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SHOCK ON THE SITUATION OF WOMEN  
IN THE HOUSEHOLD: THE CASE OF A  
PENSION REFORM IN ARGENTINA**

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***INDUSTRIAL ORGANIZATION***



**Centre for Economic Policy Research**

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# THE IMPACT OF A PERMANENT INCOME SHOCK ON THE SITUATION OF WOMEN IN THE HOUSEHOLD: THE CASE OF A PENSION REFORM IN ARGENTINA<sup>†</sup>

## Abstract

Transfers to women may affect their bargaining power within the household and consequently their well-being. We analyze the effects of a pension reform in Argentina that resulted in an unexpected and substantial increase in permanent income for around 1.8 million senior women (women 60 years and over), on outcomes arguably related to women's bargaining power within the household. Our results imply that a 10 percentage-point increase in senior women's income share within the couple leads to a statistically significant decrease of 10% in the probability that they are the only person in charge of household chores and to a significant increase of 11% in their husbands' participation in household chores. Moreover, this large income shock significantly increased the probability of divorce/separation among senior women by 19%. Our results show that (permanent) transfers to senior women can have substantial effects on their situation in the household.

JEL Classification: H55, J12, J16 and J26

Keywords: collective models, divorce, household chores, intra-household bargaining power, marital disruption, non-contributory pensions, pensions, permanent income shock, public transfers and senior women

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# 1 Introduction

Over the past two decades, several countries, mainly in Latin America, introduced social programs to fight poverty and inequality. Amongst the most expensive programs are “non-contributory pensions” aimed at extending pension coverage to individuals that did not fully contribute to the social security system (Levy and Schady, 2013). Latin American women are particularly affected by these programs given their low attachment to the labor market. In this paper, we exploit the non-contributory pension reform that occurred in Argentina in 2004/2005 as a source of a permanent income shock and analyze its effects on outcomes arguably related to women’s bargaining power within the household.<sup>1</sup> The unexpected increase in the income of eligible individuals, mostly women, brought about by the reform makes it an ideal setting to analyze exogenous asymmetric income effects within the household. Specifically, we estimate by differences-in-differences (hereafter DD) the effects of the reform on the probability of divorce/separation, the probability of women being the head of the household, and the distribution of household chores for senior women. Our results show that permanent transfers to senior women have substantial effects on their situation in the household despite their perceived stable lives and low probability of divorce.<sup>2</sup>

The Argentinean pension reform, also known as the “moratorium” or “housewives reform”, was introduced by two pieces of legislation, Law 25994 art. 6 and Decree 1454/05, approved in December 2004 and December 2005, respectively. It was not until mid-2006, however, that the government regulated the process for accessing pensions under the two laws. Data show that the full implementation of the benefits did not start before the beginning of 2007. The reform allowed individuals that had reached retirement age but had not fulfilled the 30-year social security contribution requirement to retire and benefit from a pension. The objective of the reform was to increase pension coverage in Argentina, which had been particularly low for women (55% in 2004), largely because of their low participation in the labor market (between 44% – 49% during the 80s and 90s, ILO 2011) and their

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<sup>1</sup>There is some discussion about whether the pensions approved by the Argentinean reform should be considered non-contributory. We follow Berniell 2012, Bosch and Guajardo 2012, Lustig and Pessino 2013, and Levy and Schady 2013 and label them as non-contributory pensions.

<sup>2</sup>Becker et al. 1977 and Weiss 1997 show that religion, old age, and marriage duration are factors that decrease the divorce/separation probability. Using microdata from the 2009 American Community Survey, which provides detailed information regarding changes to the family structure including divorce, we computed the average 12-month probability of divorce for women aged 60 – 65 to be around 0.7 percent. Unfortunately, there are no such surveys for Argentina, but using administrative data for the city of Buenos Aires (Institute of Statistics and the Census of Buenos Aires) we calculate a probability of divorce of approximately 0.73 percent for women aged 60 – 65.

relatively high level of participation in informal jobs. The percentage of pension beneficiaries among elderly women in Argentina went from 57% in 2005 to 92% in 2009 (Benigni et al. 2012), which meant a substantial decrease in the probability that women in their mid-60s had zero income, which, in urban areas, went from around 35% before the reform to 10% after the reform (see Figure 1). By 2009, public expenditures with the reform represented 2.4% of GDP (Lustig and Pessino 2013), and by May 2010 more than 1.8 million women had benefited (D’Elia et al. 2011).

