columns (1) and (2) correspond to the old and new system respectively, where the main change between the two systems is in the *remittance responsibility*. While under the old

¹⁵Some firms never paid family allowances through the SFC system, which explains why the initial share is not 100 percent at the beginning of the reform.

¹⁶In Figure 16 we use aggregate official budget information to show the gradual decrease in the share of family allowances paid through the SFC (old system) as a proportion of total spending. We also calculated the total sum disbursed through the SFC using the micro-data, and compared it to the macro totals. Both values are very similar, confirming that the quality of family allowance payments in the micro-data is of very good quality (see Figure 14).

system, employers disburse the transfer together with the monthly wage, under the new system, the government is the one that pays the benefit directly to eligible workers. Note, however, that the *legal liability* is exactly the same in both systems: the ultimate recipient of the transfer is the employee.

Another important component is the *salience* of the transfer. As it has already been documented, the visibility of a tax matters to determine the economic incidence of taxes (Chetty *et al.*, 2009) but it is uncertain whether and how this effect operates in the case of transfers. In principle, the transfer is fully visible and salient to both employers and employees under the old scheme; indeed, it appeared in the worker's pay slip as it is possible to see in Figure 3.¹⁷ In that figure we present a real pay slip from an anonymous worker right before and right after the firm switches from SFC to SUAF. In the old system (panel a) the pay slip contains a line where the transfer is reported making it very salient to both the employer and the employee. The amount that this worker receives is 720 Argentinian pesos corresponding to an average tax credit of approximately 25 percent of total wage earnings. Under the new system (panel b), the transfer disappears from the pay slip and the worker starts getting the transfer directly from the government in his checking account.¹⁸ Hence, the transfer becomes less salient, at least to employers.¹⁹

Furthermore, and related to previous, the tax-benefit linkage may have changed after a firm switches systems. The perception of what the transfer is and how it is financed could have changed and, as a result of this, the bargaining conditions as well. The understanding of the whole system may have changed after the new disbursement mechanism is put into place. It may be likely that employers and employees interpret the sum of wages and the transfer as a combo under the old scheme.²⁰

We set up a very simple model to try to rationalize previous i.e., partial perception of benefits, based on Gruber (1997) (for a recent application see the adaptation of Bozio *et al.* (2018)). Formally, workers perceive that their wage is a function $\tilde{w} = w + (1 - q) \cdot \tau^e$, where w is the monthly wage, τ^e is the monthly transfer disbursed by employers, and q $[0; 1]$ is a perception parameter. When $q = 1$ workers fully understand the way the transfer works and how it is funded, and when $q = 0$ there is complete confusion. What are the potential wage effects in these two extreme scenarios? In a context of perfect information ($q = 1$), then the standard model holds and the remitter of the transfer does not affect who bears the final burden of the benefit. However, as soon as we move from previous situa-

¹⁷Article 140 of the Labor Contract Law, established that it is mandatory to list in the pay slip all the items that the employer is paying and deducting from the employee.

¹⁸Interestingly, note that the take home pay, highlighted by the red square on the right-down side of the pay-slip, went down in nominal terms between the two months; and also this occurred in a context with inflation which makes everything even more unique.

¹⁹Put it differently, at least it is less salient for employers about new employees i.e., new hires. Moreover, as far as we are aware of, employers do not have information about workers' family structure and number of kids apart from this program.

²⁰Within ten days after the switch, employers had to inform their workers about the new payment mechanism and about the overall scheme of the family allowance system.

tion there is some room to price responses.²¹ In Annex F we further develop and discuss on the model.

The claiming procedure for new workers changed as well, as they have to claim the benefits by themselves rather than through their employers. There are many other dimensions that may induce a behavioral reaction, but that remain the same under the two payment mechanisms. For instance, the timing of the payments does not change, it keeps the monthly frequency and we are not aware of delays or complaints on this regard after the firm switched to the new system. In addition, there is no change induced by the reform on the way the transfer is funded; it continued to be financed by a specific component of employer SSCs. Overall, the benefit schedule didn't change at all; the only thing that changed is how workers got it. Unlike most of the literature on incidence that exploits either changes in the marginal or average tax rate, in our setting the amount of the transfer remains unchanged. Therefore, it is a pure change in the way the money is delivered but not in the total amount that the worker receives.

4 Administrative data

Wage earnings data (SIPA). The main source of information that we use in this paper is an employer-employee database compiled by the Ministry of Labor and known as SIPA. This dataset is the result of employer reported information about their employees gathered in form F.931, which is somehow equivalent to Form 941 in the U.S.. This comprehensive dataset contains monthly information for the universe of private formal wage earners in Argentina. Therefore, we are able to observe every single employee in the country conditional on being formally employed. This dataset has a wide set of variables including pre-tax monthly wages, employee social security contributions, sector, region, zip code, age, and gender among other characteristics. Our dataset spans the period 2003-2010.

Table 2 presents some descriptive statistics for the year 2004. In 2004 Argentina had approximately 5 million private wage earners and about 400 thousand firms. Roughly 25 percent of the registered workers received AAFB transfers. The majority of these beneficiaries were in the lower and middle bracket with an average tax credit rate of 13 percent and 7 percent, respectively. Note also that average number of children is 2 across the earnings distribution.

Recall that under the SFC scheme, family allowances were paid by employers to their employees who could then net these payments out from payroll taxes. So, employers had to report this information to the IRS. The richness of our data allows to observe how many employees received the transfer and also the exact amount each of them received. Once a firm is incorporated into the new scheme, the SUAF, this variable is automatically filled with zeros. This variable is of great

²¹Our results don't seem to point towards a market level response i.e., sort of general equilibrium effect, nor to a story related to a learning response. We discuss this later on in the mechanisms section

importance since it allows us to properly estimate the first stage i.e., drop in the transfer amount disbursed by employers, and also to identify the switching date. Another interesting feature of this dataset is that it is reported on a monthly basis which is not generally the case in most of the countries. This is somehow appealing because it enables looking at the whole wage variation across the year, and also because the treatment timing variation that we look at i.e., switching date, is on a monthly basis.

Family links (ADP). We combine the SIPA data with another database that contains family relationships. These data allow us to link workers to their dependents (spouse and children) accurately since 1970s. In Argentina, to claim social benefits or deduct dependents from the income tax, applicants have to register and report their family composition. Using worker's identifiers we are able to merge these data with SIPA and determine marital status and number of dependents of each worker. The workers that appear in SIPA but not in ADP are considered single with no children. Importantly for our estimation strategy and the definition of the treatment group, we observe the exact date of birth of each of the offsprings.

5 Empirical strategy and results

5.1 Event-study approach

The staggered roll out of firms into the new scheme naturally leads to an event study design. We define the *event* as the month-year t at which a given firm is incorporated into SUAF and stops disbursing family allowances. Hence, the last payment observed in the micro-data will be at month t_{-1} . Our setting is pretty rich in the sense that we have large variation and heterogeneity to analyze and explore. We observe thousands of firms experiencing this event (large number of treated units), events occurring during 84 consecutive months (time variation), heterogeneity in firm size (from micro to large firms), share of workers receiving family allowances paid by their employer (intensity of treatment at the firm level), number of kids for whom workers are receiving the transfer (intensity of treatment at the worker level).

Our estimation sample is comprised by an unbalanced panel of firms that we observe during the period of January 2003 to December 2010. In particular, we include firms for which we observe an event (switch from SFC to SUAF)²² and whose transition was before the beginning of the crisis.²³ Our estimation strategy

²²To accurately identify the event date using the employer-employee micro-data we impose the following restrictions: (i) focus on firms that were paying family allowances at least six months before they stop disbursing the transfer, (ii) exist at least six months before and six after the event $[-6; 5]$ and (iii) firms that have more than one worker receiving the transfer in the last month (t_{-1}) before they switch to the new regime. Finally, we keep firms with eligible (T) and non-eligible (C) workers in the event-window.

²³In Annex C we elaborate more on the macroeconomic context of Argentina during the 2003-

consists on comparing within each firm, eligible and non-eligible workers to receive the transfer. The control group C consists of workers without children i.e., not eligible for the benefits, and the treatment group T consists of workers with at least one child less than 18 years old (although not all of them are eligible, this depended on their wage level and working status of their spouse).²⁴

We exploit within-firm variation before and after the transition into the new system as follows. For each firm f , group $g = C, T$, and month t , we compute the average wage ($\bar{w}_{f,t}^g$) and, to keep things simple, we take the difference across groups within a given firm and month ($G_{f,t}^{\bar{w}} = \bar{w}_{f,t}^T - \bar{w}_{f,t}^C$). This specification allows netting out for a bunch of things within the firm, something that is not generally possible in many designs i.e., it is quite hard to have a setting where treated and control workers coexist within each firm. Consequently, for each firm we end up with one time series of wage gaps between workers with and without children allowing us to run the following standard event-study specification:

$$G_{f,t}^{\bar{w}} = \alpha + \sum_{j=-13}^{12} \gamma_j \cdot d_{f,t}^j + \epsilon_{f,t} \quad (1)$$

where $d_{f,t}^j$ are event-time dummies measuring that the event happened j months away. Note the $j = 0$ is the first month in which the firm does not disburse the transfer anymore and, as it is generally done, we take $j = -1$ as the omitted category in our estimations and figures. Note that this specification is numerically equivalent to having two observations per firm (the average wage for workers with and without children) and including firm-by-time fixed effects, because the way that those are identified is by differencing them out.²⁵ To construct the wage gap in the data, we consider a monthly wage variable that is used to calculate employers' social security contributions. As in most countries, this variable is right censored, as it exists a cap on social security contributions.²⁶ Besides the

2010 period. As a preview we can state that August 2008 was the beginning of the crisis, but also a month with a large number of companies switching to the new regime. There was some bunching in terms of events and this can impose some costs because we can be confounding something specific that happen at that time. Thus, it seems that the last part of the roll-out is not the best setting for an event study since there were so many switches happening at the same time which is also a crisis. Moreover, the post August 2008 period is a characterized by the following things: (i) bunching of events, (ii) large drop of the gross domestic product which makes the transfer and the change in the payment system irrelevant, (iii) period marked by less hires, (iv) the crisis affected differently small and large firms, (v) there was an expansion of the family allowance program to include informal i.e., not registered, workers in 2009 (introduction of the *Asignación Universal por Hijo*, AUH).

²⁴Workers can change treatment status over time either as (a) their youngest child turns 18 or (b) there is a newborn. To avoid workers switching treatment status, in one of the robustness checks, we identify as treated workers those who have at least one child born in [1992-2002]. This means that these workers are fully treated during the period 2003-2010 because their children will be [1-11] in 2002 and [8-18] in 2010. The rest of the workers belong to the control group, that is to say, they are either never treated or partially treated.

²⁵In Section G we elaborate more on the econometric specification.

²⁶This cap is above the 95th percentile for all the months that we analyze and thus it does not pose a threat to our results.

average wage, we also compute other moments such as percentiles 25, 50, and 75. We look at an event-time window of twelve months before and twelve after the change, and we cluster standard errors at the firm level.²⁷

Moreover, in our estimations we also add firm and month-year fixed effects as it is standard in the literature. So the final specification that we propose is the following:²⁸

$$G_{f,t}^{\bar{w}} = \sum_{j=-13}^{12} \gamma_j \cdot d_{f,t}^j + \mu_f + \mu_t + \epsilon_{f,t} \quad (2)$$

To compute the reduced-form point estimates in our tables we can simply pool all the coefficients before and after the switching date and then take the difference. We do so in a regression framework so that we also get the standard errors:

$$G_{f,t}^{\bar{w}} = \beta_1 \cdot \text{Window}_{f,t} + \beta_2 \cdot \text{Window}_{f,t} \cdot \text{Post}_{f,t} + \beta_3 \cdot (1 - \text{Window}_{f,t}) \cdot \text{Post}_{f,t} + \mu_f + \mu_t + \epsilon_{f,t} \quad (3)$$

where $\text{Window}_{f,t}$ is an indicator equal to one for the *event window* and zero for the binned end points, and $\text{Post}_{f,t}$ is an indicator equal to one for the months after the event.

We use the same framework to compute the first-stage change in the transfer where we use the monthly transfer gap of workers with and without children as the dependent variable. Finally, to compute the pass-through rate we use the Wald estimator to scale the reduced-form relative to the first stage. To get the right standard errors, we estimate this pass-through with a two-stage least squares method.

5.2 First stage, reduced form, and pass-through

We start the analysis by estimating the first-stage change in the remittance of family allowances before and after the event. We simply run specification (1) but using as the dependent variable the difference in average transfers that each employer paid to workers with and without children. We plot the γ 's of the referred equation in Figure 6. It shows that when firms transition to the new system they immediately stop disbursing the transfer and leave this task over to the government. On average, before the event, workers with children were receiving approximately 90 pesos more in transfers, disbursed by employers, than the workers without children. It is worth remembering that workers do not lose the transfer but it rather starts being paid directly by the government. But, importantly for the question of this paper, it is not managed by employers anymore.²⁹

²⁷In the robustness checks we play around with the time window and results are very stable. We also bin up the end points as it is common in this literature (Schmidheiny & Siegloch, 2019).

²⁸The firm fixed effects would account for the fact that the composition of the panel of firms is changing over time and, naturally, the month-year fixed effects would control for time specific effects.

²⁹Unfortunately, we do not observe payments at individual level under the new system. Therefore, we assume that workers continue to receive their payments. When looking at aggregate

The null hypothesis of interest is whether the way payments are disbursed is neutral in terms of who ends up benefiting from the transfer. If it results to be neutral, then we should observe no effects on monthly wages after the transition; there is full shifting to employees regardless of how the transfer is paid. On the contrary, if employers were fully shifting the incidence of the transfer under the old scheme, then the monthly wage should increase peso for peso by 90 pesos after the change.³⁰ One possible way to do so, is to think that employers were offering the transfer within the wage package saying that they could pay a certain amount including the family allowance. Intuitively, if employers were capturing part of the transfers we should observe a wage increase for eligible workers relative to non-eligible workers as soon as the firm enters into the SUAF. An interesting fact of our setting is that inflation was high during the whole period (15 percent on average) and thus monthly wages were renegotiated quite often.³¹

In Figure 7 we look at the reduced-form effect on monthly wages relative to period t_{-1} . Panel (a) shows the wage levels when we estimate equation (2) separately for workers with children (treatment) and without children (control), $\bar{w}_{f,t}^T$ and $\bar{w}_{f,t}^C$ respectively. In Panel (b) the dependent variable is the within-firm average wage gap of these two groups ($G_{f,t}^{\bar{w}}$). The first panel, the one in levels, could be understood as the simple plot of the raw wages of both groups before and after the reform, while the second one, the wage gap, nets out all potential confounders within each firm. Reassuringly, the average wage does not differ between treated and control workers before the transition (relative to the last month in the old system). In contrast, the monthly wage of workers with children increases by approximately 5 pesos relative to workers without children when firms stop disbursing the transfer.³² Therefore, both figures present a rather clean evidence that wages of eligible workers do adjust to changes in the payment system. The dynamic of the effect is such that there is an initial bump in the wage gap, that tends to increase as months go by after the firm stop disbursing the transfer.

Then we take a step further and analyze what happen within each group of workers. In particular, rather than estimating the mean wage for each group ($\bar{w}_{f,t}^T$ and $\bar{w}_{f,t}^C$), we focus on other moments of the distribution. Figure 8 shows that the increase in wages is mostly driven by workers at the lower end of the monthly wage distribution. The $p25$ wage differential of workers with and without children presents a sizable jump after the event while relatively little happens with

figures, we do not see a decline over time in the total amount of money disbursed by the family allowance program i.e., which is an indirect way to test the previous assumption.

³⁰One important caveat to make is that we do not know the incidence prior to the reform i.e., the incidence in levels. On the contrary, what we estimate is the change in incidence due to a change in the remitter. We elaborate more on what happens with the baseline incidence when looking at wage effects after a worker becomes ineligible due to kids aging.

³¹As an illustration of this, it is worth mentioning that the minimum wage had 23 changes during the 96-month period that we are analyzing i.e., it was updated roughly every 4 months.

³²The increase in the wage gap is driven by an increase in eligible workers' wage as opposed to a decrease in non-eligible ones. The latter is rather uncommon specially in nominal terms. However, this still could have been possible in our setting as we analyze a period with a relatively high inflation i.e., nominal wages could go up but real wages do not.

the $p75$. This result is reassuring as $p25$ is where family allowances present a higher average tax rate.³³

In Table 3 we report the reduced-form and pass-through estimates from the event study. The reduced-form and first stage point estimates constitute difference in differences coefficients i.e., we pool the coefficients before and after the event and take the difference. The 2SLS is the Wald estimate where we essentially scale the reduced-form by the first stage change in the transfer. This exercise summarizes previous figures and shows that the monthly wage of eligible workers increases by 5 pesos relative to those ineligible after the firm switches to the new regime. This effect declines as we move up in the earnings distribution where the average tax rate and salience of the transfer is smaller. Moreover, in terms of the pass-through, what our estimates show is that for a 1 peso decrease in the transfer paid by employers (holding the total transfer constant) the wage increases by 5 cents, implying an incidence of around 5 percent for those at the average of the monthly wage distribution.

Robustness checks. Our results are robust to a set of validation exercises. First, we show that they are not affected by modeling choices (Table 7). Point estimates are fairly stable with no fixed effects, with firm and time fixed effects, or with firm-specific linear trends. Second, results do not change when we use a balanced panel of firms present in the 96 months of data (Figure 18), when we change the number of consecutive months the firm was paying transfers right before the event (Figure 19), or when we vary the length of the event-time window (Figure 20). Third, the results are preserved when we consider workers that are fully treated during the period 2003-2010, namely, those with children ages less than 18 years old during the whole roll-out period (Figure 21). In addition, results are also robust to adding controls to the main specification that take into account firm's structure i.e., size and composition (Figure 22), and to different estimation samples of firms (Figure 34).

Worker ineligible (child turning 18 years old): Given the nature of the variation that we exploit, a change in the way the transfer is paid, we cannot make a statement about the baseline incidence of the transfer i.e., who benefits from it regardless of how it is disbursed. However, the richness of the dataset that we have access to allow us exploiting another quasi-experimental variation. Concretely, we investigate what happens to a workers' wage when her child turns 18 years old and therefore lose eligibility.³⁴ In a nutshell, what we find is that there is a clear drop in transfer's amount as the child turns 18 but no effect on wages (see Figure 35). We have three potential explanations for this null effect. First, this is an individual rather than a firm level shock, and this could have differen-

³³Intuitively, what this exercise does is to compute the wage gap of two white collar workers ($p25$) and of two directors ($p75$) with and without children within each firm.

³⁴This exercise includes firms under the old system because during that period we observe the transfer's amount and thus we are able to compute a first stage. In addition, we could eventually do the inverse exercise and analyze what happens to wages when a workers start receiving the transfer due to a new child. However, given the type of exogenous variation, having a new child, there are plenty of other things that change at the same time which makes the identification harder.

tial effects e.g., the way workers negotiate could be different. Second, it is likely that workers that become ineligible because of child ageing are closer to the $p75$ than to the $p25$ and therefore have a weaker average tax rate and salience. Third, if rent extraction occurs when the labor relationship and contract is set e.g., with new hires, then it is rather hard to observe changes in wages for contracts that are already set.

Long-run effects: Our baseline estimations focus on wage effects two years all around the switching date (one before and one after). The rationale of such a specification is that this time frame allows looking at a whole calendar year, which naturally takes into accounts the wage dynamics due to seasonalities, and also wage-renegotiations or labor agreements i.e., it's likely that a certain worker had at least one labor agreement before and another after the event). Nevertheless, we push a bit the identification strategy and look at wage differentials up to two years after firms have entered into the new system.

In Figure 23 we present the event study coefficients for the wage evolution of both groups of workers, treatment and control, and also the wage gap 24 months after the event. As it can clearly be inferred from the figures, the wage gap remains stable even looking at a longer time window, both in levels and in differences. If we focus on the last six months, we observe an increase in wage of treated workers relative to controls of about 12 Argentinean pesos, which normalized by the first stage give us a pass-through of approximately 13 percent.

6 Potential mechanisms

Our results thus far show that the way family allowances are disbursed is not neutral and that, on average, employers capture approximately 5 percent of the transfer when they mediate these payments. The incidence literature would benefit from having a story to understand the drivers of this result, because we know that in the end these things are somehow part of a black box. We would like to know the kind of circumstances that make this possible and how the capture was reduced through these means. In this section we then discuss some competing channels that could explain this response. One driven by employers and another one driven by employees. We show evidence in favor of the former and against the latter.

On the one hand, it could be that employers were exploiting workers' confusion under the old regime, and integrating the transfer into the compensation package when the contract was set to capture part of the transfer. After the firm switched to the new system, they could not engage in this practice anymore. Alternatively, it could be that eligible wage earners were confused and after the event, when they started getting the transfer directly from the government, they realized that their paycheck went down compared to their coworkers and thus started bargaining more aggressively.³⁵

³⁵Intuitively, it could be that what was happening was that people were upset because some

Both of these stories require an imperfect understanding of the way family allowances work and how they are funded. This confusion, indeed, seems to be what was happening on the ground before and during the reform. Previous is clearly illustrated in a book compiled by the social security administration: “...the old system (SFC) blurred the image of the State as responsible for it. (...) The roles were confused. People considered that these benefits integrated their salary and that employers were responsible for them. They even ignored that it is the State that pays for them...” (Marasco, 2007). Then, it seems that benefits were poorly understood and that there was a partial perception of them. Furthermore, a survey ran by the SSA in 2018 confirms that workers are still confused about how family allowances are currently funded. More than 50 percent replied that they do not know, 35 percent correctly said that they are paid by the government, and 8.6 percent still think that it is funded by employers (see Table 5).

The key piece of evidence for the labor demand channel is that the result seems to be driven by new hires rather than incumbent workers. This is reported in Figure 9 where we run two different regressions: the one we ran thus far that considers all the workers (blue line), and another one for a balanced panel of employees present at the firm in the whole window (red line). The difference between these two lines thus captures the response of new hires.³⁶ The figure shows no effect for incumbents. This is a group of workers that already have a written contract and their payment schedule is somewhat predetermined, at least in the short run. For new hires, in contrast, the contract is set when they are hired. When the firm is no longer in charge of paying the transfer, they cannot offer it as part of the wage anymore and thus the market wage of new hires goes up.³⁷

In Figure 10 we further break the aggregate wage effect by firm size and type of business. The effect is stronger in small firms with 10 or less employees. This result is in line with the idea that such rent-seeking behavior is stronger in places where employers are closer to their employees. Large firms usually have a human resources department that is in charge of hiring and thus it is presumably harder for managers to engage in such behavior. Two other plausible reasons of differential effects by firm size. First, large firms, in general, give their workers other types of payoffs and in-kind benefits. Second, it is also likely that small firms

see a fall in their salary but their colleague that doesn't have kids didn't see a fall i.e., sort of peer comparisons. Therefore, the worker with kids complained to the employer and, she does it so much that the employer gives her some compensation.