Our data comes from the Argentinean Continuous Permanent Household Survey (or EPH from the Spanish acronym for *Encuesta Permanente de Hogares Continua*) for 2004 – 2009. Importantly, we can neither identify individuals that receive a pension due to the reform nor the number of years of past individual social security contributions (hereafter SS). Because of these data restrictions, we identify intention-to-treat effects rather than treatment effects. In our application, the treatment effects on the treated are approximately 2.5 times as large. Given the large scale of the reform, we argue that intention-to-treat effects are no less relevant policy parameters as they incorporate the endogenous decision to claim benefits from the reform. Our identification strategy uses a characteristic of the reform that ascribed to all cohorts born before 1945 the right to benefit from a pension by the time they turned 60, even if they had never made SS contributions. The DD is estimated by comparing the pre- and post-reform evolution of the outcomes for 1941-1944 cohorts to those of the most similar non-affected cohorts.

We estimate a 43 and 53 percentage-point increases in the probability of receiving a pension (for all women, married and divorced, respectively), which means a 27-36 percentage-point decrease in the probability of having zero income and an average increase in monthly income of 66-68 USD adjusted for purchasing power parity of 2009. All these effects are statistically significantly different from zero. More interesting for our purposes is the even higher income effects obtained in the sample of married women, meaning 50% and 55% increases in the wife’s share in the household and the couple’s incomes, respectively.<sup>3</sup> These large income effects were accompanied by an increase in the divorce/separation probability, as well as an increase in the outcomes related to the bargaining power within the household. More concretely, the probability of divorce or separation increases significantly by 1.8 – 2.7 percentage points after the reform, which represents an increase in divorce/separation rates of roughly 18% – 19% for women between 60 – 65 years old. This relatively large impact is

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<sup>3</sup>We denote as married persons legally married or living with a partner.

likely to reflect a backlog of women that wanted a divorce/separation but could not afford it. Our large estimates may encompass a short-lived effect comparable to the effects of divorce laws adopted in several countries (González and Viitanen 2009).

Regarding the outcomes related to bargaining power amongst married women, we begin by observing a large although not significant increase of 1.4 percentage points (or 20%) in the probability of the wife being the head of the household. We further observe a statistically significant decrease of 5 percentage points (or 11%) in the probability that wives are the only ones in charge of the housework and a statistically significant 1.6 percentage points (or 13%) increase in the probability that husbands do most of the housework. By using the reform as an instrument for the female income share, we can interpret our results more broadly as the effect of female income share within the couple on the bargaining power of women. They imply, for instance, that a 10 percentage-point increase in the female income share within the couple leads to a 4.5 percentage-point (or roughly 10%) decrease in women's sole participation in household chores and an increase in the husbands participation in household chores of 1.5 percentage points (or roughly 11%).

We ruled out the possibility that our results are driven by age differences between the control and the treatment group by running robustness checks based on placebo treatments for a pre-reform period. We believe that the Argentinean reform had significant effects on senior women for two main reasons: first, because the transfers are sizable, representing an increase of 50%-55% in married women's incomes; and second, because they are permanent.

We extend our model to allow different effects of the reform by educational level. We find an interesting pattern: highly-educated women have tended to opt out of their marriages by increasing their probability of divorce/separation, while the low-educated women have opted in and gained more bargaining power within their marriages.