³⁶Note that our empirical strategy requires, for each firm, to have both workers with and without children during the whole event window of the figure. This is why we have to infer the behavior of new hires indirectly. Otherwise, we would be asking too much from the data, especially for small firms i.e., firms hiring every month at least two workers, one with and another without children.

³⁷The new hires story shut down an alternative interpretation that is linked to employers partially insuring their workers in a hypothetical scenario where they do not receive the transfer under the new regime (or take some time to be effective). This also shuts down the potential left digit bias type of adjustment common in the behavioral literature. This adjustment would have suggested that employers increase wages of those workers such that the first digit of their take home pay remain unchanged.

are less monitored by unions,³⁸ social security administrations and tax agencies. The results are also summarized in Table 4. Note that in the case of small incorporated businesses, the pass-through rate is -0.092 which means that employers were capturing about 10 percent of the transfer when they were in charge of its payment.

Furthermore, we discuss three reasons why the horizontal equity channel does not seem to be at play. First, if this was a bargaining story, then one would expect the effect to arise slowly over time. However, we find an immediate effect at $t = 0$ which is more consistent with response from the labor demand. Second, fairness concerns would operate mostly for incumbent workers at the time of the event. Yet, we find a null effect for this group and large effect on new hires. Third, one would expect pay equity concerns to operate more strongly when there is a mix of eligible and non-eligible workers. Hence, the pass-through effect should present a U-shaped relationship with the exposure of a firm to family allowances. That is, it should be stronger at firms with 50 percent of their workforce with children and smaller at the extremes. We test this hypothesis in Figure 11. Panel (a) shows the distribution of firms based on their exposure to family allowances and panel (b) shows the wage effects for different bins of this exposure. The analysis shows an increasing rather than U-shaped relationship (the effect increases with firm exposure).

So far we have seen that the wage effects that we found are mostly driven by new hires and small firms. We then take a step further and dig into firms' degrees of supervision to set contracts, to comply with regulations, etc. Figure 12 presents the 2sls coefficient break down by firms' exposure to unions regulations i.e., percentage of workers that are unionized within each firm. As it can be clearly seen, the less unionized the firm is the larger the effect that we found. Thus, it seems that in those situations where there is more degrees of freedom to adjust new contracts (*new hires*), in setting with less rigid structures (*small firms*) and that are less supervised by unions (*less unionized*) drive most of the observed wage effects.

Moreover, to shed some light on what was going on the ground with collective bargaining agreements (CBA) we did the following, very basic, text mining exercise. Concretely, we looked for key words that could give us pieces of information related to the family allowance program, in general, and to the reform, in particular. We found that less than 10 percent of the agreements ever mentioned something related to family allowances and no reference whatsoever about the reform.³⁹

³⁸Relatedly to previous, it could be that there was a systematic violation of collective bargaining agreements (CBA). That is, employers were agreeing on wages plus transfers before the event to match the CBA wage schedule. Although the CBA refers to wages, in practice they might have been implemented or understood by employers as wages plus transfers (predominantly in small firms). This story of companies getting away with cheating the union contracts was harder to do after the reform because employers lacked accurate information on beneficiaries and transfer amounts.

³⁹To do this we examined a unique digitalization data effort that involved the universe of collective agreements in Argentina. This initiative, carried out by the Argentinean government, digitized all collective agreements that were available, originally in pdf format, and then summarized

Finally, we analyze the dynamics of the wage effect by looking at how the treatment outcome evolves as a larger number of firms get into the new payment system. In principle this is relevant since we could disentangle whether our results are, somehow, more related to a general equilibrium story, namely a market level effect, or on the contrary it is more a firm specific shock. For instance, if we observe that as more firms enter into the new system the treatment effects gets larger, then this is probably more driven by a market level response. Alternatively, the way information about the new payment system was spreaded out as time passed, could also help explaining our results. For instance, those firms that switched first, when there was no information, could have been scared e.g., about a potential retaliation, and that's the reason why they compensated workers. Firms that switched afterwards, already made the adjustment to wages way before they switched because they got to know about the new system. If previous is consistent with what happened, thus we should see a big effect at the beginning that declines over time. As time passes the effect gradually disappears as everybody knows about the new system i.e., we should observe that the effect asymptotically goes to zero. This should be consistent with a sort of *learning story*.⁴⁰

Figure 13 presents the 2sls coefficient over time, where each dot includes a different sample of firms; we consider a moving window of switches by month-year when the event happened. Overall, we find a relatively stable effect over time, if anything a slight U-shape effect. Therefore, we rule out the *learning story* and also the market level effect.⁴¹

Other responses: The structure of the firm, namely its composition in terms of the two types of workers, as well as its size, could have reacted to the reform. In Figure 36 we look at these two margins using the same specification as in equation (2). As we can see, there is no effect in the gap in the number of eligible and non-eligible workers (panel a) as well as on the total number of employees within the firm (panel b). In the long run, two years after the event, it seems that firms start hiring more non-eligible workers than eligible ones.

We also look at whether the reform affected the delinquency rate of firms. To do that we used an additional source of information that contains the monthly financial situation of all employers. This information is compiled by the Central

the main content and information of each agreement (as shown in Figure 24). For each agreement, it is possible to see the level, date, activity, firm's name, as well as the main contents discussed in the agreement are also enumerated. We tried to combine the CBA with the employer-employee data using firm's name, but the exercise was really messy. Initially, we thought that this database could be very informative about the mechanisms and a very good contribution, but we did not want to push more on this.

⁴⁰A simple search of the word "SUAF" in google trends, as a proxy of general awareness of the new system, from the beginning of 2004 (first year where information is available) to the end of 2010, show no spike at the begging and a rather constant number of searches. The peak occurs in June 2010 when the last month to enrol into the new system took place.

⁴¹In this figure we also see that as soon as we start including firms that switched after the beginning of the crisis (dashed-red vertical line) we have that the the effect discontinuously drops at that time. As a reminder, in footnote (23), we make a list of the reasons of why we exclude firms whose transition was after the start of the crisis.

Bank of Argentina into what is called *Central de Deudores del Sistema Financiero* (CENDEU) database. Though rather limited due to the time frame that we had accessed to, it seems that the reform had almost no effect on the delinquency rates of firms (see Figure 38).⁴²

Finally, the family allowance scheme contains *notches* that could, eventually, lead to collusion between employers and employees, materialized in a bunching behavior right before the threshold. Moreover, before the reform, employers had more visibility to keep the salary below the notch so that they could benefit from the transfer; therefore, there was space for collusion because the employer was relatively more aware of the transfer. What we observe looking at the charts in the annex, is no clear bunching in the different notches of the transfer scheme (see Figure 39).

7 Conclusion

In this paper, we study whether the way family allowances are disbursed matters to determine who bears the final incidence of the transfer. To test the standard neutrality hypothesis from the neoclassical model, we exploit a change in the remittance system of family allowances in Argentina. Before the reform was passed i.e., under the old system, employers were in charge of disbursing the transfer to their eligible employees and had the right to net these payments out of employer SSCs liabilities. Afterwards, under the new payment system, the government eliminated this sort of intermediary role that firms used to play, and started disbursing the transfer directly into workers' bank accounts. As a result, the transfer became less salient to employers who used to know who was receiving it and how much. Firms were gradually incorporated into the new scheme over the course of eight years due to administrative and capacity constraints. We combine this gradual roll out, using an event study design, and an employer-employee administrative data to identify wage effects of means-tested transfers that are mediated by employers.

Our results show, indeed, that the way family allowances are disbursed is not neutral. We estimate that monthly wages of workers with children increases by 5 pesos relative to workers without children when firms stop disbursing the transfer (and the SSA delivers them instead). Effects are larger for those located at the lower end of the income distribution, where the average tax rate and salience of the transfer are large, and decline as we move upwards. In terms of the pass-through rate i.e., when we normalize previous increase by the first stage, we get that employers were capturing 5-10 percent of the transfer (by paying lower wages) when mediates its disbursement.

The increase in wages is mostly driven by new hires rather than incumbents

⁴²This result, somehow, shut down the possibility that suggest that firms started paying higher wages to their eligible workers due to a better financial situation (as a result of the new payment mechanism). This does not seem to be the main channel at play.

workers, shutting down the pay equity concern channel. As soon as firms switch to the new regime and stop delivering the transfer, they lose the ability to integrate it into the wage package and thus the market wage of new hires with children goes up. The fact that the effect appears immediately in the first month post event, and that it is driven by new hires, go against a pay equity concern channel, since one would expect the effect to build up slowly and also to affect incumbents. Previous also make sense as incumbents have an already written contract and thus it is harder to observe wage effects; there is more degrees of freedom to negotiate in the case of new hires. Moreover, we find that the effect is larger in rather small firms and in firms that are less unionized (both cases probably with more flexibility to adjust wages). Finally, we document that wage effects are stronger the higher the exposure of a firm to family allowances.

These results raise questions about the use of employers as intermediaries to disburse the transfer; where less salient schemes may lead to capture by the former. The way governments set up tax credit programs, like the EITC in the U.S., influences the final economic incidence, against with what the standard incidence model would have predicted. Our results could be very informative in light of the fast growing relevance of social protection systems around the world. Moreover, there are currently, both developing (Brazil) and developed (Switzerland) countries, that mediate transfers through employers, with very little evidence or awareness of potential unintended consequences.

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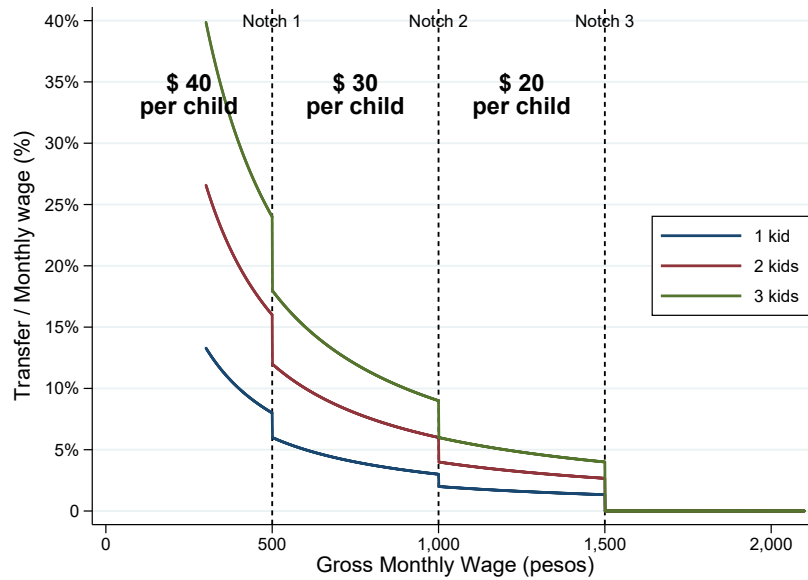
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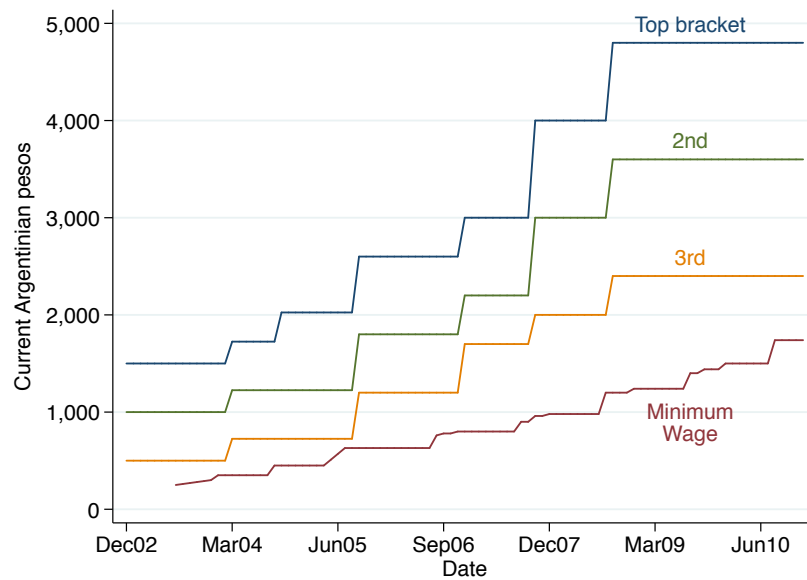
Figures and Tables

Figure 1: Family allowance schedule

(a) Average tax rate (1996-2004)



(b) Bracket thresholds (2003-2011)



Source: own elaboration based on official documentation.

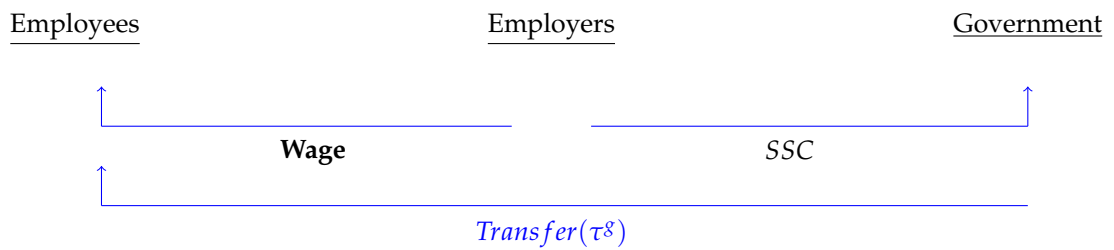
Notes: panel (a) shows the average tax rate (the ratio of transfer to gross earnings) over monthly gross wages. Each line corresponds to a different number of children below 18 years old. Panel (b) presents the three upper monthly thresholds of each bracket; the series at the bottom represents the evolution of the minimum wage. All series are expressed in current Argentinian pesos.

Figure 2: The reform: a change in the payment system

Old system (SFC)



New system (SUAF)



Notes: This diagram illustrates the change in the payment system of family allowances. Under the old system (SFC), employers were in charge of delivering child benefits together with the monthly wage. For transparency purposes the government replaced the intermediary role of firms and started depositing the transfer directly into workers' bank accounts. In the new system (SUAF), firms only had to remit SCC to the IRS.

Figure 3: Saliency of the transfer on a worker's pay slip

EMPLEADOR:XXXXXXXXXXXXXXXXXXXXXXX

DOMICILIO:XXXXXXXXXX

LOCALIDAD:LA PLATA

CAJA:XXXXXXXXXX

Nº DE INSCRIPCIÓN:

LEGAJO Nº3

APELLIDOS Y NOMBRESXXXXXXXXXXXXXX

FECHA DE PAGOO4/06/2010

SUELDO O JORNAL1302.27

CATEG.MAB

FECHA07/05/2010

LAPSO04/10

BANCOPcia.Bs.As.

FECHA INGRESO01/03/1987

DOCUMENTO

SECCION

TAREAMAB

CODIGO

CONCEPTO

HR.

DIA

MESES

ANOS

DEDUCCIONES

LIQUIDACION

QUIN.

MES

ANO

04/2010

1Sueldo básico301302.27

2Antigüedad28419.33

3Presentismo8.33%299.71

200Jubilación11%222.34

201Ley 19.0323%60.64

202Obra Social3%116.93

203Cuota Sindical2%77.95

208F.A.E.C.Y.S.0.5%10.11

301Asig. Hijo720.00

302Asig. Acuerdo. 01 201075.00

504Acuerdo Colect. 04 2009300.00

505Acuerdo Colectivo Abril 08444.32

Transfer = \$720

(\$180 x 4 kids)

ATR = 23%

CUILXXXXXXXXXX

Categoría : MAESTRANZA B

Hab. No Rem: 819.32

Acred. en : Efectivo

LUGAR DE PAGOXXXXXXX

TOTAL HABERES3560.63

TOTAL DEDUC.487.97

NETO A COBRAR3072.66

RECIBI CONFORME LA SUMA DE:

PESOS TRES MIL SETENTA Y DOS CON 66/100

EN CONCEPTO DE MIS HABERES CORRESPONDIENTES AL PERIODO ARRIBA INDICADO Y SEGUN LA PRESENTE LIQUIDACION, DEJANDO CONSTANCIA DE HABER RECIBIDO UN DUPLICADO DE ESTE RECIBO.

FIRMA EMPLEADO

EMPLEADOR:XXXXXXXXXXXXXXXXXXXXXXX

DOMICILIO:XXXXXXXXXX

LOCALIDAD:LA PLATA

CAJA:XXXXXXXXXX

Nº DE INSCRIPCIÓN:

LEGAJO Nº3

APELLIDOS Y NOMBRESXXXXXXXXXXXXXX

FECHA DE PAGOO4/08/2010

SUELDO O JORNAL1302.27

CATEG.MAB

FECHA07/07/2010

LAPSO06/10

BANCO

FECHA INGRESO01/03/1987

DOCUMENTO

SECCION

TAREAMAB

CODIGO

CONCEPTO

HR.

DIA

MESES

ANOS

DEDUCCIONES

LIQUIDACION

QUIN.

MES

ANO

07/2010

1Sueldo básico301302.27

2Antigüedad23419.33

3Presentismo8.33%143.41

200Jubilación11%205.15

201Ley 19.0323%55.95

202Obra Social3%99.27

203Cuota Sindical2%66.18

208F.A.E.C.Y.S.0.5%16.54

502Asig. Acuerdo. 06 201075.00

503Acuerdo 01 2010100.00

504Acuerdo Colect. 04 2009300.00

505Acuerdo Colectivo Abril 08344.32

506Asig. Acu. Enero 2008100.00

507Ad. No Rem. Ac. 06 2010396.14

508Presentismo art 40109.58

CUILXXXXXXXXXX

Categoría : MAESTRANZA B

Acred. en : Efectivo

LUGAR DE PAGOXXXXXXX

TOTAL HABERES3290.05

TOTAL DEDUC.443.09

NETO A COBRAR2846.96

RECIBI CONFORME LA SUMA DE:

PESOS DOS MIL OCHOCIENTOS CUARENTA Y SEIS CON 96/100

EN CONCEPTO DE MIS HABERES CORRESPONDIENTES AL PERIODO ARRIBA INDICADO Y SEGUN LA PRESENTE LIQUIDACION, DEJANDO CONSTANCIA DE HABER RECIBIDO UN DUPLICADO DE ESTE RECIBO.

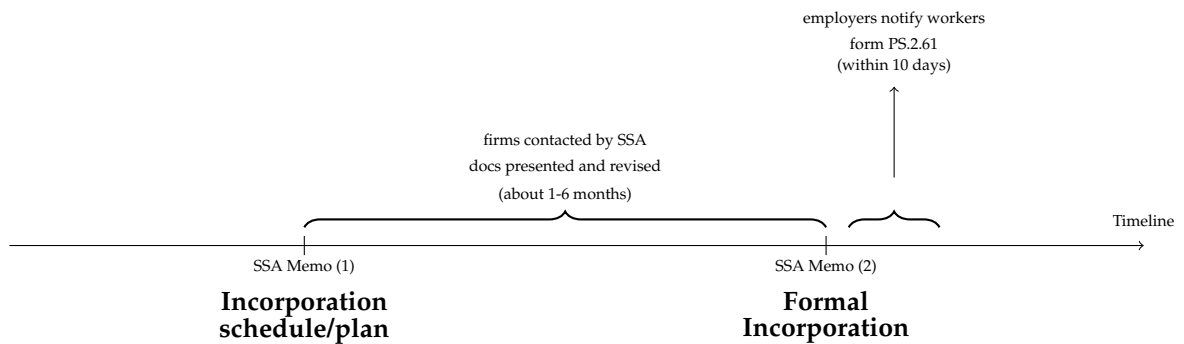
FIRMA EMPLEADO

(a) Before the firm switches

(b) After the firm switches

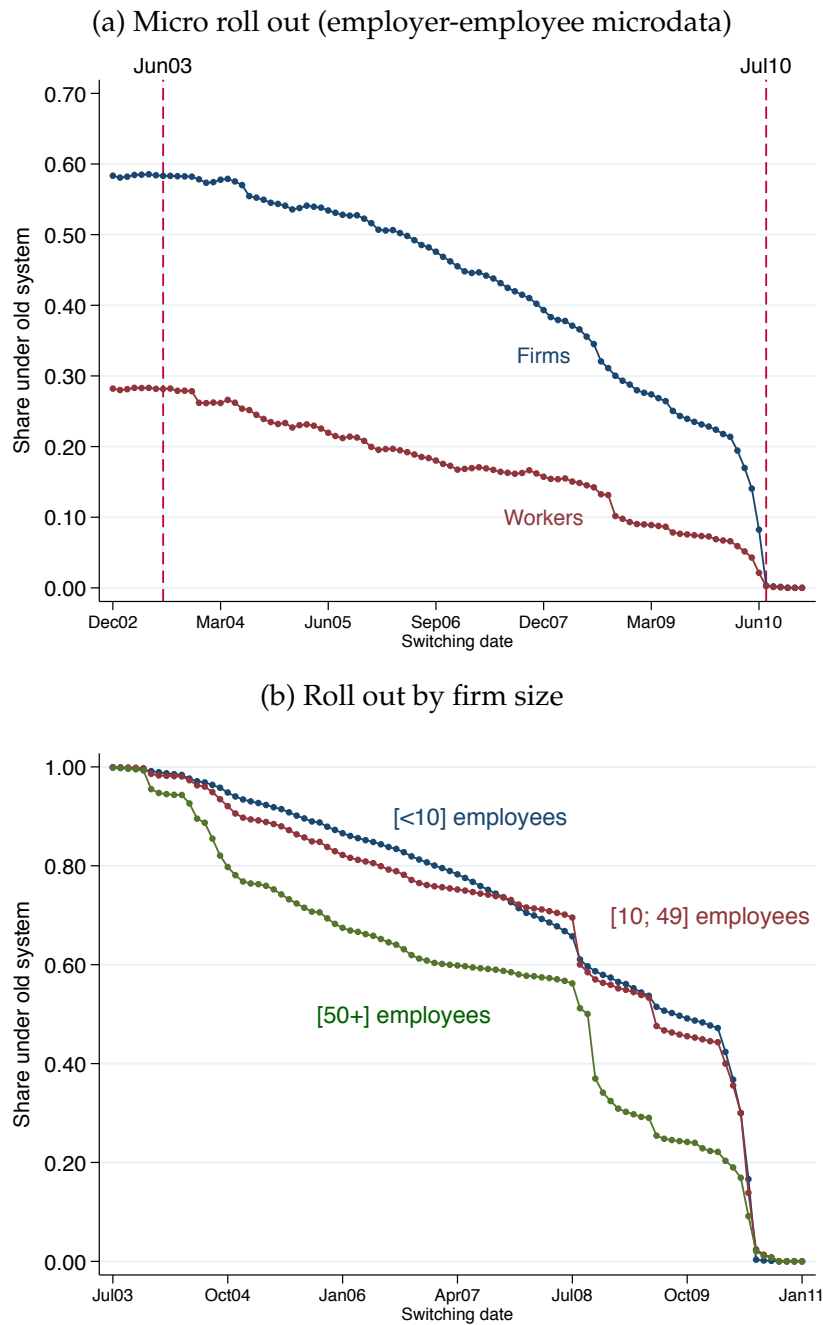
Notes: This figure shows the pay slip of a worker right before and right after the firm switches from the old payment system (SFC) to the new payment system (SUAF). In the old system (panel a) the pay slip contains a line for the transfer making it very salient to both the employer and the employee. The amount that this worker receives is 720 Argentinian pesos corresponding to an average tax credit of approximately 25 percent of total earnings. In the new system (panel b) that line disappears and the worker gets the transfer directly from the government in his checking account.

Figure 4: Firms' incorporation steps into the new payment system



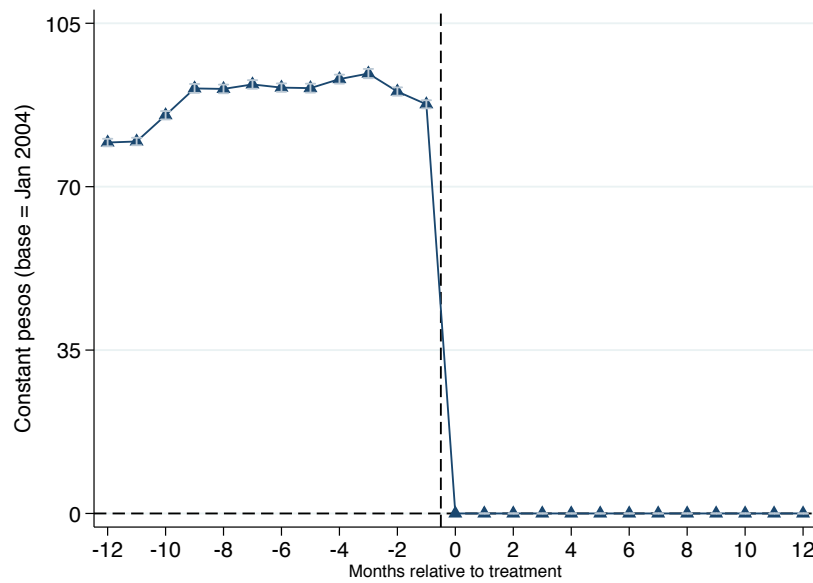
Notes: this figure shows the timeline of the incorporation steps to the new payment system (SUAF). This process was determined by the SSA through official memos posted online. The incorporation started with the SSA setting an *internal* incorporation schedule, where basically the SSA issues a list of targeted firms that will be gradually incorporated up to a certain point in time. Firms were then contacted by an officer and informed to present certain documentation to be incorporated into the system (payroll, beneficiaries, bank accounts). The last step, after checking everything was correct, consisted on the formal approval and incorporation into the new system. Employers were required to notify their employees through an individual form to be signed by both parties (affidavit).

Figure 5: Gradual roll out from the old to the new system



Notes: this figure shows the gradual transition of firms and workers from the employer-based to the government-based payment system. Panel (a) focuses on all firms and workers in the microdata. Panel (b) is restricted to our estimating sample and breaks the roll out by firm size proxied by number of employees in 2003. Source: own elaboration based on employer-employee micro-data.

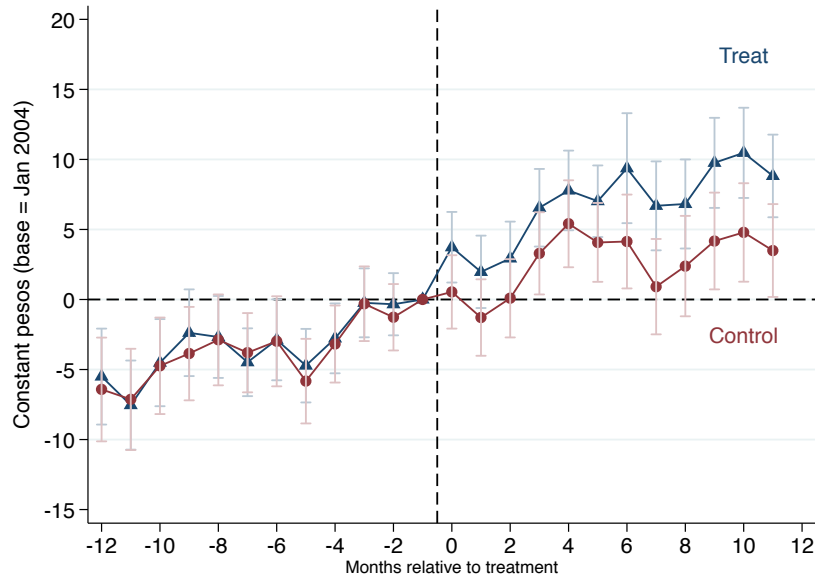
Figure 6: First stage change in the remittance at the event



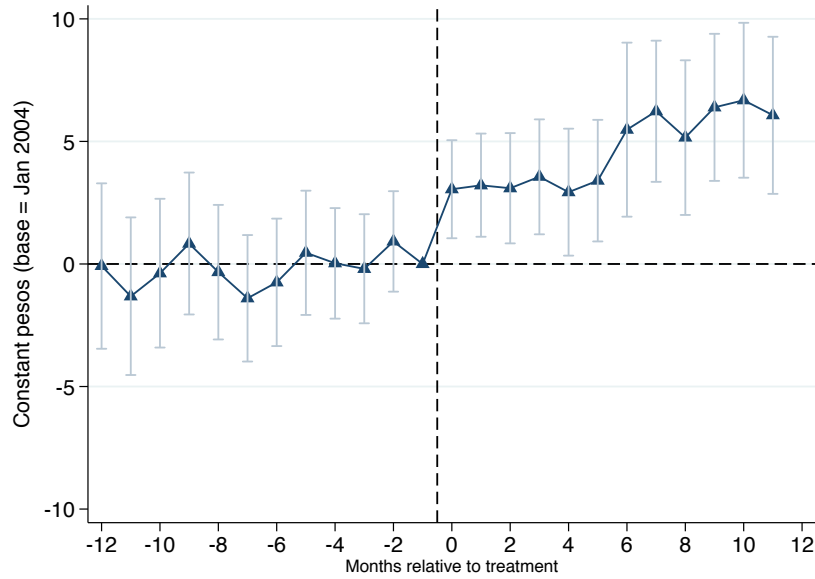
Notes: This figure presents event-study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (1). The dependent variable is the within-firm difference in average family allowance of workers with and without children. It shows that when firms transition to the new system they immediately stop disbursing the transfer and hand this task over to the government. On average, workers with children were receiving approximately 90 pesos more in transfers per month, disbursed by employers, than workers without children.

Figure 7: Reduced-form wage effects

(a) Average wage levels

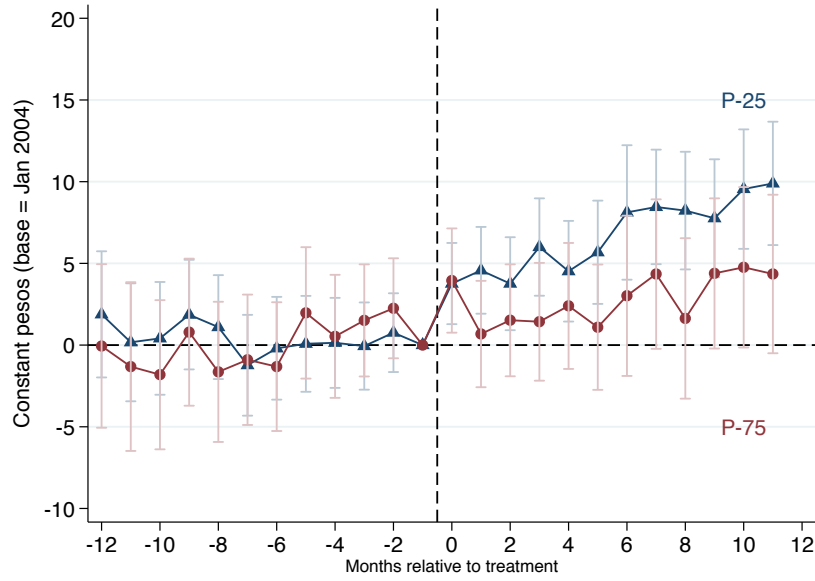


(b) Average wage gap



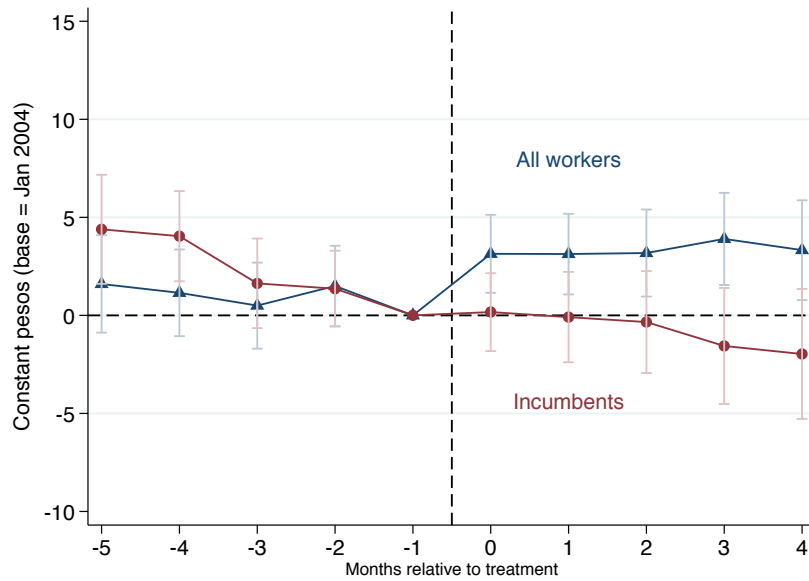
Notes: these figures plot the event-study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (2). Panel (a) shows the wage levels when we estimate this equation separately for workers with children (treat) and without children (control). In Panel (b) the dependent variable is the within-firm average wage gap of these two groups. It shows that monthly wages increase by approximately 5 pesos when firms stop disbursing the transfer to eligible workers.

Figure 8: Reduced-form wage effects: p_{25} vs p_{75}



Notes: this figure plots the event-study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (2). We run two different regressions where the dependent variable is either the 25th or 75th percentile within each firm. It shows that monthly wages increase mostly at the lower end of the distribution and rather less in the upper part.

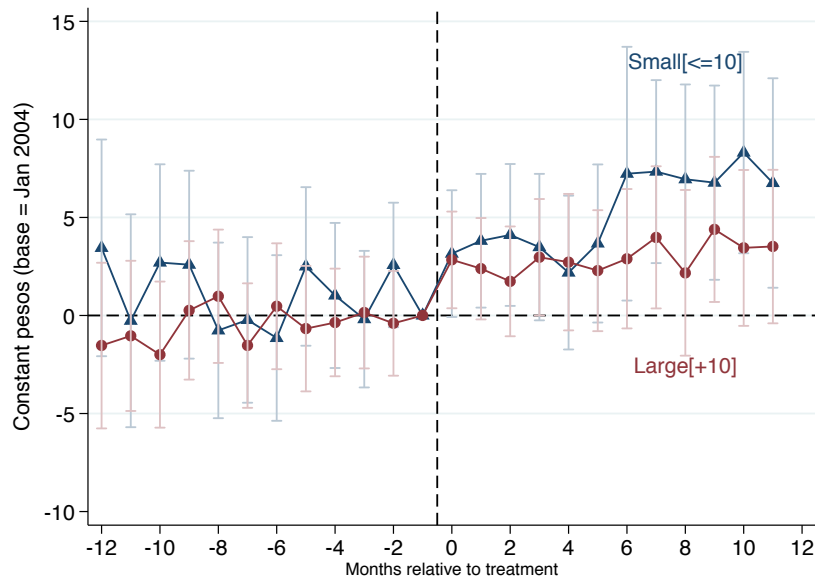
Figure 9: Wage effects: new hires and incumbents



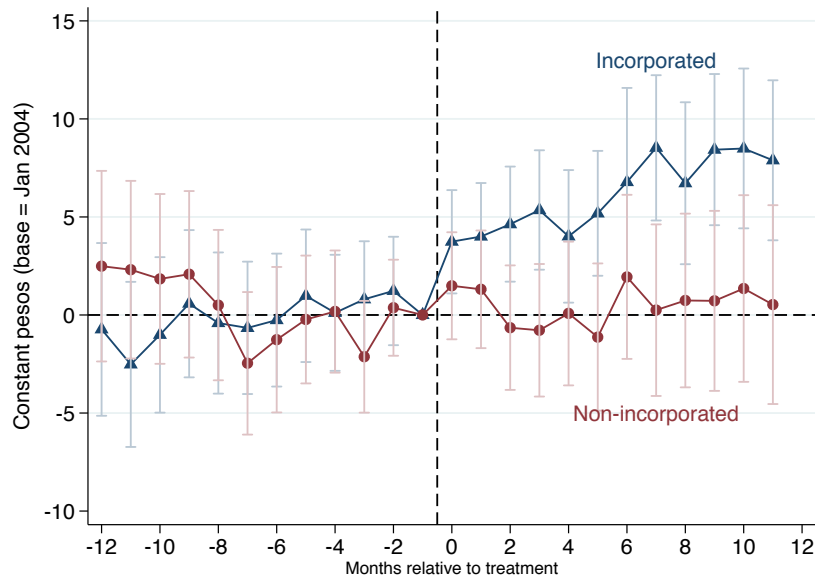
Notes: this figure plots the event-study coefficients and 95 percent confidence intervals of equation (2) considering a time window of one year around the event. The dependent variable is the gross monthly wage gap between workers with and without children. We run two different regressions: the blue line includes all the workers while the red line only considers a balanced panel of employees present at the firm in the whole window (one year). The difference between these two lines captures new hires.

Figure 10: Heterogeneities: firm size and type of business

(a) Small vs. large firms



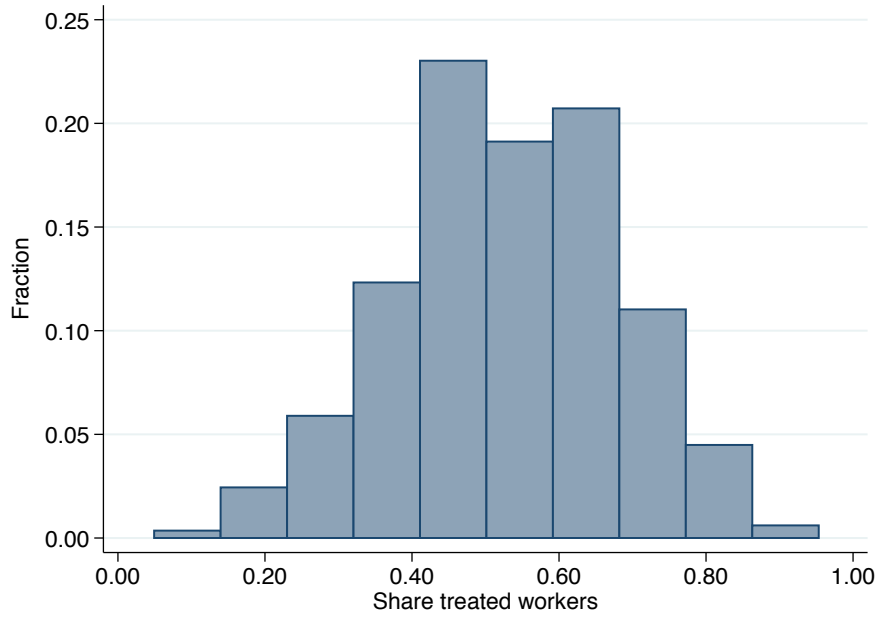
(b) Incorporated vs. unincorporated



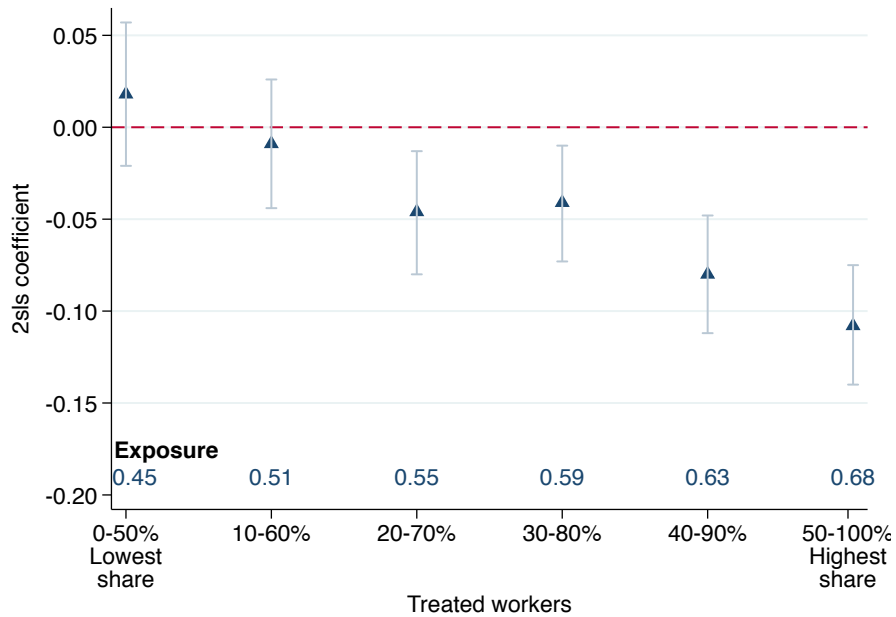
Notes: panel (a) presents event study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (2) for small firms and large firms. Panel (b) plots the event study estimates for incorporated and unincorporated businesses.

Figure 11: Horizontal equity

(a) Firm exposure to family allowances

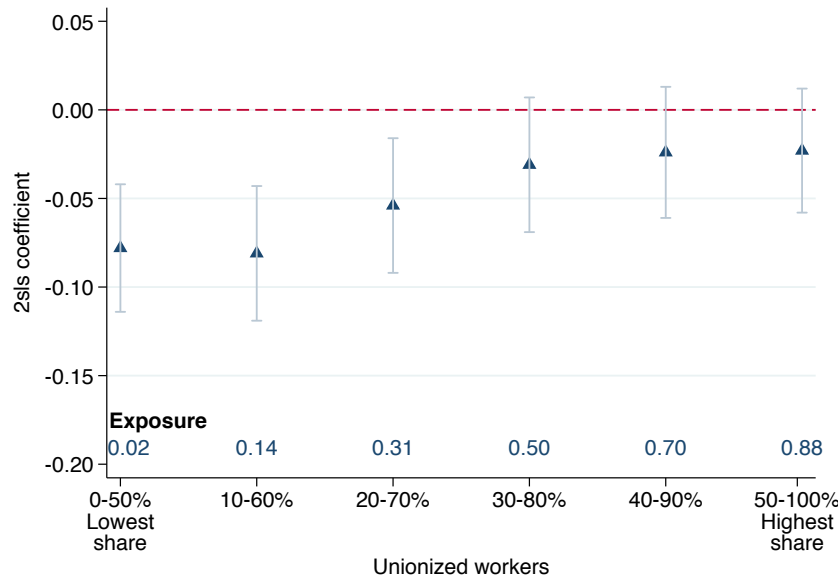


(b) Pass-through by firm exposure



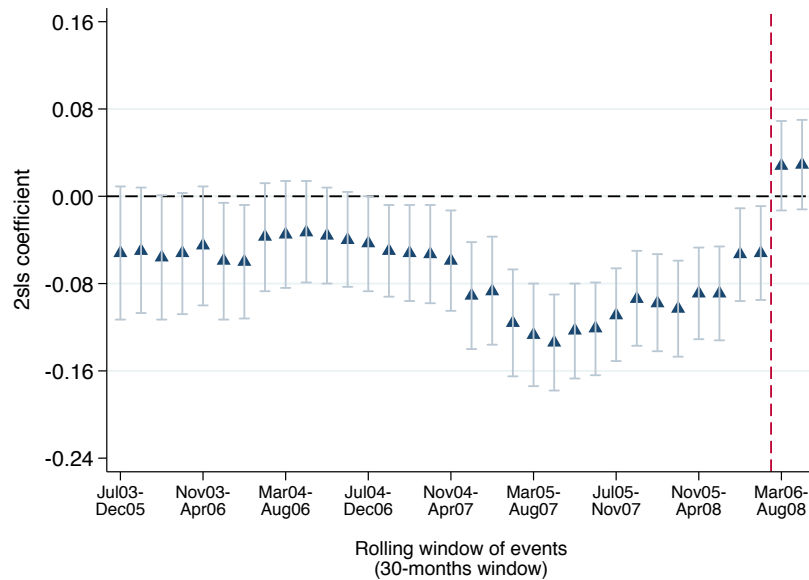
Notes: panel (a) shows the density of firm exposure to the reform. Exposure is defined as the within-firm share of workers with children. Panel (b) plots the reduced-form point estimates of equation (3) for different breaks of firm exposure where each dot corresponds to a separate regression. The bottom part of the figure presents also the mean exposure of each group of firms considered in every single regression.

Figure 12: Wage effects: unionized workers



Notes: this figure plots the reduced-form point estimates of equation (3) for different breaks of firm exposure to unionized workers where each dot corresponds to a separate regression. The bottom part of the figure presents also the mean unionization rate of each group of firms consider in every single regression.

Figure 13: Effects dynamics - rolling windows of events



Notes: this figure plots the reduced-form point estimates of equation (3) considering firms that switched to the new system in different time spans. In particular, we focus on firms that changed regime within a 30-months window and then we move forward following a rolling window of events.

Table 1: Key dimensions under the two payment systems

	SFC (1)	SUAF (2)
Legal liability	<i>Employee</i>	<i>Employee</i>
Remittance responsibility	<i>Employer</i>	<i>Government</i>
Information reporting	<i>Form 931</i>	<i>Form 931</i>
Tax-benefit linkage	<i>Low</i>	<i>Higher</i>
Source of funding	<i>Contributory Employer SSC</i>	<i>Contributory Employer SSC</i>
Transfer's claiming procedure	<i>Employer</i>	<i>Employee</i>

Notes: the first column refers to the *Sistema de Fondo Compensador* (SFC) while the second to the *Sistema Único de Asignaciones Familiares* (SUAF), the old and new payment scheme respectively.

Table 2: Summary statistics for registered salaried workers in Argentina, 2004

	1st Bracket (1)	2nd Bracket (2)	3rd Bracket (3)	Universe (4)
Salaried workers	2,154,722	1,426,404	550,571	4,787,496
Beneficiaries AAFF	480,185	488,414	188,979	1,226,459
Number of children	2.0	2.0	2.0	2.0
Female (%)	21.4	19.5	13.6	33.8
Average earnings	555	941	1,486	1,148
Transfer/Earnings (%)	13.1	6.8	3.6	7.7

Notes: this table displays summary statistics for private formal salaried workers in April 2004.