This paper contributes to three important literatures: The literature on decision-making and allocation within the household; the literature on the determinants of divorce/separation; and the literature on the effects of transfers on household members. Models of allocation within the household and the accompanying empirical evidence predict an increase in outcomes and demands preferred by women following an unexpected increase in their income share in the household, such as the one brought about by the Argentinean pension reform (Becker 1974, Manser and Brown 1980, McElroy

and Horney 1981, McElroy 1990, Thomas 1990, Schultz 1990, Lundberg and Pollak 1993, Bourguignon et al. 1993, Lundberg and Pollak 1996, Lundberg et al. 1997, Gray 1998, Browning and Chiappori 1998, Chiappori 1988, Browning et al. 2011, and Majlesi 2014 for the case of Latin America, among others). To the extent that a more equal distribution of household chores and being the head of the household proxy for greater well-being in the household, our results concur with this literature.<sup>4</sup> To our knowledge, we are the first to show that gains in bargaining power still occur in older ages, possibly after long marriages.

Our results on divorce/separation probabilities also concur with the “independence effect” hypothesis developed in the context of the divorce literature. Again, we show that this effect is still present in old age. The “independence effect” hypothesis (Ross et al. 1975, also supported by an earlier work by Becker 1974) predicts an increase in divorce/separation rates with the increase in married women’s incomes relative to their husbands’. This theory triggered a number of empirical studies, particularly in the sociology literature (e.g. Sayer and Bianchi, 2000). The difficulty in estimating income effects stemming from truly exogenous shocks has given rise to works by several economists. The weight of the evidence in the economic literature favors the “independence effect” hypothesis (e.g. Becker et al. 1977, Weiss and Willis 1997, Weiss 1997, Jalovaara 2003, Bobonis 2011, and Doiron and Mendolia 2011), although there are notable exceptions (Hoffman and Duncan 1995 and more recently Hankins and Hoekstra 2011).<sup>5</sup>

Finally, our paper is directly related to the literature that analyzes the effects of pension transfers (Duflo 2000, Bertrand et al. 2003, Edmonds 2006, Posel et al. 2006, Sienaert 2008, Ardington et al. 2009, Ponczek 2011, de Carvalho Filho 2012, Bosch and Guajardo 2012, Danzer 2013, Galiani et al. 2013). This literature has focused mainly on the effects of pension transfers on the labor supply of recipients and non-recipient household members, as well as on children’s nutritional and school outcomes. We contribute to this literature by analyzing the effects of transfers on a different set of

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<sup>4</sup>Sociologists studying the relationship between household work and earnings have found in general a negative correlation between women’s earnings and household work (see for example Bittman et al. 2003 and the references there in). Interestingly, this pattern reverses when women start to earn more than their husbands in an effort to maintain their gender identity (Bittman et al. 2003 and more recently Bertrand et al. 2013). See Biddlecom and Kramarow 1998 for a suggestive relationship between headship and variables related to attitudes and economic power of women.

<sup>5</sup>Note that the literature on the determinants of divorce and union dissolution more generally is too extensive to be discussed here. In particular we leave out of the discussion papers that study policies or transfers that affect the benefits or costs conditional on divorce since the transfers brought about with the Argentinean pension reform were not conditional on marital status.

outcomes related to the well-being of female recipients such as marital stability and cooperation in household chores.

The rest of the paper is organized as follows. Section 2 describes the pension reform in Argentina. Section 3 describes the data set. Section 4 describes the empirical strategy. Section 5 describes the main results. Section 6 shows the results of the placebo treatments, and in Section 7 we discuss heterogeneous effects by education. Section 8 concludes.

## 2 The Pension Reform

In Argentina, women can retire at 60 and men at 65. Besides reaching the retirement age, a worker must have 30 years of SS contributions to be entitled to collect a pension. These requisites, together with a traditionally low female participation in the labor market (around 44% in the 80s, ILO 2011) and an increasingly high level of informal jobs (Tornarolli and Conconi 2007 report a 45% level of informality for all workers, but the value for women is likely to be higher (ILO 2011)), resulted in low pension coverage, especially amongst women; by 2004 only 55% of age-eligible women received a pension, and only 35%, if widows are excluded (Figure 2). Pension coverage was higher for males (75%) due to their higher labor force participation.