Table 3: Wage effects and pass-through of a change in the remittance system

	All post periods [0;11] (1)	Last 6 periods [6;11] (2)	Last period [11] (3)
Reduced form			
Δ monthly wage (in pesos)	4.69*** (1.21)	5.93*** (1.52)	5.73*** (1.88)
First stage			
Δ transfer (τ^e) (in pesos)	-94.13*** (0.35)	-95.28*** (0.37)	-93.94*** (0.38)
2sls			
$\frac{\Delta wage}{\Delta transfer(\tau^e)}$	-0.05*** (0.01)	-0.06*** (0.02)	-0.06*** (0.02)
Number of firms	26,226	26,226	26,226
Observations	2,285,705	2,128,349	1,998,351
Avg wage at t-1	871	871	871

Notes: this table reports the reduced-form and 2SLS estimates from the event study. In the first panel, we pool the coefficients from Figure 7 before and after the switching date and we then take the difference. In the second panel, we do the same for the change in transfers paid by employers. In the third panel, we run a 2sls regression to scale the reduced-form coefficient by the first stage change in the transfer. In column (1) we pool the coefficients for the 12 months post event. In column (2) we pool the coefficients for the last 6 months post event. In column (3) we take the coefficients for the last month post event. Standard errors are clustered at the firm level are reported in parentheses. *** significant at 1%, ** significant at 5%; * significant at 10%.

Table 4: Wage effects and pass-through by firm size and type of bussines

	Small [<= 10] (1)	Large [+10] (2)	Non Incorpo (3)	Incorpo (4)	Incorporated Small [<= 10] (5)	Large [+10] (6)
Reduced form						
Δ monthly wage (in pesos)	4.21** (2.01)	3.36** (1.51)	0.26 (1.92)	6.15*** (1.54)	9.35*** (3.07)	3.10* (3.07)
First stage						
Δ transfer (in pesos)	-102.22*** (0.61)	-86.62*** (0.37)	-99.50*** (0.71)	-91.66*** (0.40)	-101.67*** (0.82)	-85.76*** (0.40)
2sls						
$\frac{\Delta wage}{\Delta transfer(\tau^e)}$	-0.041** (0.020)	-0.039** (0.017)	-0.003 (0.019)	-0.067*** (0.017)	-0.092*** (0.030)	-0.036* (0.02)
Number of firms	12,278	13,948	8,133	18,093	6,451	11,642
Observations	1,050,424	1,235,281	688,451	1,597,254	556,922	1,040,332

Notes: this table reports the reduced-form and 2SLS estimates from the event study. In the first panel, we pool the coefficients from Figure 7 before and after the switching date and we then take the difference. In the second panel, we do the same for the change in transfers paid by employers. In the third panel, we run a 2sls regression to scale the reduced-form coefficient by the first stage change in the transfer. In columns (1) and (2) we break the result for small firms (10 or less employees) and large firms (more than 10 employees). In columns (3) and (4) we break the result for incorporated and unincorporated businesses. In columns (5) and (6) we combine size and type of business. Standard errors are clustered at the firm level are reported in parentheses. *** significant at 1%, ** significant at 5%; * significant at 10%.

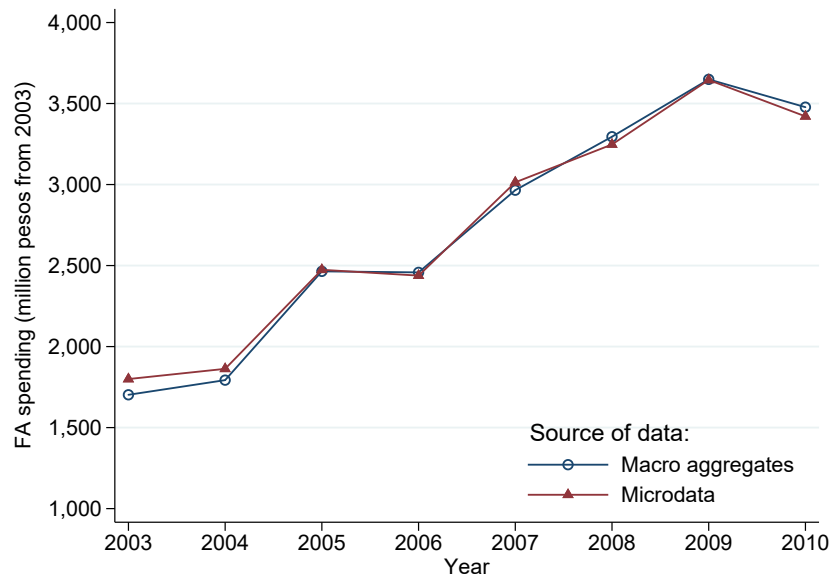
Table 5: Survey evidence about the understanding of family allowances (2018)

Who is the responsible of paying family allowances?	
People answered:	
A. Government	35.4%
B. Employer	8.6%
C. Other	4.0%
D. Don't know	52.0%

Notes: this table shows the results from a survey carried out by the social security administration (Anses) where they asked people if they knew who was responsible of paying family allowances in Argentina. Option C includes: N/A; the call got interrupted, the bank. Source: based on a SSA report (Cruces, 2019).

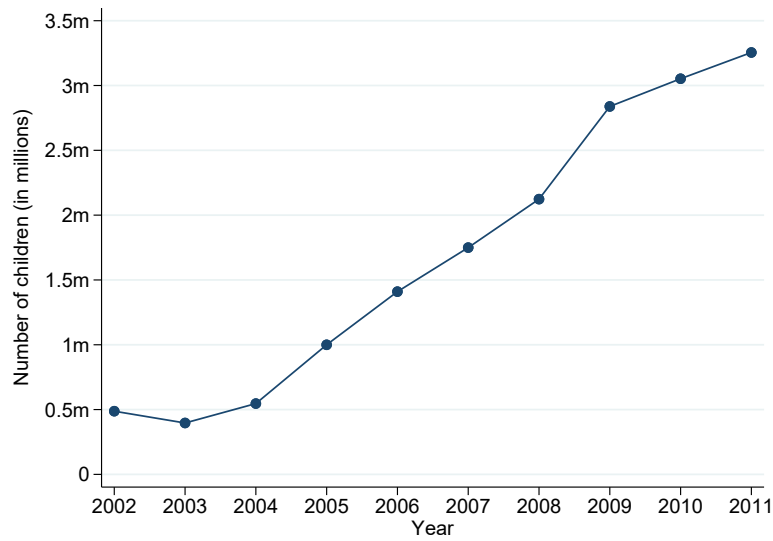
A Appendix Figures and Tables

Figure 14: Macro and micro aggregates comparison



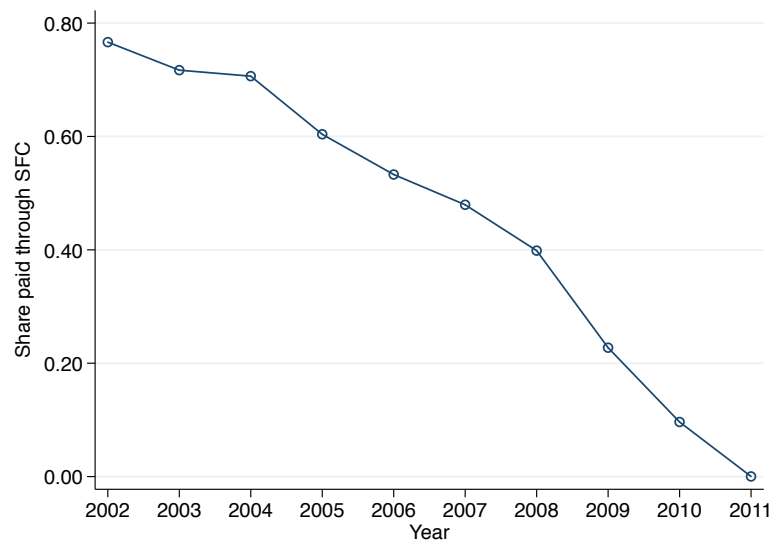
Notes: this figure shows the total expenditure on family allowances in real terms (old and new system). The blue connected dots present the macro total available in official budget information (data extracted from *Cuenta de Inversion*, *Contaduría General de la Nación* and *Informe Gerencial* (AFIP)) while the red ones contains the total estimated using the employer-employee micro-data adding up the transfer variable reported by employers.

Figure 15: Beneficiaries (number of children)



Notes: this figure shows the number of children receiving the child benefit between 2002 and 2011. Reassuringly the number does not decrease during the transition from the old to the new system. The sharp increase could be due to the fact that the economy was booming and there was a formalization process carried out by the IRS.

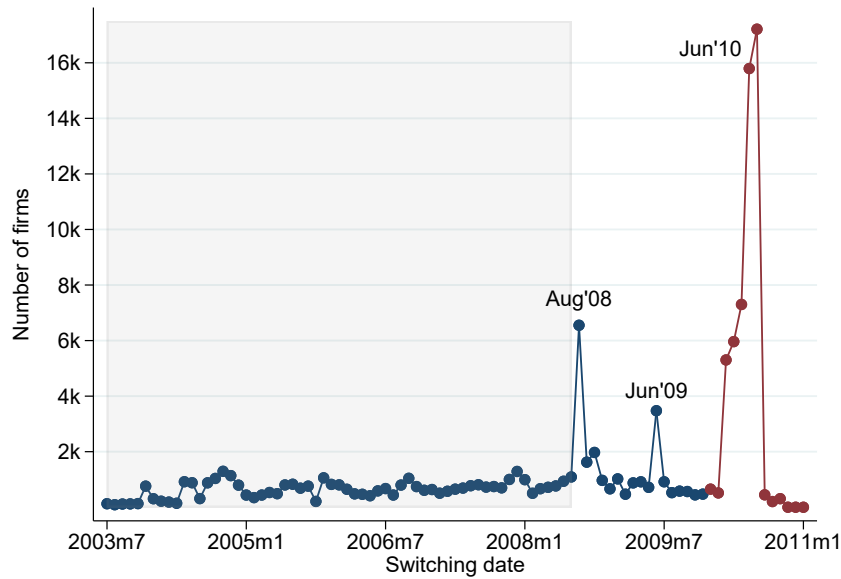
Figure 16: Macro roll-out (official budget information)



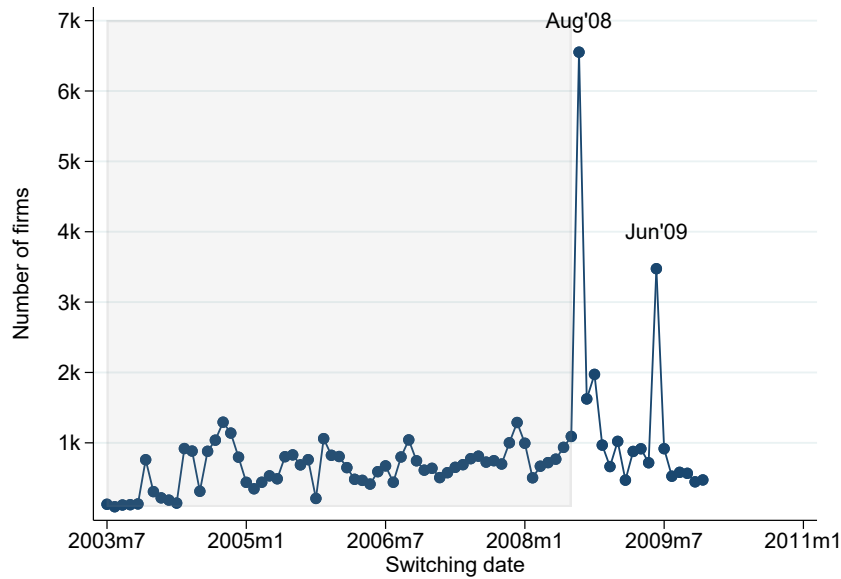
Notes: this figure shows the share of family allowances paid under the old system (SFC). The aggregate expenditure on family allowances is taken from official budget information (*Cuenta de Inversion, Contaduría General de la Nación* and *Informe Gerencial* (AFIP)). The gradual decline in this share illustrates the staggered transition to the new system.

Figure 17: Event frequencies per month-year (number of firms)

(a) Full period 2003-2010

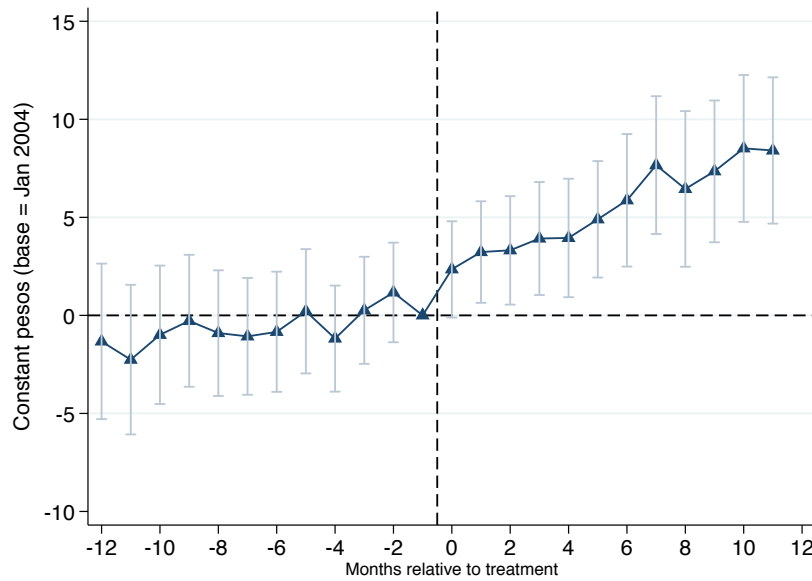


(b) Zoom in before 2010



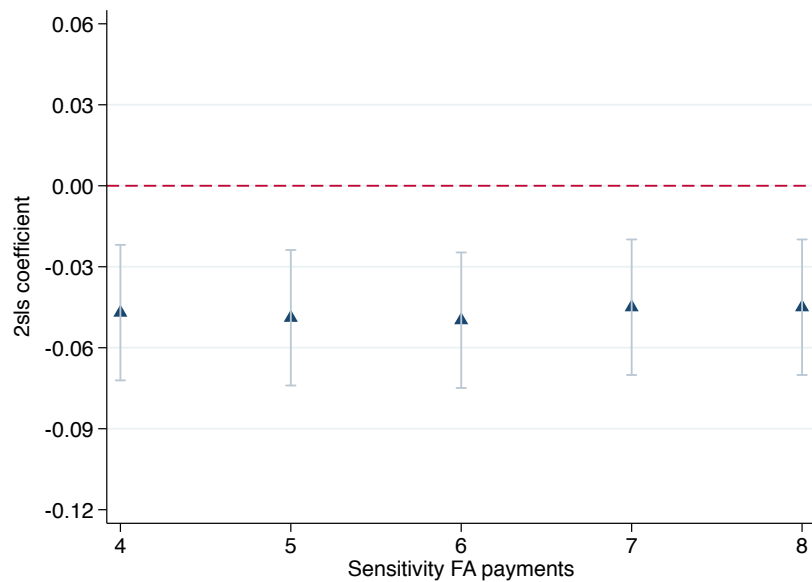
Notes: these figure show the number of firms switching to the new system at each month-year of our micro-data. Panel (a) shows the full period from 2003 to 2010 and panel (b) restricts the graph to pre-2010 data to get a clearer picture. The spikes correspond to three massive incorporation dates: August 2008 (Great Recession), June 2009, and March-July 2010. Source: own elaboration based on employer-employee micro-data.

Figure 18: Balanced panel



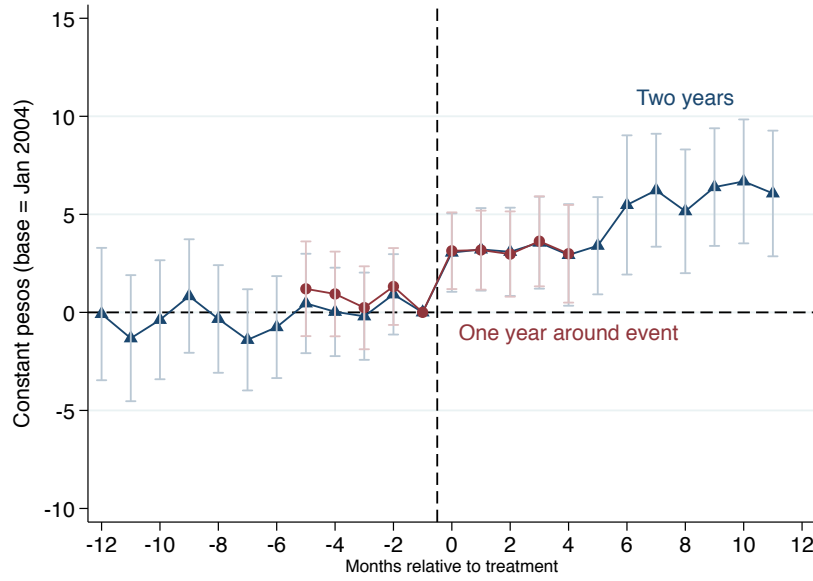
Notes: this figure plots the event-study coefficients and 95 percent confidence intervals of equation (2). It shows that results remain unchanged when considering a balanced panel of firms present in the 96 months of data.

Figure 19: Sensitivity to months of transfer payments (2SLS)



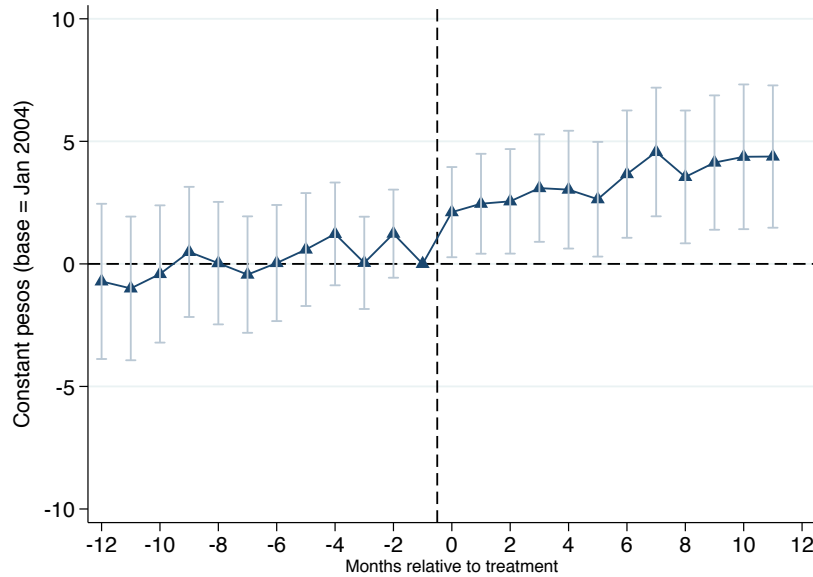
Notes: each dot in this figure corresponds to a different reduced-form point estimates of equation (3) where we vary the sample of firms according to the number of months that each firm was paying family allowances (FA) right before the event. We consider firms paying at least 4, 5, 6, 7, and 8 months respectively. The result is very stable across specifications.

Figure 20: Sensitivity to event window range



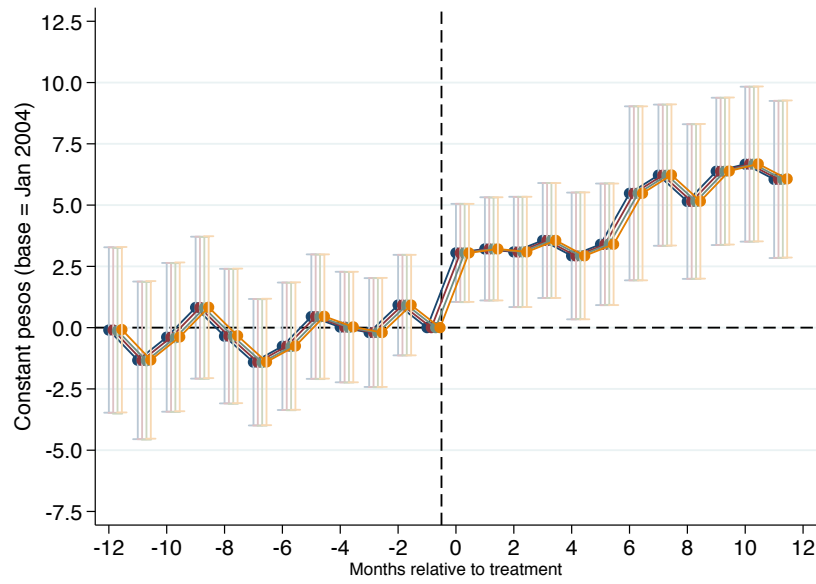
Notes: this figure plots the event-study coefficients and 95 percent confidence intervals of equation (2). This figure shows that results remain unchanged when considering a time window of 6 months before and after the event instead of 12 months.

Figure 21: Alternative treatment group definition



Notes: this figure plots the event-study coefficients and 95 percent confidence intervals of equation (2). It shows that results remain unchanged when using an alternative definition of the treatment group that considers workers that are fully treated during the period 2003-2010 i.e., those with children ages less than 18 years old during the whole roll-out period.

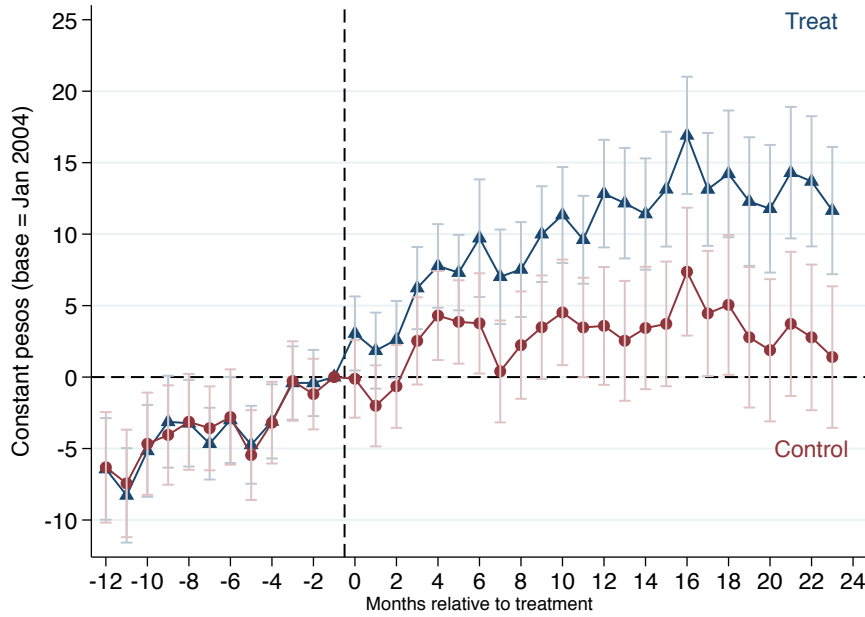
Figure 22: Wage effects under alternative specifications (including controls)



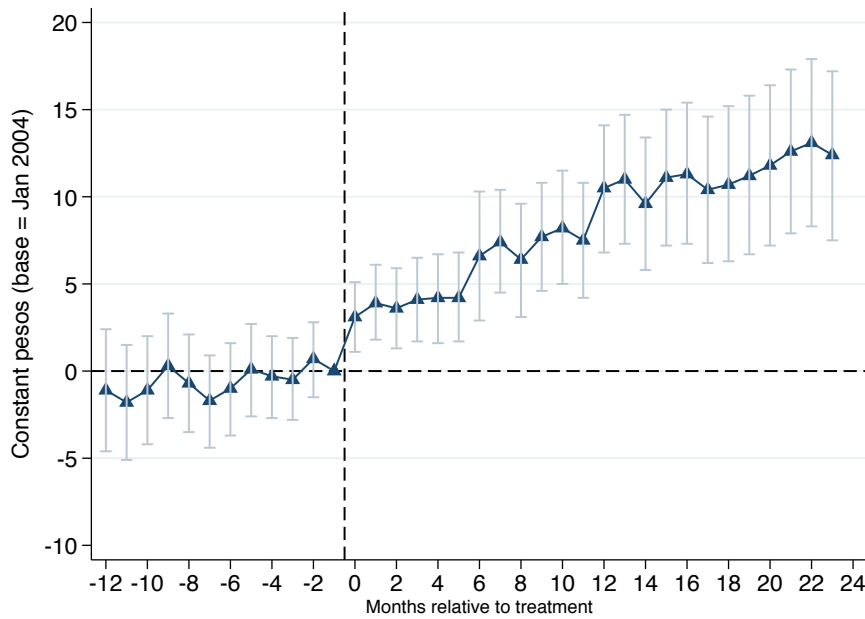
Notes: these figures plot the event-study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (2) (blue series). In the other series we include controls such firm size, the gap in the number of treated and control workers and as well as its square. The point estimate and the standard errors remain unchanged after adding these set of controls.

Figure 23: Reduced-form wage effects (long run)

(a) Average wage levels



(b) Average wage gap



Notes: these figures plot the event-study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (2) focusing on 12 months before and 24 after respectively. Panel (a) shows the wage levels when we estimate this equation separately for workers with children (treat) and without children (control). In Panel (b) the dependent variable is the within-firm average wage gap of these two groups. Both figures provide clean evidence of the effect on wages as a result of the change in the payment system.

Table 6: Monthly transfer by income bracket (1996-2010)

Year	Effective date M/D/Y		Law	Monthly Gross E.		Child Transfer
	Start	End		\geq	\leq	
1996	10/16/96	03/01/04	Law 24714/1996	-	500	40
			Dto. 1245/1996	500	1,000	30
			Res. 112/1996	1,000	1,500	20
2004	03/01/04	10/01/04	Dto. 0368/2004	100	725	40
				725	1,225	30
				1,225	1,725	20
2004	10/01/04	09/01/05	Dto. 1691/2004	100	725	60
				725	1,225	45
				1,225	2,025	30
2005	09/01/05	12/01/06	Dto. 1134/2005	100	1,200	60
				1,200	1,800	45
				1,800	2,600	30
2007	12/01/06	10/01/07	Dto. 0033/2007	100	1,700	72
				1,700	2,200	54
				2,200	3,000	36
2007	10/01/07	09/01/08	Dto. 1345/2007	100	2,000	100
				2,000	3,000	75
				3,000	4,000	50
2008	09/01/08	10/01/09	Dto. 1591/2008	100	2,400	135
				2,400	3,600	102
				3,600	4,800	68
2009	10/01/09	09/01/10	Dto. 1729/2009	100	2,400	180
				2,400	3,600	136
				3,600	4,800	91
2010	09/01/10	10/01/11	Dto. 1388/2010	100	2,400	220
				2,400	3,600	166
				3,600	4,800	111

Notes: own elaboration based on official documents. The last three columns are expressed in current Argentinian pesos.

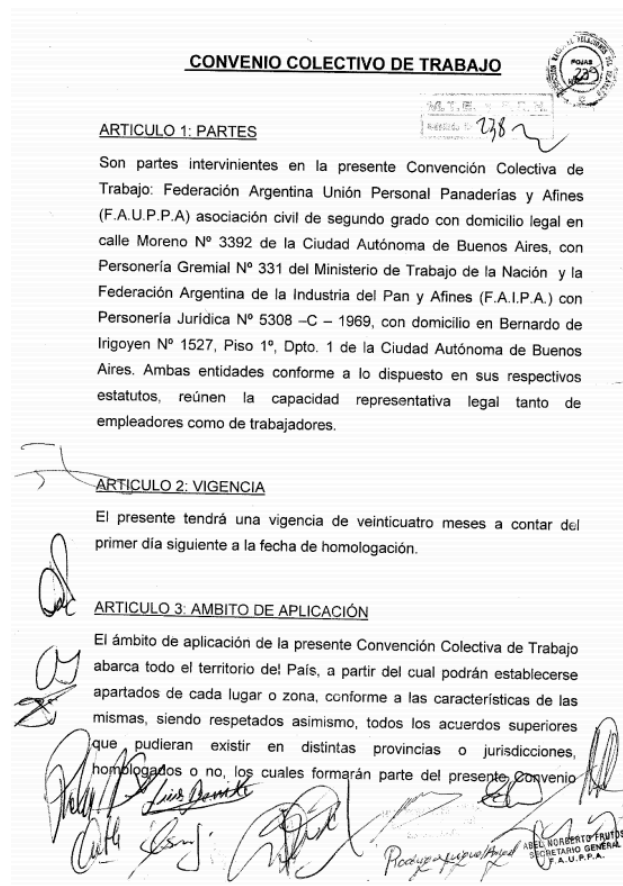
Table 7: Robustness exercises - alternative specifications

	(1)	(2)	(3)
Reduced Form			
Δ monthly wage (in pesos)	4.44*** (0.85)	4.69*** (1.21)	4.33*** (1.23)
2sls			
$\frac{\Delta wage}{\Delta transfer(\tau^e)}$	-0.05*** (0.01)	-0.05*** (0.01)	-0.05*** (0.01)
Simple mean difference	✓		
Firm and time FE		✓	✓
Firm linear trend			✓
Observations	2,285,705	2,285,705	2,285,705





Notes: this table presents the reduced-form and 2sls point estimates of equation (3) in column [2]. In column [1] we run equation (3) without firm and time fixed while column [3] refers to equation (3) plus firm linear specific trends. Standard errors clustered at the firm level in parentheses.

Figure 24: Collective agreement

(a) Example of a collective agreement (pdf format)



(b) Summary of a collective agreement

CONVENIO COLECTIVO DE TRABAJO 1523/2016 [CCT-1523-2016-E]					
Nivel : EMPRESA	SubNivel Empresa : Única	Celebración 29-09-2015	Publicación en BO	No informada	Actividad PETROLEROS
Partes	Sindicato/s Empleador/s	SUPEH - FEDERACION SINDICATOS UNIDOS PETROLEROS E HIDROCARBURIFEROS YEL INFORMATICA S.A.			
Vigencia	Salarial General	Desde 1/9/2015 hasta 31/8/2016 Desde 1/9/2015 hasta 31/8/2018			
Ambito Territorial de Aplicación	Ambito Territorial	No abarca ni siquiera una zona de tipo provincia			
	Territorio Comprendido	AMBITO DE LA EMPRESA - REFINERIA BARADERO 777 - LA PLATA, SEDE CENTRAL TUCUMAN 744 - CABA Y PETROQUIMICA AV. GOBERNADOR VERGARA KM 27 - LA PLATA			
Ambito Personal de Aplicación	Personal Incluido	TRABAJADORES DE LA EMPRESA QUE SE DESEMPEÑEN EN TODA ACTIVIDAD QUE SE DESARROLLE EN LOS AMBITOS DE EXPLORACION, PRODUCCION, INSUTRIALIZACION, COMERCIALIZACION, TRANSPORTE Y ADMINISTRACION DEL PETROLEO Y SUS DERIVADOS EN CONTINENTE Y COSTA AFUERA			
	Personal Excluido	NO ESPECIFICA			
Contenidos discutidos	ADICIONAL TAREAS DE TURNO; ANTIGÜEDAD; APOORTE SOLIDARIO; COMPENSACION BRIGADA CONTRA INCENDIOS; CONTRIBUCION EMPRESARIA; CUOTA DE AFILIACION; DIA DEL TRABAJADOR PETROLERO; FORMAS DE CONTRATACION; HORAS EXTRAS; INFORMACION Y CONSULTA; JORNADA LABORAL: TAREAS INSALUBRES, FRANCS NO APLICADOS; LICENCIA ORDINARIA; LICENCIAS ESPECIALES REMUNERADAS: NACIMIENTO DE HIJO, MATRIMONIO, FALLECIMIENTO DE FAMILIARES, EXAMEN, ADOPCION, RAZONES DE SALUD, SITUACIONES DE FUERZA MAYOR, FENOMENOS METEOROLOGICOS, DONACION DE SANGRE; PERIODO DE PRUEBA; POLIVALENCIA LABORAL; PRESENTISMO; RECONOCIMIENTO MUTUO; REDUCCION DE JORNADA POR MOTIVOS FAMILIARES; REGIMEN DE OBRA SOCIAL; SEGURIDAD E HIGIENE INDUSTRIAL; SUELDO ANUAL COMPLEMENTARIO; SUELDO BASICO; TELETRABAJO; VIANDA AYUDA ALIMENTARIA				
Convenio, Acuerdo o Laudo		CCT-1523-2016-E			
Norma Homologatoria		Norma Homologatoria			
Información Relacionada al Convenio, Acuerdo o Laudo		ANEXO - ESCALA SALARIAL			
		ANEXO - RES. TOPE INDEMNIZATORIO			

Notes: Panel (a) contains a screenshot of the first page of a collective agreement. This is a standard type of agreement where the different articles (ARTICULO) describe what has been discussed and/or negotiated. Panel (b) presents a summary of the information extracted from a given collective agreement (CCT – 1523 – 2016 – E). As it is possible to see, this agreement is at firm level (Nivel: EMPRESA), was celebrated in September 29th 2015 (Celebración: 29-09-2015) and it affected workers in the oil sector (Actividad: PETROLEROS). Moreover, the main contents discussed in the agreement are also enumerated (Contenidos discutidos: ADICIONAL TAREAS DE TURNO; ANTIGÜEDAD; APOORTE SOLIDARIO, etc). In addition, firm's name is available within the extracted information (Empleador/s: YEL INFORMATICA S.A.).

B Family Allowances in Argentina

The AAFB program benefits low and middle-income families. For example, a worker who earns the minimum wage typically falls in the lowest bracket and is eligible for the highest allowance. More generally, between 2001 and 2008 the upper earnings limit, where the worker loses eligibility, was approximately equal to the average monthly wage of registered workers.^{1 2} Note that the typical FA recipient is located rather in the low-middle end of the *formal* wage distribution. The existence of unregistered, or *informal*, wage employees, who generally have lower earnings, points towards the fact that the AAFB is not targeted towards the poorest families in the country.

Table 6 provides a complete picture of the scheme including the evolution of the brackets and the exact transfer amount per child. As it is possible to see from the table, the amounts are adjusted semi-annually. The average tax credit rate for the lowest category is on average 7 percent,³ and in the micro-data, we observe that on average each claimant does so for two children (therefore final ATR is double). In 2010, roughly 1.5 million registered workers received a total of \$10 billion in AAFB payments.

The AAFB is an “individually-based” scheme meaning that individual earnings are considered to determine the bracket and transfer amount (as opposed to nuclear family earnings). Only one of the parents or guardian, conditional on being formally employed, is entitled to receive this benefit, but not both of them at the same time. This implies that if one of the spouses earns more than the upper gross earnings threshold, he/she is not entitled to receive the benefit but the other can (conditional on being a formal employee and with gross wage earnings below the upper threshold).⁴ Since 2012, the tax credit went from being individually-based with 3 progressive brackets to family-based with 4 progressive brackets.⁵ The family-based component means that to be entitled to receive the allowance, none of the child’s parents can earn more than the upper threshold.⁶

Besides the AAFB program mentioned above, the Argentinian government currently transfers money to households with children in two other different schemes. First, middle- and high-income workers subject to the income tax are

¹Workers are also entitled to one-time benefits upon marriage; pregnancy, birth, or adoption of a child; for maternity leave or prenatal care; and for a disability of a child or spouse.

²To avoid any potential gaming behavior to the system, the worker has to earn more than 100 pesos to be eligible to receive the transfer. This floor remained constant from March 2004 to September 2012.

³Calculated using the upper threshold e.g., in the first row we took the ratio 40 over 500.

⁴When a certain worker has more than one job, she is entitled to receive the family allowances benefits in only one of them, the one with the highest seniority.

⁵See Decree 1667/2012.

⁶In principle, this change could improve the targeting of the scheme. However, it may also impose some costs to secondary earners within the household, typically female, given that they face a higher marginal tax rate with a potential concern on labor supply. This is an interesting reform for future research.

entitled to personal exemptions in the form of a fixed deduction per spouse and per child (this is technically a tax credit conditional on having children). As in many countries, taxpayers below a given threshold are exempt of the personal income tax. In general, this threshold coincides with the upper threshold where workers lose the AAFP transfer but this is not always the case. The unification of both thresholds is a way to assure that every child receive at least a certain amount of aid from the government. Second, Argentina introduced a universal child credit (the Universal Childhood Allowance, AUH for its acronym in Spanish) in 2009, extending in this way the coverage to unemployed and informal workers (Decree 1602/2009). Payments are conditional on enrolling children into schools, health check-ups, and vaccinations.⁷

The ongoing Argentinian scheme, including the three systems mentioned above, is plagued with inconsistencies and inequities. For instance, while transfers received through AUH are conditional on some requirements e.g., school enrollment, the child tax credit embedded in the personal income tax exemptions does not impose any conditionality. Moreover, family allowances to formal employees are paid on a monthly basis and the full transfer is paid each month. AUH recipient's, on the contrary, receive 80 percent of the transfer each month and the rest is disbursed at the end of the year when conditionalities are checked. In a context of high inflation, where the purchasing power of money is eroded quite fast, this can make a big difference. Final remark, if both spouses file personal income tax, they can both deduct the children they have in common duplicating the amount of the tax credit.⁸ It is then likely, that the effective final transfer received by a rich household is indeed higher than a poorer one.

C Macroeconomic and historical context

Argentina went through a large economic crisis during the period 2001/2002 with a sizable drop in the per capita gross domestic product of around 12 percent. The crisis established the end of the *convertibilidad* that tied the Argentinean peso to the US dollar, and leaded the country into one the largest depression in its history including institutional, political and social unrest. As a proof of such a complicated time, it can be mentioned that the country presented the highest poverty and inequality levels ever documented, and that it had five presidents in only one week. Moreover the period was characterized by some difficult episodes, including lootings, and the introduction of quasi-currencies that were gradually removed afterwards. Naturally, as the Argentinean peso was untied to the US dollar, there was a a jump in the exchange rate and the fear to the return of inflation was latent again.

⁷This type of programs are known as Conditional Cash Transfer (CCT) and have been gradually introduced across all Latin American countries after the famous Mexican experience (*Progres*).

⁸This has been recently removed (Resolution 4283/2018), and only one spouse is allowed to deduct the children they have in common.

After the crisis Argentina experienced a steady and continuous recovery with an (average) annual gdp growth of approximately 7 percent. Throughout the period, we observe an increase in employment, production and formalization rates, among others indicators. As a caveat, inflation that had been almost inexistent during the nineties, started rising after the depreciation of the peso. Moreover, during the 2003-2010 period, yearly inflation was on average 15 percent. For the purpose of this paper i.e., estimate wage effects, the presence of inflation represents a very interesting feature. Somehow, this is an ideal context to measure this type of things, as wages are gonna be renegotiated quite often. In other setting, its going to take time, it is going to be confounded by differential trends, but here we think is clean for this reason. Figure 25 illustrate this point; it presents the consumer price index (CPI) and the average salary of registered workers in nominal terms, both on a monthly basis.

As way to complement previous, for instance, it is worth mentioning that the minimum wage had experienced 23 changes during the 96-month period that we are analyzing i.e., it was updated every 4 months. During these years, there were also several changes in the minimum pension allowance and, as already shown in Table 6, the thresholds and amounts of family allowances have been updated roughly once per year. Overall, this suggests that prices (wages) were quite flexible during the time span that we are interested in.

In terms of wage setting institutions and regulations, approximately half of the workers are, one way or another, covered by unions. Collective bargaining agreements occur either at firm or at activity level, 63 and 37 percent respectively (see Figure 24 for an example of a CBA). In principle, these agreements could take place at any moment within the year, as it is possible to see in Figure 26.

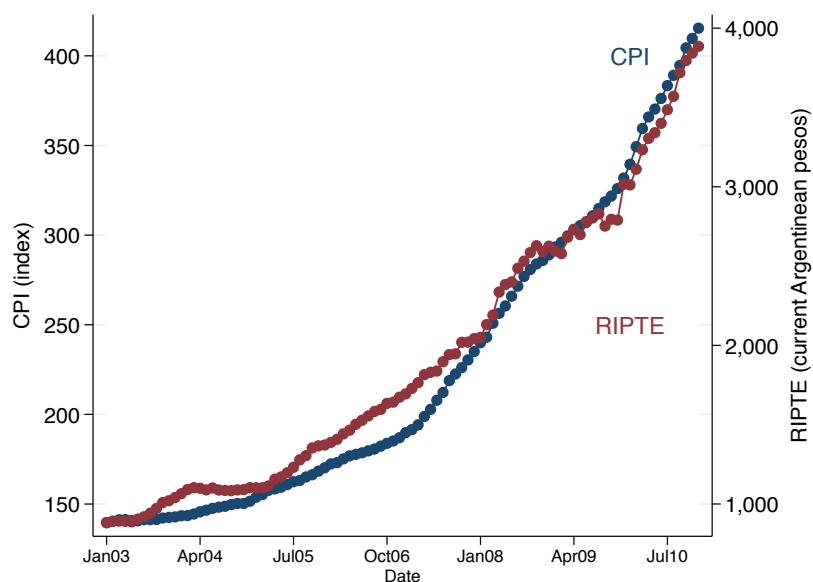
The sustained growth and fast recovery that the Argentinean economy showed after the crisis, was interrupted in mid-2008 by the great recession. Argentina was not the exception and, as such, was hit by the greatest worldwide crisis since the 1930s where the great depression mostly took place. The impact on the local economic activity can be summarized in Figure 27, where we document the evolution of monthly economic activity estimator. On a similar vein, private employment grew steadily until mid-2008, and stabilized afterwards (see Figure 28).⁹ There was a satisfactory recovery in 2010/2011, and since then the country shows a behavior analogous to the shape of a saw i.e., one year positive growth and following negative, and so on.

As a way to deal with the 2008 crisis, the family allowance program was expanded in 2009 to include informal workers i.e., workers that are not registered and therefore that were not initially covered by the FA program. This extension gave place to a new (sub) program called *Asignación Universal por Hijo* (AUH), that impose some conditionalities to its beneficiaries linked to health and education investments. The spirit of the AUH, is very much aligned to the standard conditional cash transfer type of program. Nonetheless, the general regime, the

⁹A priori, this seems interesting specially if the wage effect that we document comes from, or is driven by, new hires.

one devoted to registered wage earners, kept its original scheme beyond the natural updates due to inflation. In Figure 29 we plot the ratio of the transfer to the minimum wage for a worker with one child and for three different income brackets. As it is possible to see, the average tax rate remains roughly constant throughout the period.

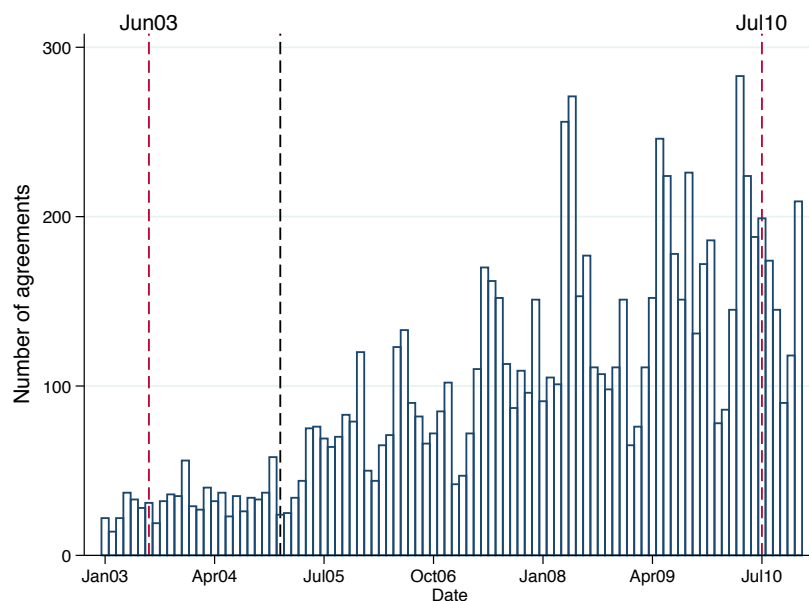
Figure 25: Monthly evolution of inflation and nominal wages (2003-2010)



Notes: CPI denotes consumer price index while RIPTE to the average salary of registered workers (in current pesos).

Source: Ministry of Labor, Argentina.

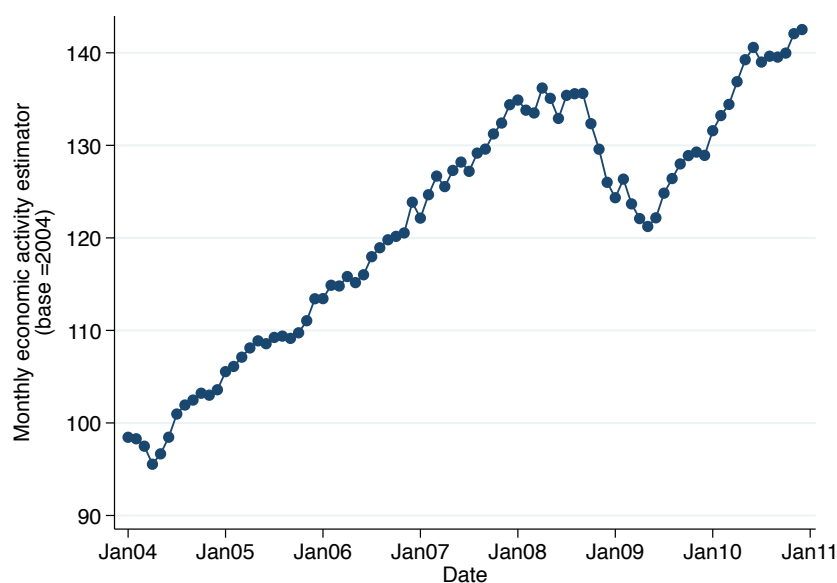
Figure 26: Celebration of collective bargaining agreements (2003-2010)



Notes: each bar on the vertical axis measures the number of collective agreement by month of celebration. Approximately, two-thirds of them are firm level agreements and, as it is possible to see, collective bargaining agreements occur every month.

Source: Own elaboration based on a dataset with the universe of collective agreements in Argentina. See footnote 36 for more information on this data.