In December 2004, the Argentinean Government approved a reform to the pension system (Law 25994), that extended pension and health insurance benefits to persons of retirement age, i.e., cohorts 1944 and older if female and cohorts 1939 and older if male, but did not fulfill the 30-year SS contribution requirement. The reform was implemented through a payment schedule, which was officially named “moratorium” and popularly known as “the housewives pension” because housewives were perceived as the group of the population that benefited the most. The payment schedule consisted of paying back to the SS system the amount corresponding to the number of years (up to 30) the individual had not contributed subject to a cap. The SS debt would be paid in up to 60 monthly installments and was deducted directly from the individual’s monthly pension benefit. The law established a maximum deduction of 49% (Lustig and Pessino 2013). This cap implied that housewives, for example, who had never contributed to SS would receive a pension equivalent to 51% of the minimum pension during the first 5 years, i.e. 304 ARS in 2007 or 191 U.S. dollars PPP

2009 per month, and 596 ARS or 374 U.S. dollars PPP 2009 per month afterward. This minimum transfer was just enough to cover the basket of basic needs for an adult in Argentina in January 2007, which cost 295.89 ARS (Source: INDEC). Assuming a 15-year life-expectancy and a conservative 5.3% real interest rate (WDI 2009, World Bank), these figures imply that each woman who claims the full benefits from the moratorium will cost the Argentinean State over 39,000 US PPP 2009 in net present value. Importantly, benefits were not automatic and those eligible had to apply in order to benefit from a pension.

Law 25994 expired in April 2007, but this had no effect on the 1944 or older cohorts with the approval of Decree 1454/05 in December 2005. In addition, Decree 1454/05 also allowed younger cohorts to benefit from the moratorium, although it established more stringent eligibility criteria.<sup>6</sup> Hence, the pension reform affected different cohorts differently: older cohorts, born in 1944 or earlier, benefited relatively more than younger cohorts. In our empirical exercise, we focus on the effects of the reform on a few cohorts that benefited the most (1941-1944), which represent over 500,000 women in May 2010 (D'Elia et al. 2011).

In Argentina, a bill must be discussed and approved in the Senate and Congress before becoming a law. Law 25994 was unusual in that it was discussed and approved in both chambers on the same day, December 16, 2004. Moreover, the proceeding Bill 1183-D-03 of April 2003 did not refer to any benefits to the 1944 or younger cohorts. This unusual trajectory is likely to have contributed to the scarce media coverage received before December 2004. Despite the unusually fast approval process, the pension reform took more than 2 years to be fully implemented. One reason was the delay in regulating the process of accessing pensions under the moratorium, which was completed in July 2006 (BOE 30870, March 21, 2006 and Resolución General Conjunta AFIP 2091/2006, July 2006). Media coverage of the reform understandably peaked during this period. As we show in Figure 3, news stories about the reform in the two major newspapers in Argentina, *La Nación* and *El Clarín*, appeared mainly in the last months of 2006. The view that the news coverage may have been strategic or biased in favor or against the Government is contradicted by the fact that Google search counts (Figure 4) followed a similar pattern over time. The program was not fully implemented until 2007, as documented by D'Elia et al. 2011, which is consistent with the number of pension recipients

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<sup>6</sup>Decree 1454/05 only extends the moratorium to the self-employed among the younger cohorts. We could not find evidence as to whether this requirement was effectively monitored or binding in practice. This aspect, however, is not of substance for our analysis.

and income effects observed in our data (Figure 2).

### 3 Data

We use the Argentinean Continuous Permanent Household Survey (EPH) for the years 2004 – 2009.<sup>7</sup> The EPH is a rotating panel quarterly survey. Households are in the panel for four quarters in two alternating periods of two quarters each, spanning one and a half years. A given individual is surveyed for two consecutive quarters in the first year, is out of the sample for the next two quarters, and surveyed again in the following two quarters. Approximately 25,000 households are surveyed in every quarter. The survey covers 32 urban regions representing 62% of the country’s population, although our analysis is restrict to 29 urban areas since three regions were not covered by the EPH before 2006.