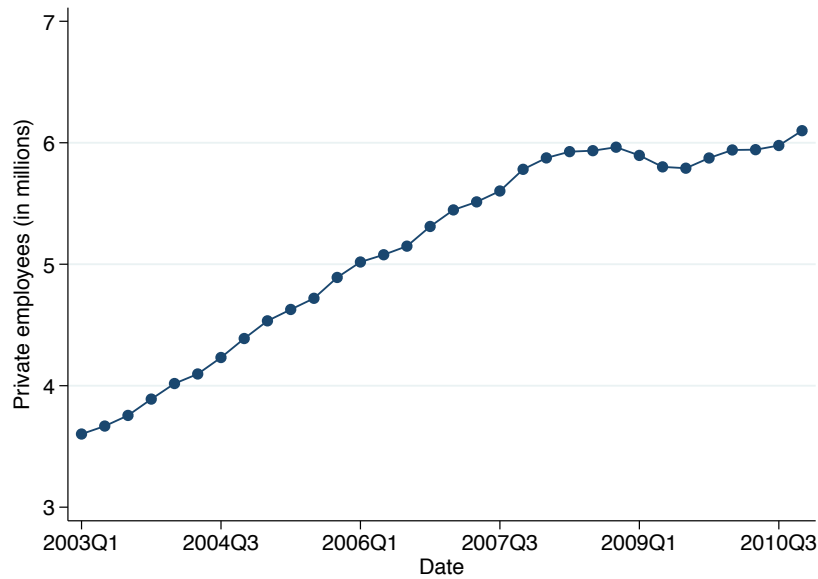
Figure 27: Monthly evolution of the economic activity estimator (2004-2010)



Notes: the vertical axis measures the monthly economic activity indicator as a function of time. We observe a large drop in economic activity from August 2008 onwards.

Source: National statistical office of Argentina, *Instituto Nacional de Estadística y Censos* (INDEC).

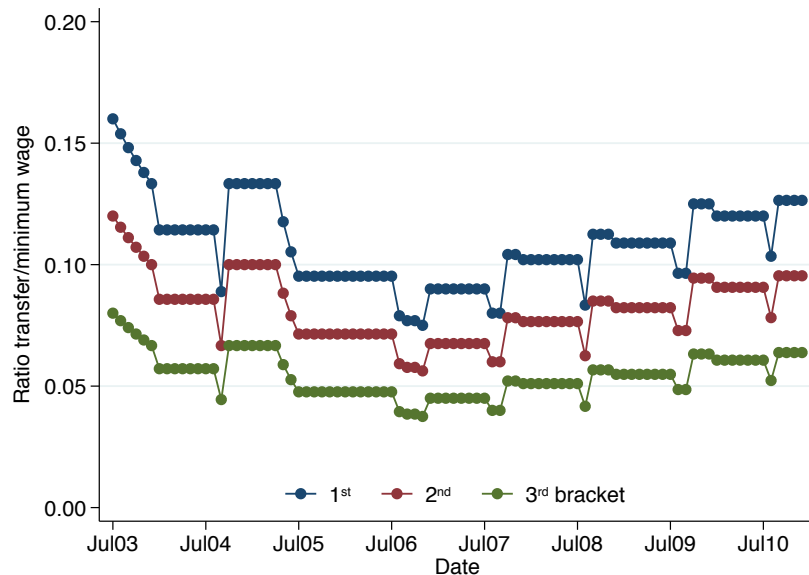
Figure 28: Quarterly evolution of private employment (2003-2010)



Notes: the figure presents the evolution of registered private wage employees for the years 2003-2010. The period is characterized by a steady increase in the number of registered workers followed by stabilization of employment since the third quarter of 2008.

Source: Ministry of Labor, Argentina.

Figure 29: Evolution of the average tax rate of the family allowance (2003-2010)



Notes: the vertical axis presents a proxy of the average tax rate i.e., ratio of the transfer normalized by the minimum wage, for three transfers' amount. As it is possible to see, the ATR remains roughly constant during the period of analysis. *Source:* own elaboration based on official documentation.

D Similar schemes around the world

Family allowance schemes vary substantially across countries. The main difference comes from whether a given country adopts a universal approach or not; where universality simply refers to the employment status of children's parents. While some countries pay out allowances to all families regardless of parents' labor condition e.g., France; others do so based on their employment status, i.e., workers receive an extra payment that is linked to the family composition e.g., Argentina. Differences appear also when looking at sources of funding (general revenues or employer/employee contributions), benefit level (percentage of the minimum wage), progressivity, and administration, among others. Most of the countries set the children's age eligibility threshold at the minimum working age, generally determined somewhere between 14 and 18 years old.¹⁰

In modern economies, governments quite often rely on firms as intermediaries in the tax-benefit system. This could include different types of interactions such employer-based health insurance, withholding of the payroll or income tax, or even disbursing family transfers. There are of course pros and cons of such an intermediation. For instance one of the great advances in contemporary tax schemes is the tax withholding assignment that firms do. Jointly, with better technology, third party reported information implied through the withholding exercise, is one of the key drivers of better enforcement and less evasion (Kleven *et al.* (2016) and Kleven (2014)). However, sensitive information could be revealed to the firm during the process and rent opportunities arise e.g, wage effects. In the case of employer-mediated transfers, those pieces of information could be who is receiving the transfer, how much, the structure and family composition, among others.

There is scant evidence of the economic incidence of means-tested transfers as stated by Nichols & Rothstein (2015). In addition, very little has been documented about the role of firms as intermediaries of family allowances/transfers/tax credits. Overall, employer-mediated transfers, are more widespread than publicly known. This is true both in developed as well as in developing countries (mostly middle income ones, since a certain level of development is necessary to set up those type of schemes). In Table 8 we present some examples of rather similar schemes, a number of them are still on going; as a caveat, note that this is not an exhaustive list and we are updating it as soon as we identify new cases.¹¹

There are various Latin American countries that have schemes that are almost a photo of the Argentinean one. As a more general thought, it seems that these type of family allowance schemes have been introduced on top of the existing social security system and that's the reason why they use employers as intermediators.¹² The Brazilian one, *Salário Família*, is a means-tested program

¹⁰This brief classification is largely based on Roddis & Tzannatos (1999).

¹¹Importantly, notice that here we are not referring to the well known conditional cash transfers (CCT) that for the Latin American countries listed in the table their names are *Bolsa Familia*, *Chile Solidario*, *Juntos* and *Tekopora*, respectively.

¹²There are also other common features in the region such as the contributory scheme and the

based on individual income, targeted to workers in the formal sector, and funded by a contributory system. In the same way that the SFC, the transfer is paid to employees by their employer and then the payments are deducted from social security contributions. The *Salário Família* is a bit less generous, as compared to the Argentinean one, as the transfer covers children up to 14 years old.

Table 8: Employer-mediated transfers around the globe

	Country	Program's name
Latin American countries		
	Brazil	<i>Salário Família</i>
	Chile	<i>Asignación Familiar</i>
	Paraguay	<i>Asignación Familiar</i>
	Perú	<i>Asignación Familiar</i>
Developed countries		
	Greece	<i>Βοήθημα Τοκετού</i>
	Italy	<i>Bonus Renzi 80 Euro</i>
	Switzerland	<i>Familienzulagen</i>
	United Kingdom	<i>Working Family Tax Credit</i>
	United States	<i>Advance Earned Income Tax Credit</i>

Notes: Own elaboration. This table does not contain an exhaustive list of countries that have, or had at some point, employers-mediated transfers. As we identify more countries during the process, we will update the content of it.

The Earned Income Tax Credit (EITC) is currently the largest cash transfer program in the United States and, probably, one of the most famous programs around the world. It consists on a refundable tax credit which is a function of households earnings and number of children. Interestingly, it contains a phase-in scheme that creates positive incentives to work. The transfer schedule contains also a plateau and a phase-out range where benefits are taxed away. The *Advance* option, the AEITC, allowed taxpayers to receive the transfer in their paychecks rather than when filing their year-end tax return. The advance option was eliminated in 2010 by President Obama due to a very low take-up rate which was clearly a big failure. Similarly, the United Kingdom had, between 1999 and 2003, the Working Family Tax Credit (WFTC) a welfare program that disbursed the payments through the employers rather than directly to workers. This program was then replaced by the Working Tax Credit, which is the reform analyzed by [Azmat \(2019\)](#).

There are also more recent experiences some of which are still on going. For *notched* structure.

instance, in 2014 Italy introduced the *Bonus Renzi 80 Euro* a welfare transfer program targeted to employees with certain level of income. The bonus was paid through the employers that acted as the withholding agent. In Switzerland, the *Familienzulagen*, is a child benefit regulated on a cantonal basis (26 cantons) that is financed by a compensation fund and paid by employers every month along with the corresponding salary. Finally, Greece has also a family allowance scheme for each child less than 18 years old that is paid together with the salary by the corresponding employer.

E Incorporation process

The way firms were gradually incorporated into the SUAF can be summarized as follows; we illustrate this process in Figure 4. The first step consisted on social security administration (ANSES, for its name in Spanish) publishing various resolutions that established that firms will be gradually incorporated and, mandatory included, into the system before a certain month i.e., December 2005. It published more than fifty resolutions between 2003 and 2008 with the different incorporation schedules. Each firm was notified accordingly about the different documents that they had to present. Concretely, the formalization process required that each employer had to hand in a set of specific documents and paperwork including the form F.560. These documents were supposed to be presented either at ANSES headquarter's office or in a subsidiary, *Unidad de Atención Integral* (UDAI).¹³ Figure 30 presents an example of such a memo. The top panel contains the body of the resolution including the first two articles, note that some of the key words are: *cronograma* (schedule), *paulatina* (gradual) and *obligatoriamente* (mandatory); while the bottom panel presents the corresponding annex that include firm identifiers.

The second step consisted on, as stated above, the different firms presenting the whole documentation. In general, it took three months and a half between the moment where the firm was notified and the presentation of the documentation. The third, and the last one, consisted on the final approval or formal incorporation into the system, which in most cases took approximately 50 days after step two was completed.¹⁴ The approval was materialized in another memo where ANSES established the date in which each firm would be formally included in SUAF and up to when it can *compensate* the family allowances paid under the old system.¹⁵

¹³There were nearly 300 UDAs located throughout the whole country.

¹⁴Both duration references were extracted from an audit of the SUAF incorporation made by the AGN (*Auditoría General de la Nación*).

¹⁵The term *compensate* refers to the possibility that firms had where they could deduct the transfer from employer SSC. The last month to *compensate* a payment was the month before the formal incorporation date. The idea behind this was to avoid duplicates payments i.e., both, a payment under the SFC and under the SUAF, for a given month.

Figure 30: Incorporation schedule memo

(a) Resolution (body text)


Resolución N° 333/2005¹

Cronograma de inclusión de empleadores al Sistema Único de Asignaciones Familiares. A.N.Se.S.

Artículo 1°— Apruébase el cronograma de inclusión al Sistema Único de Asignaciones Familiares (S.U.A.F.) respecto de los empleadores que se encuentran detallados en el Anexo que forma parte integrante de la presente, y que obligatoriamente serán incluidos formalmente al Sistema Único de Asignaciones Familiares en forma paulatina hasta el mes devengado diciembre de 2005.

Artículo 2°— La Gerencia de Prestaciones notificará fehacientemente a los empleadores referenciados en el artículo 1° de la presente sobre los requisitos que deberán cumplir y la documentación que deberán presentar ante la Unidad de Atención Integral/Área Central de esta Administración Nacional de la Seguridad Social, a los efectos de quedar incluidos formalmente en el Sistema Único de Asignaciones Familiares.

(b) Resolution annex (with employer's identifiers)



333

ANSES
Ministerio de Trabajo, Empleo y Seguridad Social

ANEXO

20-05047024-6	JUAN NESTOR NARCISO
20-07924169-6	BORDA PAULINO APARICIO
20-14131275-9	WINGEYER HUGO DANIEL
20-17071721-0	BALLARIO JORGE ALBERTO
20-17639159-7	FRIGERIO FERNANDO DANILO
20-20195515-8	CIPOLLONE RAUL ALBERTO
20-22126363-5	RUIZ DIAZ EULOGIO ANTONIO
23-05243056-9	MOROSI RICARDO EDER
23-14940864-9	ROJAS RICARDO ALFONSO
27-13881818-2	HULZANQUI PATRICIA CARMEN
27-22127177-2	GONZALEZ MARIELA ALEJANDRA
30-57189536-2	LINEA 22 SOCIEDAD ANONIMA
30-63872707-9	GREEN S A
30-65464085-4	SE NE MI SRL
30-66760328-1	ASOCIACION COOPERADORA HOSPITAL MUNICIPAL

Notes: panel (a) presents the first two articles of the the incorporation schedule published in resolution N°333/2005. The first article states that all employers listed in the annex will be gradually incorporated into the SUAF until December 2005. The inclusion into the new system is mandatory. Afterwards, the second article, states that the government agency will notify each of the employers to let them know the documentation that they have to hand in. Panel (b) shows the annex of resolution N°333/2005. As it is possible to see, on the left column the resolution lists the taxpayer identifier, while on the second column the name of the employer/firm.

Figure 31: Incorporation memo

(a) Resolution (body text)

Resolución N° 456/2006¹

Incorporación de empleadores al Sistema Único de Asignaciones Familiares. A.N.Se.S.

Artículo 1°— Incorporáanse formalmente al Sistema Único de Asignaciones Familiares a los empleadores **que se encuentran** detallados en el Anexo que forma parte integrante de la presente, a partir del período mensual devengado correspondiente a **agosto de 2006**.

Artículo 2°— Los empleadores deberán continuar abonando las asignaciones familiares a sus trabajadores a través del Sistema de Fondo Compensador hasta el período mensual devengado correspondiente a julio de 2006.

Artículo 3°— Los empleadores referenciados en el artículo 1° de la presente, no podrán compensar las asignaciones familiares abonadas a sus trabajadores, a partir del período devengado agosto de 2006.

Artículo 4°— Dése cuenta a la Administración Federal de Ingresos Públicos (A.F.I.P.).

Artículo 5°— De forma.

ANEXO

CUIT	Razón Social	U.D.A.I.
30-963840333-8	Agroexport S.A.	U.D.A.I. San Juan

(b) Resolution annex (with employer identifiers)

2005 – AÑO DE HOMENAJE A ANTONIO BÉRNIZ

ANSES 000647

Ministerio de Trabajo, Empleo y Seguridad Social

ANEXO

CUIT	RAZON SOCIAL	UDAI
30575438772	CONFRAVE S A I C	GERENCIA UCA
30651778170	CONFRAVE INDUMENTARIA S R L E	GERENCIA UCA
30505426661	TEJEDURIAS NAIBERGER SAICI Y F	GERENCIA UCA
30515772746	TRIUMPH INTERNATIONAL	GERENCIA UCA
30515923329	FAMOFEL FABRICA MODELO DE	GERENCIA UCA
30516142452	EPIFANIO VELASCO E HIJOS S A I C I	GERENCIA UCA
30500834087	VIDRIERIA ARGENTINA SOCIEDAD	GERENCIA UCA
30626831660	INDUSTRIAS 9 DE JULIO S A	OFICINA 9 DE JULIO
30666501396	COOP DE COOPERATIVAS DE	OFICINA 9 DE JULIO
30545724819	COOPERATIVA ELECTRICA Y DE	OFICINA 9 DE JULIO
30545744569	COOPERATIVA DE ELECTRICIDAD	OFICINA BALCARCE
30593302462	MHOR INDUSTRIAL S A	OFICINA ESCOBAR
30610738369	ASOCIACION CIVIL NAUTICO	OFICINA ESCOBAR
30608964076	MARTIN BARROCAS Y CIA SRL	OFICINA ESCOBAR
30520473501	MANDOLA MATEO LORENZO Y	OFICINA ESCOBAR
30662051868	ABRANTES SA	OFICINA ESCOBAR
20101633331	SZYKULA MIGUEL ANGEL	OFICINA ESCOBAR
20121737052	KANDRACHOFF NESTOR PABLO	OFICINA ESCOBAR
30578380015	GOYAIKE S A A C I Y F	OFICINA ESCOBAR
30653466931	GNC ESCOBAR SA	OFICINA ESCOBAR
30580736528	BEST PAINT S A	OFICINA ESCOBAR
30559721502	PRENSADORA MURO SOCIEDAD DE	OFICINA ESCOBAR
30522601264	COOP ELECT CONS Y SERVICIOS	OFICINA GENERAL ALVEAR

Notes: panel (a) presents an example of an incorporation resolution. The first red box on the upper-left side, states that the firm(s) listed below will be formally incorporated into the SUAF. The second red box on the upper-right side refers to the specific month this enrollment will occur i.e., August 2006. The last red box contains the taxpayer identifier (CUIT) to which the resolution is referring to. Panel (b) contains the list of employers contains the annex (for those cases where several employers are referred in the body of the resolution).

Figure 31 shows an example of an incorporation memo. The top panel presents the whole memo where it is possible to see the key components such as *incorpórase formalmente* (formal incorporation), *agosto 2006* (incorporation date) as well as the firm identifier. When the memo involves several employers, it contains an annex with the list of them (as it can be seen in the bottom panel).¹⁶

Employers were also able to search through a public website whether the firm was in fact under the new scheme and, if so, the starting date. This is shown in Figure 32. To do a query it is necessary to introduce firm's CUIT (employer identifier) and a security code; afterwards, the site reports the firm's name (*Razón Social*), whether it is allowed to be in the new system (*Estado*), and the corresponding legal memo as well as the date (month and year) of incorporation into SUAF (*Detalle*).¹⁷

Figure 32: Website query

Notes: this is a screenshot of a public query where it is possible to check whether a given employer (CUIT) is already in the SUAF. After introducing the CUIT and the security code, the site reports the firm's name (*Razón Social*), whether it is allowed to be in the new system (*Estado*), and the corresponding legal Memo as well as the date (month and year) of incorporation into SUAF (*Detalle*). The official website can be accessed at [ANSES website](#).

The last point refers to firms' observed responses in the micro-data i.e., the first month where we observe an interruption of family allowance payments un-

¹⁶Note that the third column contains that name of the UDAI i.e., where the documentation was handed in.

¹⁷We manually checked whether the date that appeared in the memo coincides with that one in the website and in nearly all the cases it coincides.

der SFC. As it was already explained in the body of the paper, we define an event date as the moment where we identify that in the micro-data a given firm stops paying under the old payment mechanism. We then check whether the different administrative dates (schedule and formal incorporation) correlates with what we observe at the micro level.

To do that we digitized all internal schedules that we were able to find in ANSES webpage (more than the 50 annexes). We end up with approximately 63,000 firm identifiers with its corresponding final schedule deadline.¹⁸ As far as we know, the date worked as an internal due date to commit to the gradual incorporation process rather than a deadline imposed to firms. We combine these dates with the event dates constructed from micro-data. We found that 80 percent of the employers were incorporated before the *internal* deadline which somehow shows that ANSES commit to its internal planning of gradual incorporation.

We then looked at the formal incorporation date (listed in the incorporation resolution) and its correspondence with the micro-data. As opposed to the schedule memo, it is quite hard to track the incorporation memo basically because there were various hundreds of them and they are not systematized at all. However, we exploit the public website and recover the formal incorporation date for a random sample of firms. Figure 33, presents the correlation between the formal incorporation date and the one derived from the micro-data. In panel (a) we present the correlation for all the firms in our estimation sample whereas in panel (b) we open previous depending on the number of beneficiaries in the last month we observe a payment in the micro-data i.e., in t_{-1} . On the vertical axes shows presents the cumulative distribution function (*cdf*) of firms that entered into the new payment system. On the horizontal, we show the distance (in months) from the event (identified in the micro data) to the formalization date. Those on the left side means that they have an event (switch) before the formalization date, while in contrast those on the right had an event afterwards.

Overall we observe a high correlation between the event, identified using the micro-data, and the formalization date which is somehow reassuring that we are correctly determining the exact moment where each employer switch to the new regime. Note however, that in the top panel we have that some firms entered into the SUAF before the formalization date. Although this could have been possible, it was quite unlikely. So to further understand what could explain this we re-do the *cdfs* open down by number of beneficiaries receiving FA the last month before switching i.e., we consider firms with 1 or more FA recipients, 2 or more, and so on.

We find that the mass on the left side of the figure is entirely driven by firms with only one beneficiary before the switch. Therefore it is likely that we have a measurement error in the event definition when we consider employers with only one FA recipient. For instance, it could be the case that the unique beneficiary left the firm or was fired, and thus that's why we observe that the firms stop disbursing the transfer and afterwards by mistake we identify such moment as

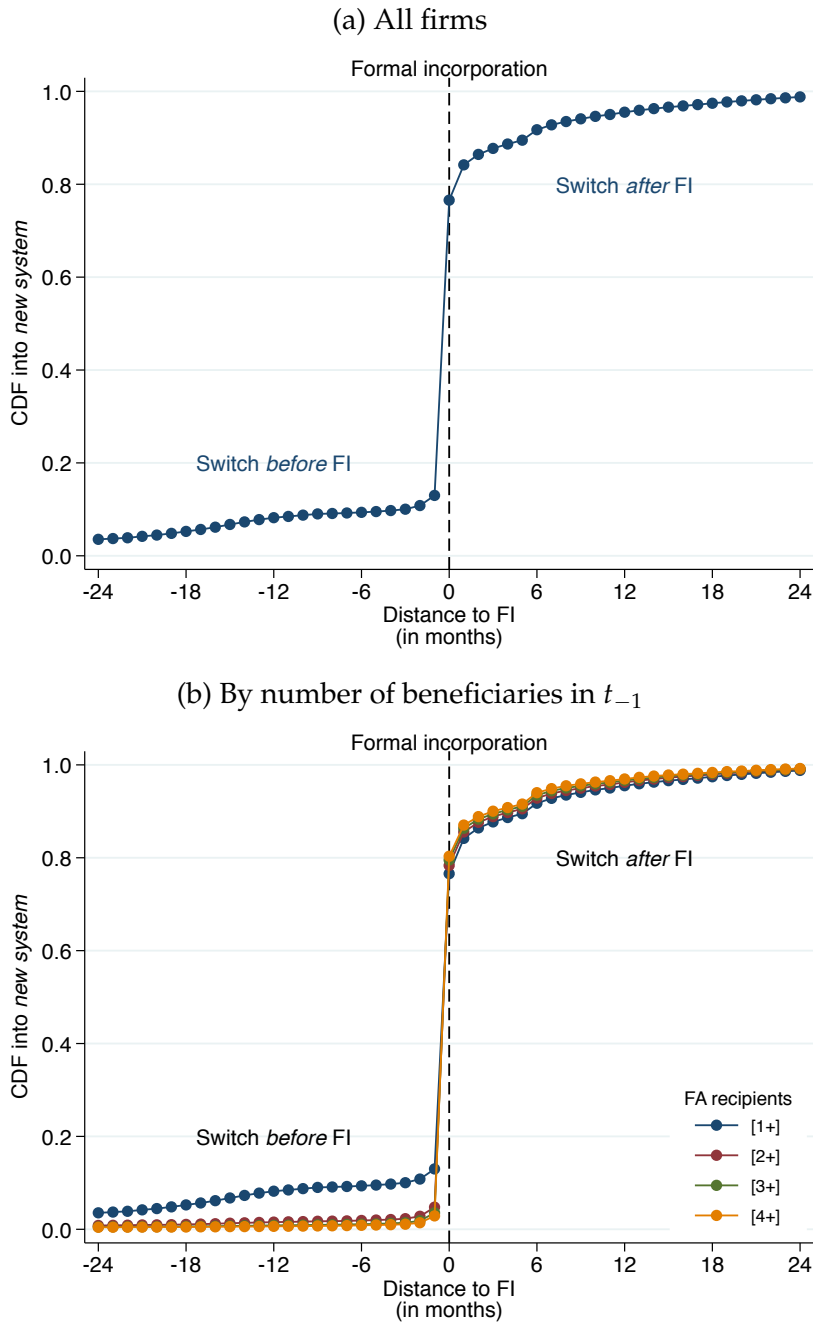
¹⁸We found that only 0.001 percent of the employers appeared in more that one resolution.

the event while this is not true. Narrowing the sample to FA $t_{-1} > 1$, shows that switch before the FI was not possible (which is consistent with the anecdotal evidence that we have).