The survey includes one household questionnaire and individual questionnaires for every person in the household. The questionnaires include questions about housing conditions, household and individual incomes, demographic characteristics, occupation and working conditions, certain types of social benefits, etc. Unfortunately, there is no information on the number of years individuals contributed to the SS system, which would have allowed us to identify individuals directly affected by the policy, nor could we identify individuals claiming benefits from the moratorium.

In our empirical analysis below we start by measuring the effect of the reform on different measures of personal income. Concretely, we consider the following income measures: the probability of receiving a pension,<sup>8</sup> the probability of not having any personal income, the amount of monthly personal income, and for legally married women or those leaving with a partner, the wife’s share of income within the household and within the couple. Because monthly income is sometimes left unreported, the Statistics Office created a twin variable where missing values were imputed.<sup>9</sup> We transform Argentinean currency (Pesos ARS) to U.S. dollars (USD) using the purchasing power parity (PPP) conversion factor for private consumption in 2009.<sup>10</sup>

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<sup>7</sup>Data for the third quarter of 2007 is not available because some regions could not be surveyed due to administrative problems in the Statistics Office.

<sup>8</sup>We constructed a dummy variable for “receives a pension” from the “income from pensions” category of the EPH. Only 2% of pension income was imputed by the Statistics Office.

<sup>9</sup>In our sample only 9% percent of the observations had imputed monthly income.

<sup>10</sup>The PPP conversion factor is published by the International Comparison Program database (World Bank). This

We now describe the construction of our main outcome variables: the probability of divorce or separation;<sup>11</sup> the identity of the head of the household; and sharing household chores. The information used to construct the variables related to the identity of the head of the household and sharing household chores comes from the household module of the survey. The respondent to the household module identifies the head of the household according to her own judgment since the definition provided by the Statistics Office, in charge of the EPH, is essentially void, “head of the household is the person recognized by the household members as such.” Being the head of the household is therefore compatible with being the main breadwinner or the main decision maker, or both.

The respondent to the household module also identifies which household members contribute to household duties, whether they do most of the housework or just help, as well as whether the household has domestic service or receives some external help.<sup>12</sup> We constructed the following variables: i) A dummy variable that takes the value 1 if the wife is the *only* person responsible for most of the household chores, i.e., no other household member is identified as in charge of *most* of the household chores; ii) a dummy variable that takes the value 1 if the husband is responsible for most of the housework, whether or not he is the only one responsible;<sup>13</sup> and iii) a dummy variable that takes the value 1 if the household has domestic service or external help with housework.

Other individual characteristics that we include as control variables in our regressions are cohort dummies, region of residence (dummies for the 29 urban areas where the EPH is conducted), educational level with high and low education dummies, where low education indicates less than high school diploma, a dummy variable to identify those who were born abroad and a dummy that identifies those that belong to the richest one percent of the female sample. Additionally, for married women, we construct variables to reflect age and educational differences between spouses. The latter

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factor represents the units of ARS required to buy the same amounts of goods and services in the domestic market as 1 USD would buy in the United States. We also use the U.S. annual inflation rate to adjust for price changes in the United States throughout our period of analysis. Therefore, 1 U.S. dollar PPP 2009 has the same purchasing power as 1 USD in the United States in 2009.

<sup>11</sup>The survey question does not allow us to distinguish between divorced and separated.

<sup>12</sup>Specifically, we use the closed-form answers to the following questions on the household questionnaire: 1) “*Who does most of the housework?*” Respondents can indicate up to two household members, domestic service or other help from people who do not live in the household; 2) “*Which other people help in the household chores?*” where respondents indicate which other household members help with these chores, or whether they receive external help or have domestic service.