To avoid previous we restrict our estimation sample to those firms that have at least two beneficiaries before the switch.¹⁹ We observe that in most of the cases the event date coincide with the formalization date (roughly 80 percent of the cases) and, six month after the FI, 95 percent of firms were already into the new system. This rather fuzzy correlation could be the results of some inattention or miss-communication between employers and the SSA. In principle, firms have no incentives to delay its incorporation after the formalization since according to the memo they cannot compensate the money of the transfers they disburse. For instance, see article 3 in Figure 31 panel (a) (*ARTICULO 3: ... no podrán compensar las asignaciones familiares abonadas a sus trabajadores, a partir del período ...*).

¹⁹Nevertheless, we test the sensitivity of our wage effects using different estimation samples as show in Figure 34.

Figure 33: Event accuracy and formal incorporation date



Notes: the vertical axis of these figures contains the cumulative density function (*cdf*) of firms incorporated into the new system as a function to the distance (in months) to the formal incorporation date. Panel (a) involves all firms while in panel (b) we break the *cdf* by the number of transfer recipients within each firm in the last month before the switch (t_{-1}). We consider firms with 1 or more FA recipients, 2 or more, 3 or more and 4 or more.

F Model specification

In this section we discuss the derivation of the simple model that we propose. As it was already mentioned, the best way to reconcile the setting with the results that we document, is to incorporate a partial perception of benefits. Based on [Gruber \(1997\)](#), we put forward the following specification:

$$\tilde{w} = w \cdot (1 + (1 - q) \cdot \tau^e) \quad (1)$$

where \tilde{w} represents the perceived wage as a function of the wage (w), a perception parameter (q) and the transfer rate disbursed by employers (τ^e). In addition, we define $\tau^e = \bar{\tau} - \tau^g$, where τ^g is the transfer disbursed by SSA (the government), and $\bar{\tau}$ is the total disbursed transfer. In a situation with perfect perception and knowledge ($q = 1$), the perceived wage is equal to the true wage $\tilde{w}_1 = w$. This means that there is an accurate understanding of the way family allowances work and how they are funded. On the contrary, in a situation with no knowledge ($q = 0$), the perceived wage includes the transfer $\tilde{w}_0 = w(1 + \tau^e)$.

We then express the labor supply function as follows:

$$L_i^s = L_i^s(\tilde{w}_i) = L_i^s(w_i \cdot (1 + (1 - q) \cdot \tau_i^e)) \text{ with } i = 1, \dots, n \quad (2)$$

and the corresponding labor supply elasticity as:

$$\eta_i^s = \frac{d \ln(L_i^s)}{d \ln(\tilde{w}_i)} = \frac{l_i^s}{L_i^s} \cdot w_i \cdot (1 + (1 - q) \cdot \tau_i^e) \quad (3)$$

where $l_i^s = \partial L_i^s / \partial \tilde{w}_i$ is the partial derivative of the labor supply with respect to the perceived wage.

Similarly, labor demand is expressed as follows:

$$L_i^d = L_i^d(w) \text{ with } i = 1, \dots, n \quad (4)$$

and labor demand elasticity as:

$$\eta_i^d = \frac{d \ln(L_i^d)}{d \ln(w_i)} = \frac{l_i^d}{L_i^d} \cdot w_i \quad (5)$$

totally differentiating supply and demand equations (2) and (4), we have

$$d \ln(L_i^s) = \eta_i^s \cdot [d \ln(w_i) + d \ln(1 + (1 - q) \cdot \tau_i^e)] \quad (6)$$

and

$$d \ln(L_i^d) = \eta_i^d \cdot [d \ln(w_i)] \quad (7)$$

Equating (6) and (7) and rearranging terms we get

$$\left. \frac{d \ln(w_i)}{d \ln(1 + \tau_i^e)} \right|_{\bar{\tau} = \tau^e + \tau^s, \bar{q} = q} = \frac{\eta_i^s \cdot (1 - q) \cdot \left[\frac{(1 + \tau_i^e)}{(1 + (1 - q) \cdot \tau_i^e)} \right]}{\eta_i^d - \eta_i^s} \quad (8)$$

Incidence predictions: to keep things simple we can reduce previous equation and focus on two polar cases. Subsequently, we identify the following situations:

- $q = 1 \rightarrow$ perfect knowledge, then we have $\frac{d \ln(w_i)}{d \ln(1 + \tau_i^e)} = 0$ and thus we recover the standard incidence result. The way the money is disbursed does not have an effect on wages and therefore the remittance responsibility do not determine the economic incidence.
- $q = 0 \rightarrow$ situation with no knowledge or complete confusion about the scheme. In this case we have $\frac{d \ln(w_i)}{d \ln(1 + \tau_i^e)} = \frac{\eta_i^s}{\eta_i^d - \eta_i^s} < 0$ and hence the change in the remitter do have an effect on wages.

The anecdotal evidence that we were able to found, point towards the fact that employees were not really understanding the way the old payment system worked. As it was mentioned earlier, some of the features that characterize the old system could be summarized as follows: roles are confused, people perceive that benefits integrate their wage package and even ignore that it is the state who pays for them.

Change in perception: the shift in the remittance responsibility from employers to the government could have lead to a change in the information content to employees, and this could have altered the scheme's perception (q). This is a sort of information treatment, while imposing the new payment system, eligible workers indirectly update their beliefs or perception about the overall AAFP scheme. Consequently, we re-do previous derivation but allowing q to change as a result of the change in the transfer disbursed by employers (τ^e). We get the following expression:

$$\left. \frac{d \ln(w_i)}{d \ln(1 + \tau_i^e)} \right|_{\bar{\tau} = \tau^e + \tau^s} = \frac{(1 + \eta_i^{(1-q)}) \cdot \eta_i^s \cdot (1 - q) \cdot \left[\frac{(1 + \tau_i^e)}{(1 + (1 - q) \cdot \tau_i^e)} \right]}{\eta_i^d - \eta_i^s} \quad (9)$$

where we define $\eta_i^{(1-q)} = \frac{\partial(1-q)}{\partial \tau_i^e} \cdot \frac{\tau_i^e}{(1-q)}$ as a *misperception elasticity*. That is to say $\eta_i^{(1-q)}$ measures how much $(1 - q)$ changes as the benefits disbursed by employers increase. This elasticity is positive meaning that, as there are more transfers disbursed by employers (τ^e), there is an increase in confusion which means decreases in (q) and, naturally, an increase in $(1 - q)$. This positive elasticity reinforces the main effect that we have previously derived.

G Econometric specification

Intuitively our identification strategy can be summarized as follows. Let's assume that there is only one firm and, obviously, one treatment date. Then, the natural within-firm variation to be exploited can be specified as follows:

$$w_{i,t} = \alpha + \beta_0 \cdot T_{i,t} + \beta_1 \cdot T_{i,t} \cdot Post_{i,t} + \mu_t + \epsilon_{i,t} \quad (1)$$

where T refers to workers belonging to the treatment group, $Post$ to the period after the event, and μ_t to month-year fixed effects. Finally, the outcome variable w denotes the monthly wage used as base for employers' SSC.

If however, it happens to be that there are N firms all with the same treatment date, then we would have

$$w_{i,f,t} = \beta_0 \cdot T_{i,f,t} + \beta_1 \cdot T_{i,f,t} \cdot Post_{i,f,t} + \mu_{f,t} + \epsilon_{i,f,t} \quad (2)$$

where $\mu_{f,t}$ refers to firm-specific month-year fixed effects.

If we then allow the N firms to have different treatment dates, we could write the following:

$$w_{i,f,t} = \beta \cdot T_{i,f,t} + \sum_{j=-13}^{12} \gamma_j \cdot T_{i,f,t} \cdot d_{f,t}^j + \mu_{f,t} + \epsilon_{i,f,t} \quad (3)$$

Afterwards, we could get the mean wage for each firm-group-month ($\bar{w}_{g,f,t}$) and thus present the following reduced form specification in levels (note that here we have two observations by firm-month).

$$\bar{w}_{g,f,t} = \beta \cdot T_{g,f,t} + \sum_{j=-13}^{12} \gamma_j \cdot d_{f,t}^j \cdot T_{g,f,t} + \mu_{f,t} + \epsilon_{g,f,t}^{20} \quad (4)$$

To keep things simple, afterwards we take the difference across groups and thus define the (mean) wage gap between treatment and control workers.

$$G_{f,t}^{\bar{w}} = \bar{w}_{f,t}^T - \bar{w}_{f,t}^C$$

This means that for each firm we have a time series of first differences. Thus, we specify a first difference model and run regular event study specification (note that in this case we will have one observation by firm-month).

$$G_{f,t}^{\bar{w}} = \alpha + \sum_{j=-13}^{12} \gamma_j \cdot d_{f,t}^j + \epsilon_{f,t} \quad (5)$$

²⁰Alternatively, we can run either (a) $\mu_f + \mu_t$ i.e., firm and time, separately, fixed effects, or (b) $\mu_f + \mu_t + \mu_f \cdot t$ plus firm linear trends. Nevertheless, our preferred alternative is the less parametric one, the one included in the main specification.

The γ 's in equation (5) should be numerically the same as those estimated in equation (4). That is to say, we get the same result as when having two observations per firm-month and including firm-by-time fixed effects because the way those gammas are identified in equation (4) is by differencing.²¹

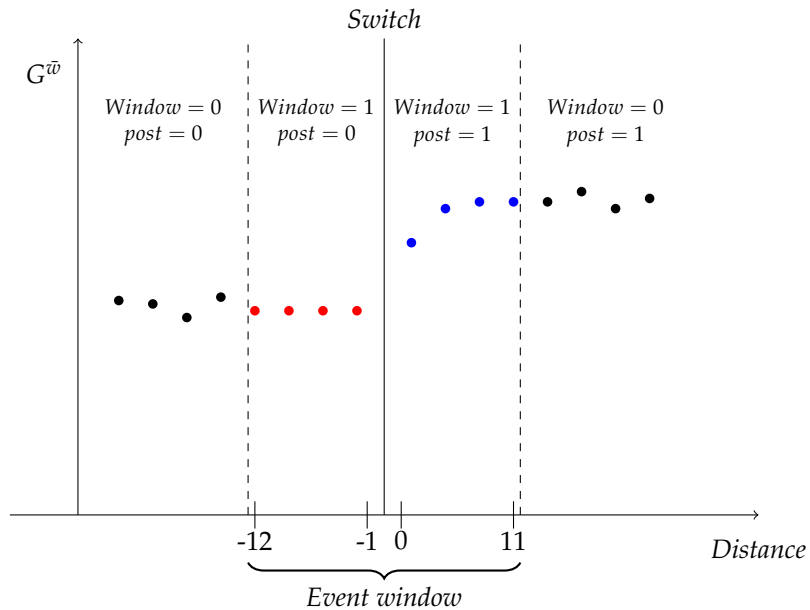
In order to compute the reduced-form point estimates and, somehow, sum up our results, we simply pool all the gamma coefficients before ($G_{before}^{\bar{w}} = (\gamma_{-12} + \gamma_{-11} + \dots + \gamma_{-3} + \gamma_{-2} + 0)/12$) and after ($G_{after}^{\bar{w}} = (\gamma_0 + \gamma_1 + \gamma_2 + \dots + \gamma_{10} + \gamma_{11})/12$) the switching date and then take the difference ($G_{average}^{\bar{w}} = G_{after}^{\bar{w}} - G_{before}^{\bar{w}}$). Getting previous in a regression framework would imply estimating the following specification which in turn will allow estimating the standard errors:

$$G_{f,t}^{\bar{w}} = \alpha + \beta_1 \cdot Window_{f,t} + \beta_2 \cdot Window_{f,t} \cdot Post_{f,t} + \beta_3 \cdot (1 - Window_{f,t}) \cdot Post_{f,t} + \epsilon_{f,t}$$

where *Window* equals one in those months that belong to the time span [-12;11]. If we then apply the expected value operator to the previous equation we would have the following scenarios:

- $E(G^{\bar{w}} / Window = 0, post = 0) = \alpha$
- $E(G^{\bar{w}} / Window = 1, post = 0) = \alpha + \beta_1$
- $E(G^{\bar{w}} / Window = 1, post = 1) = \alpha + \beta_1 + \beta_2$
- $E(G^{\bar{w}} / Window = 0, post = 1) = \alpha + \beta_3$

A sort of the difference in differences (DID) coefficient could be approximated by taking $[3] - [2] = \beta_2$. Graphically, we will have a situation that can be illustrated as follows:



²¹The standard errors, clustered at firm level, are also the same under both specification. This is true because given that it is the same estimator so it has to have the same true variability.

Similarly, the first-stage point estimate will be recuperated as follows

$$G_{f,t}^{Transfer} = \alpha + \delta_1 \cdot Window_{f,t} + \delta_2 \cdot Window_{f,t} \cdot Post_{f,t} \\ + \delta_3 \cdot (1 - Window_{f,t}) \cdot Post_{f,t} + \epsilon_{f,t}$$

Thus the 2sls Wald estimator will be given by the following ratio $\Theta = \frac{\beta_2}{\delta_2}$. Moreover, to the first difference model specified in equation (5) we could add firm and time fixed effects to account for the fact that the composition of the panel of firms is changing over time and to control for time specific trends, respectively.

$$G_{f,t}^{\bar{w}} = \sum_{j=-13}^{12} \gamma_j \cdot d_{f,t}^j + \mu_f + \mu_t + \epsilon_{f,t} \quad (6)$$

And finally to get the point estimate we run the following specification:

$$G_{f,t}^w = \beta_1 \cdot Window_{f,t} + \beta_2 \cdot Window_{f,t} \cdot Post_{f,t} \\ + \beta_3 \cdot (1 - Window_{f,t}) \cdot Post_{f,t} + \mu_f + \mu_t + \epsilon_{f,t}$$

H Extensions

H.1 Other sub-samples

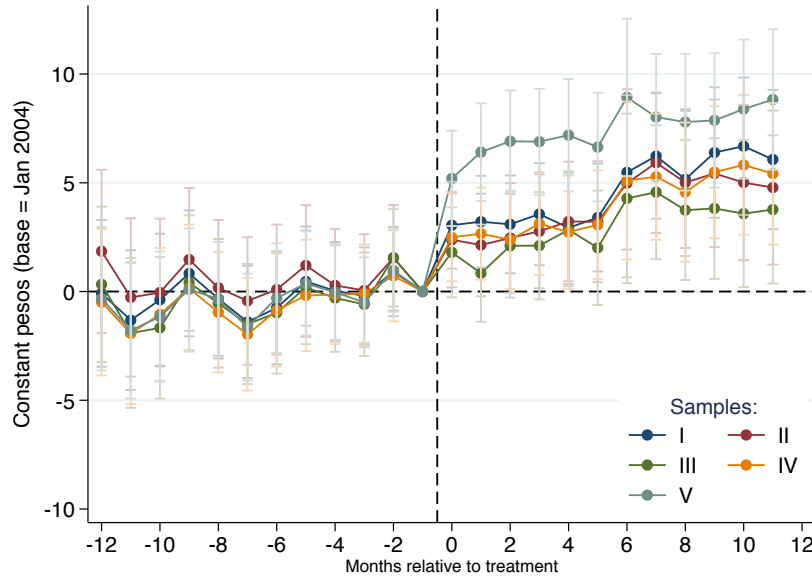
Our main estimation sample considers firms that have more than one worker receiving the transfer in the last month (t_{-1}) before the switch to the new regime. This restriction allows us to correctly identify the event date and therefore avoid potential fake events that could confound the estimated effects. If we do not introduce this restriction we could have a situation where the only worker that was receiving the transfer left the firm e.g., because it was fired, and thus we observe that the firm stops paying the transfer. Consequently we associate that date (where the worker was fired) with the event date but this is not correct.

Nevertheless, we also show that our results are robust to different sample sets. First, we do not impose previous restriction and thus we include firms that have only one worker receiving the transfer in t_{-1} . Second, on the other extreme, we impose a tighter restriction that requires firms to have more than one recipient in every of the six months before the switch (in $t_{-6;-1}$). Third, we keep firms that have more than one worker in the last month (t_{-1}) and also where the event date and the formalization date coincides. Fourth, we preserve firms with the same date but with no restriction regardless of the number of beneficiaries in (t_{-1}).

Figure 34 plots the coefficients of estimating equation (2) using as dependent variable the within-firm average wage gap of the two groups ($G_{f,t}^{\bar{w}}$) for different sub samples (namely those that were introduced in previous paragraph). There

are various interesting facts to highlight that arise from this figure. First, regardless of which sample of firms we consider, the points estimates are roughly stable and, more importantly, remain economically and statistically significant. Second, if we do not impose the restriction of having more than one worker (sample V in the graph) we observe a higher bump in the wage gap after the switch. We understand that this effect could be a mechanical result of, eventually, firing the only transfer recipient (which in principle is a treated worker likely with a rather low wage).

Figure 34: Wage effects using alternative samples



Notes: this figure plots the event-study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (2) for different subsamples. Namely: (I) baseline sample (includes firms with more than one worker receiving the transfer in t_{-1}), (II) adds to (I) the restriction of having the same event date and formalization date in memo, (III) keep firms with same date but include those with one worker receiving in t_{-1} ; (IV) consider firms with more than one worker receiving the family allowance in each month for the time span $[-6; -1]$ and (V) No restriction.

H.2 Turn 18: becoming ineligible

The richness of the dataset that we have access to allows exploiting another source variation. In particular, we tried to shed some light on the baseline incidence i.e., who benefits from the transfer regardless of the way it is delivered, by taking advantage of an individual level shock. Concretely, we analyze what happens when a certain worker lose eligibility due to its child reaching 18 years old. A priori this is a very interesting event to look at given that, from the parents' point of view, a child going from 17 to 18 years is a rather smooth event. The opposite case, becoming eligible due to a newborn, it is naturally very interesting as well but it is a more drastic type of event as several things could change at the time of

the birth.²²

We consider workers with kids that reach 18 years old between January and December 2005 i.e., born in 1987. We focus on a balance panel of workers with one job during 36 months of 2004, 2005 and 2006.²³ The treatment group is comprised by workers with a child turning 18 in 2005 (who might be getting FA or not) and the control by workers without kids turning 18 in 2005 (might be getting FA or not). We keep firms with “treated” workers that switch to SUAF in 2006 or later, that have at most one event, that have other workers with children but that suffer no event. Afterwards, we collapse everything at firm level and do a within-firm level analysis.

Figure 35 plots the coefficients of the first and reduced form specifications. We document a very clean first stage result with a drop in transfer’s amount as soon as the kid turns 18. This finding is reassuring about the overall functioning of the FA program, particularly under the SFC when the transfer was disbursed by employers. Age-eligibility thresholds appeared to be working accordingly even when the disbursement of the transfer was decentralized. Furthermore, as a reduced form result, we estimate a rather precise null effect on wage earnings which, in principle does not imply that the economic incidence of the transfer fall hundred percent on workers. Below we discuss why this result does not contradict the main findings of our paper.

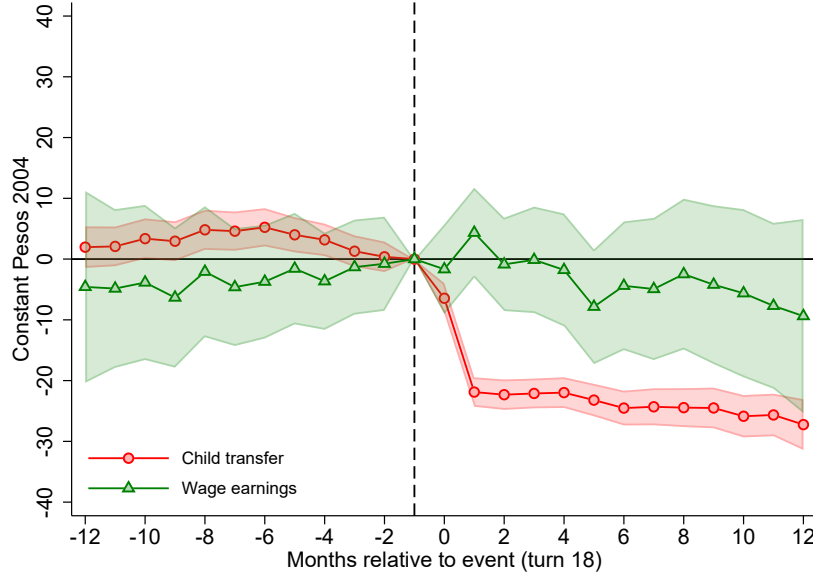
First, it could be that the worker does complain, tries to bargain, but the employer has the chance to explain to them that it’s actually a transfer from the government and thus not part of their compensation package, and now they are not eligible anymore. Second, our main finding i.e., exploiting the switch SFC-SUAF, is mostly driven by new employees or hires; thus, this is still consistent with a null effect of “turn 18”. It could mean that the incidence or rent-extraction takes place when the worker is hired, at the beginning of the labor relationship, when the contract is set. If the child turn 18 in the middle of the contract, when the wage and other obligations are already written, then it is hard to observe a wage response given that there is no much freedom to adjust.

Third, this is an individual-level shock while the core of the paper is about a firm-level shock. Responses could be very different when only one worker is affected as opposed to a situation where many co-workers are involved. Indeed, we show and discuss in the mechanisms section, that the wage effect is stronger in those firms where the share of workers with kids is larger. Fourth, workers exposed to the “turn 18” type of event, are more likely to be closer to $p75$ and thus have a weaker saliency and average tax rate. Fifth, the composition of firms that we use for both exercises is not exactly the same and it could be the case that they differ in size and/or union’s coverage.

²²For this reason, we focus only in those cases where the child reaches 18 years old.

²³We selected those born in 1987 for two reasons. First, in order to maximize the number of firms that haven’t switched yet and, second, to use 2004 and 2006 as pre-post years.

Figure 35: Turning 18, becoming ineligible (individual level shock)



Notes: this figure plots the event-study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (2). The event, in this exercise, refers to have a child that turn 18 years old. In one series we plot the gap in transfer (first stage) while in the other the evolution of the wage gap (reduce form) around the event.

I Other responses

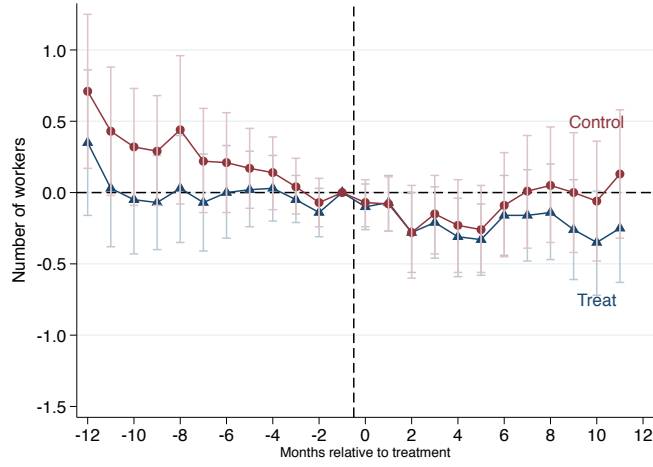
I.1 Composition and firm size

This sub-section digs into what happens within firms in terms of composition regarding the two types of workers i.e., with (treated) and without kids (control), and also looking at firm size. We take advantage of the same event study specification that we described in the main body of the paper and run 2 but using a different outcome variable. In the top two panels of Figure 36 we look at the firm's composition specifically at the number of workers (in levels) and workers' gap, namely the difference in treatment (N^T) and the control (N^C) workers. We do not find a clear pattern on these two dimensions.

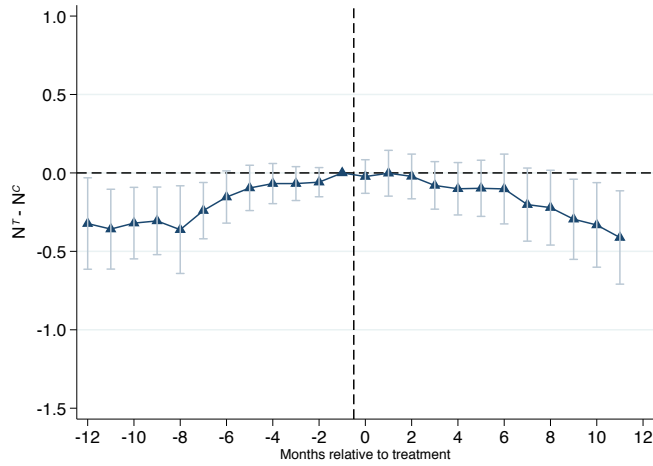
Similarly, we look at firm size before and after the enrollment into the new payment system (see the bottom panel in Figure 36). As we can see in the figure, there is very little action materialized by a flat set of event study coefficients. In Figure 37, we present the same analysis but for considering a 24 month-period after the firm switch to the new regime.

Figure 36: Other margins

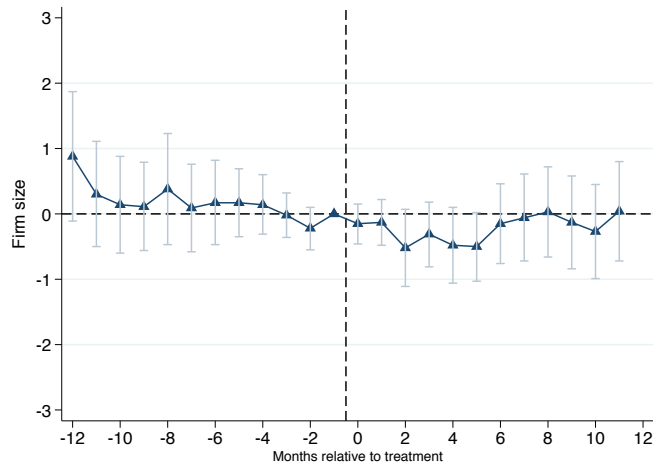
(a) Workers in levels



(b) Workers' gap



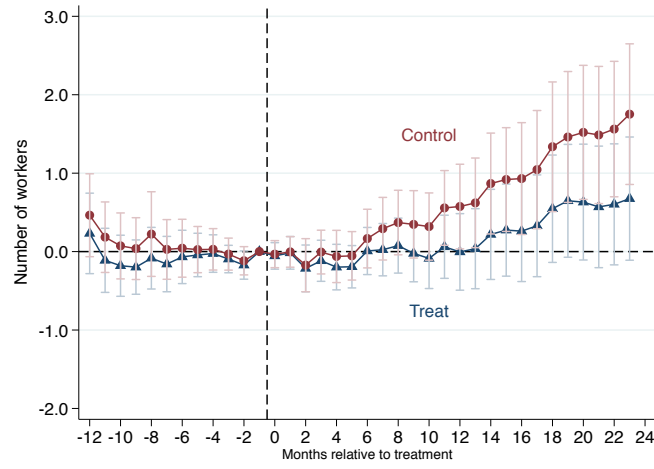
(c) Firm size



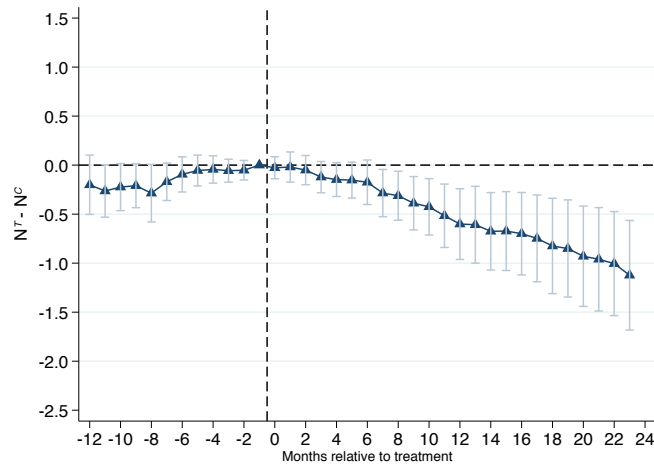
Notes: these figures plot the event-study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (2). Panel (a) shows the number of workers in the treatment (N^T) and the control (N^C) group (in levels) while panel (b) considers the gap as the outcome variable. In Panel (c) the dependent variable corresponds to the total number of workers within the firm i.e., firm size.

Figure 37: Other margins, long run (24 months after the event)

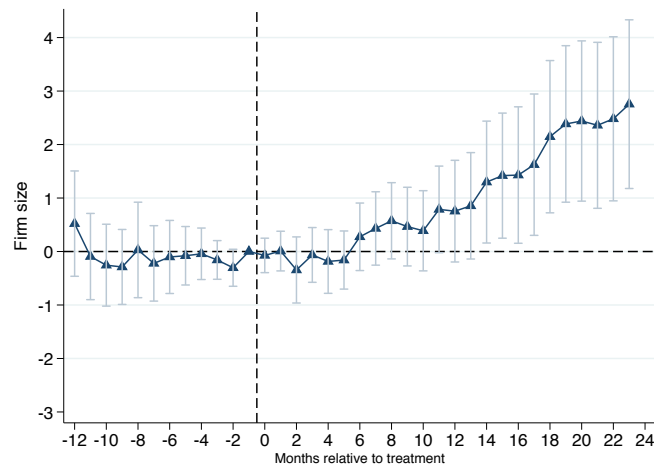
(a) Workers in levels



(b) Workers' gap



(c) Firm size



Notes: these figures plot the event-study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (2) but considering a 24 month-period after the event. Panel (a) shows the number of workers in the treatment (N^T) and the control (N^C) group (in levels) while panel (b) considers the gap as the outcome variable. In Panel (c) the dependent variable corresponds to the total number of workers within the firm i.e., firm size.

I.2 Delinquency rates

The question behind this exercise is whether early switchers differ from late ones and, somehow, test for the existence of financial stress experienced by firms before they enrolled the new system. It is an empirical question, whether the old payment system impose a burden on firms' financial situation. Although with rather limited information, we tried to approach this question by using a complementary administrative database.

To do this we combine our set of events with the monthly financial situation of employers. This information is compiled by the Central Bank of Argentina (BCRA) into what is called the *Central de Deudores del Sistema Financiero* (CENDEU). The CENDEU informs, for each taxpayer, the debts incurred with financial entities within the Argentine Financial System. The dataset is the result of information that financial institutions send to the BCRA every month; for each debtor they report the following information: the situation, amount of debt, reporting entity and date. The central bank groups taxpayers in six different categories based on the probability of default and,²⁴ following this classification, we identify high risk debtors as those that have payment delays of more than 90 days.

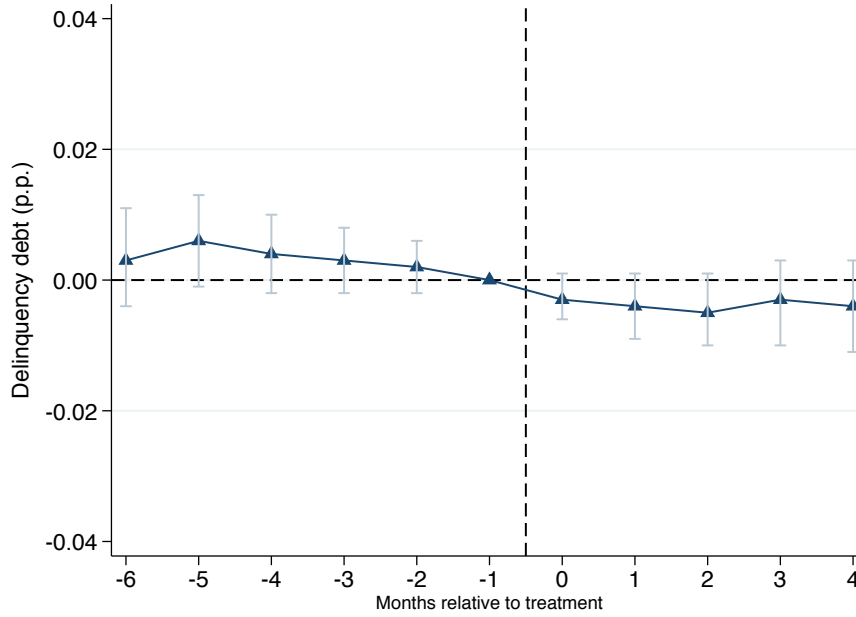
In concrete, we have access to a dataset that contains the financial situation of every firm on a monthly basis for the period that goes from April 2003 to November 2004 (20 consecutive months). Put it differently, we have a time series of trends in delinquency rates for firms switching between that period. We then run a standard event study design where we use the delinquency rate as dependent variable.²⁵

We present the event study result in Figure 38. The figure shows no clear effect of switching on financial distress. We get the same results if instead we re-define risky debtors those with payments delay of more than 180 days. If we were to open this figure by firm size, we would observe a precise zero for small firms i.e., those that drive the wage effects, and a sort of decreasing trend, that we are not able to remove with the specification that we propose, for large firms (this decreasing trend in delinquency rates over time is likely the result of an economy that was recovering from the 2001/2002 crisis).

²⁴The categories are the following: [1.] Normal: delay in payments less than 31 days, [2.] Low risk: delay between 31 to 90 days since maturity, [3.] Medium risk: delay in payments between 91 and 180 days, [4.] High risk: delay great than 180 days but less then a year, [5.] Irretrievable: delay greater than a year and [6.] Irretrievable for technical reasons: debt with an ex-entity.

²⁵The dummy variable takes a value of one if we are referring to a risky debtor i.e., more than 90 days without payments, or zero in any other case.

Figure 38: Delinquency rates



Notes: this figure plots the event-study estimates of the parameter γ and its corresponding 95 percent confidence intervals of equation (2) considering a one year period. The dependent variable is a dummy one that takes a value of one if we are referring to a risky debtor i.e., more than 90 days without payments, or zero in any other case. We include untreated firms i.e., those that switched during 2005, in the regression and re-center the time variable as being t_{-1} for these set of firms.

I.3 Bunching at notches

Under the old payment system, the transfer was very salient to both employers and employees as it was already shown in Figure 3. The salience could in principle affect the collusion between employers and workers to extract rents from the transfer scheme, in the spirit of Doornik *et al.* (2018) (they identify strategic behavior in claiming unemployment benefits). Before the reform, employers had more visibility to keep the salary below the notch so that they could benefit from the transfer; therefore, there was space for collusion because the employer was relatively more aware of the transfer.

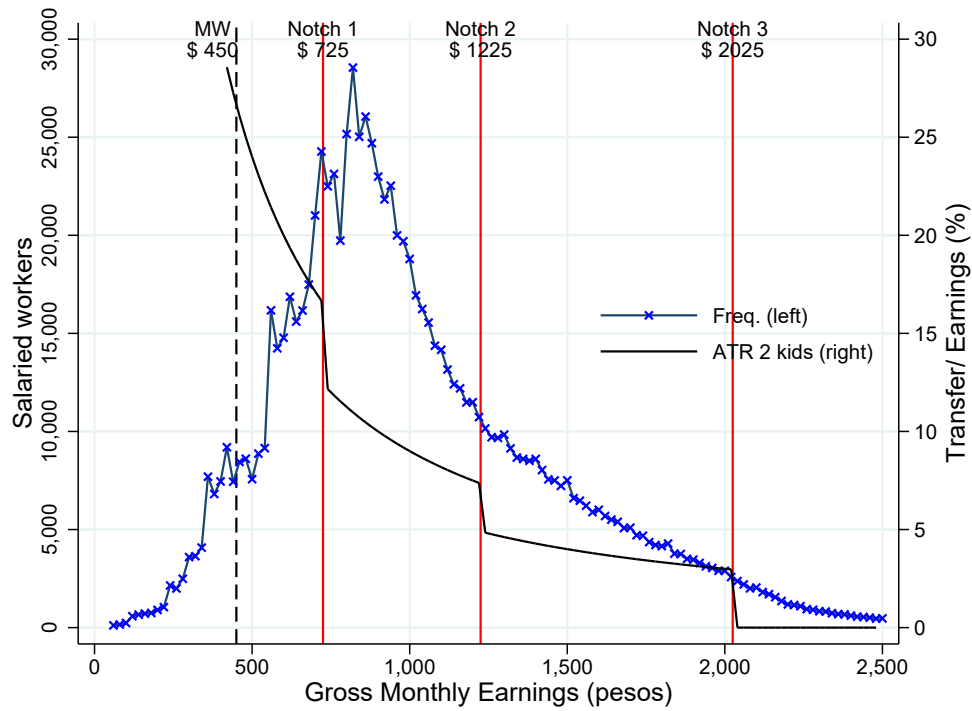
Empirically, if this is what occurred we should observe bunching to the left of the thresholds for eligible workers with kids compared to the distribution of those without kids. The gradual roll out should then be translated into a gradual decrease of the bunching behavior. Intuitively, under the new system the situation is more opaque to employers about where the notches are and who is currently receiving the transfer. Figure 39 (a) presents the distribution of employees grouped in bins of 20 pesos and the three transfer notches, we also add the minimum wage as a reference point for August 2004. To illustrate the discontinuity induced by the transfer scheme we also plot the theoretical average tax credit (i.e., the ratio of transfer to earnings) for workers with two children, as a way of

pointing where and how strong the incentives to bunch are. As opposed to *kinks*, notches imply that there exist dominated areas, and therefore large incentive to remain below the threshold. In our setting, moving above the notch means that the firm pays more and, at the same time, workers receive less income (including the transfer). What we observe looking at the figure, is that there is no clear bunching in the last two notches (even zooming into neighbor areas), but there seems to be something in the first notch, but we show later that it is confounded by something else.

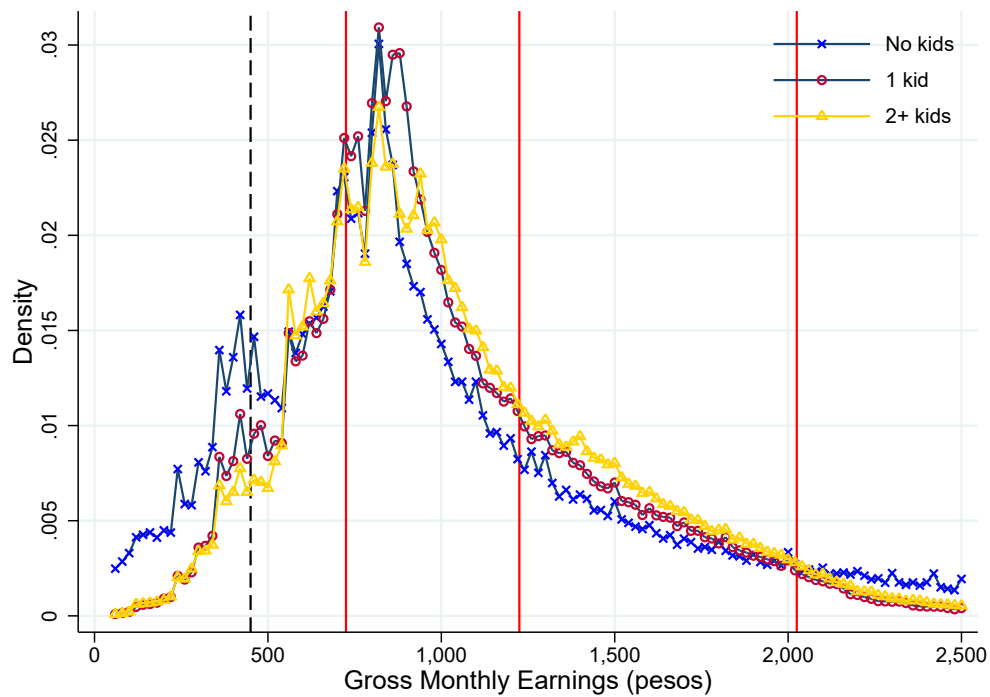
In Figure 39 (b) we break the previous figure by the number of kids because, given an earnings level, incentives operate more strongly for workers with many children. Again there is no visible bunching at any *notch*. Although there are some spikes, there is no clear pattern between those workers with and without children. Some of the potential reasons might be the following. First, there is no incentives to bunch if there is low enforcement in general and at the *notches* in particular. To rule out this alternative we look at the empirical first stage, that is, what happens with the transfer at the *notches*. In figure 40, we plot the median and average transfer, grouping workers in bins of 20 pesos. We confirm that the *notches* are properly enforced since there is a discontinuity in the transfer paid right at the threshold. Second, there are frictions and labor market regulations that make it difficult to collude and therefore to bunch at the *notch*.

Figure 39: Bunching as a collusion response

(a) Gross wage and average tax rate



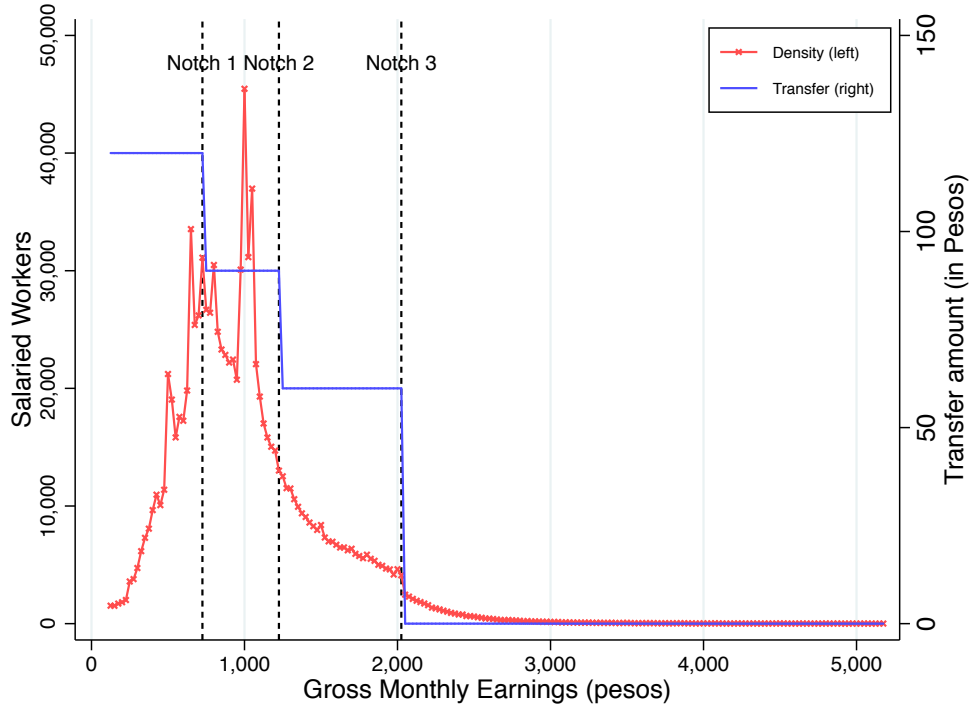
(b) Distribution by number of kids



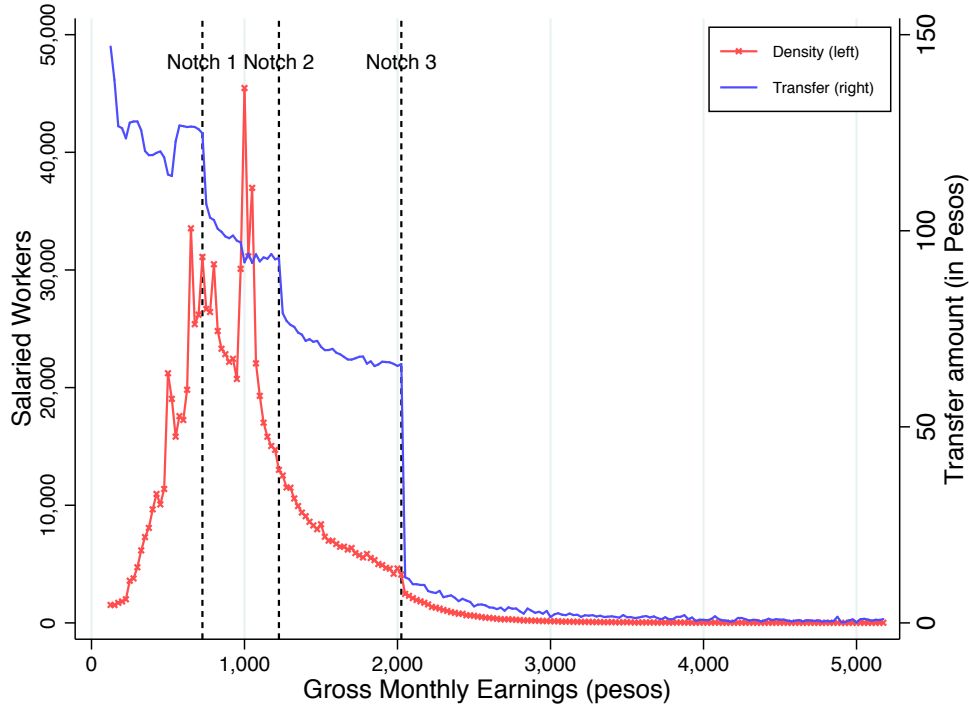
Notes: these figures show the bunching response of wage employees to the presence of *notches* embedded in the transfer scheme. Panel (a) presents the distribution of wage-employees grouped in bins of 20 Argentinean pesos together with the theoretical average tax rate for a worker with 2 children. In panel (b) we repeat the analysis but we break down by number of children.

Figure 40: Transfer's amount empirical discontinuities at *notches*

(a) Median transfer



(b) Mean transfer



Notes: these figures show the bunching response of wage employees to the presence of *notches* embedded in the transfer scheme. Panel (a) presents the distribution of transfers' recipients grouped in bins of 20 Argentinean pesos together with the empirical median ATR. In panel (b) we repeat we present mean ATR for each bin.