<sup>13</sup>We do not construct a variable similar to “i)” for husbands since there are very few observations where husbands are identified as the *only* person responsible for most of the housework.

is constructed taking differences between the spouses level of education attained, with a positive value when the wife is more educated than the husband.<sup>14</sup>

Our sample includes women born between 1941 – 1944 and 1950 – 1953 (see Section 4 for the details about the sample selection). Our analysis uses the EPH as repeated cross sections. The final database contains 46,047 individual observations of women aged between 51 and 68 years old. In the pre-reform period, 13% of these women were divorced or separated, 8% were single, 15% were widows, and the rest were married or living with a partner (see column 6 in the first panel of Table 2). In the subsample of married women, only 7% were the head of the household, on average their personal income represented 20% of the total household income, 40% of them were the only responsible for doing the household chores, and 11% of the husbands were in charge of most housework. Only 4% of the married sample had domestic service or external help. In this sample, the average personal income of the treated cohort before treatment was only 199 USD PPP 2009. This amount is much lower than the average personal income of a treated divorced woman before treatment (not shown in Table 2) which was 361 USD PPP 2009; an amount almost identical to the long-run pension provided by the moratorium to a woman who had never contributed to the SS.

## 4 Empirical strategy: Difference-in-Difference Estimation

Although the Argentinean pension reform law was passed in 2004 and 2005, its full implementation started in 2007 as noted in Section 2. Since our data set covers the period 2004 – 2009 we can compare outcomes of treated individuals before and after the law came into effect as part of our identification strategy. Accordingly, we define 2004-2006 as the pre-treatment period and 2007–2009 as the post-treatment period.<sup>15,16</sup>

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<sup>14</sup>The maximum level of education attained is a categorical variable available in the EPH. We assign values between 0 and 6 to each category. The maximum education category is “Higher Education (complete)” with the value 6, and the minimum is “no formal education” with the value 0. The other categories are “elementary school (incomplete)”, “elementary school (complete)”, “high school (incomplete)”, “high school (complete)” and “higher education (incomplete)”.

<sup>15</sup>We do not consider the years before 2004 since there were important methodological changes to the EPH in 2003. Nor do we include data after 2009 to ensure that women that would turn 60 are not included in the control group. Another important reason to leave years after 2009 out of the sample is the announcement and implementation of the Universal Child Allowance Program (*Asignación Universal por Hijo para Protección Social*) at the end of 2009. This program paid a monthly amount per child under 18 to parents working in the informal sector or unemployed (Resolution ANSES N° 393/2009). By 2011 almost 95% of the beneficiaries were women (ANSES, 2012).

<sup>16</sup>Any anticipation effects due to the announcement of the law lead to an underestimate of the effects of the reform. These anticipation effects are not very likely, however, given the scarce media coverage before mid-2006 (as shown in

To complete our identification strategy, we exploit a feature of the reform that granted differential treatment to different cohorts. This discontinuity in treatment allows us to identify a treatment and a control group. We focus on those cohorts that benefited the most from the reform, i.e., those born in 1944 or earlier. Accordingly, we define as treated all women born between 1941 and 1944 for two reasons: On the one hand, all these women had already turned 60 by 2004, their ages ranging between 60 and 65 in the pre-treatment period and between 63 and 68 in the post treatment period, which allows us to isolate the effect of the reform from the effect of changes in individual labor market decisions that occur at retirement age.<sup>17</sup> On the other hand, in 2007, the year the reform was fully implemented, all women in the treatment group became potentially eligible to obtain the maximum benefit (i.e., may include up to 30 years in the payment schedule). Note that since we neither observe the number of years individuals contributed to the SS system nor who actually claims benefits from the moratorium, our estimates identify intention-to-treat (ITT) effects. Our control group is composed of women born between 1950 and 1953, who by definition were never affected by the reform during our sample period since their ages range between 51 – 56 in the pre-treatment period and between 54 – 59 in the post-treatment period. Table 1 summarizes the cohort and age composition of the treatment and control groups. Using administrative records, Figure 4.4. from D’Elia et al. (2011) shows that by May 2010 there were roughly 506,000 women between 65-69 years old, that is, in the same cohorts as our treatment group affected by the moratorium.

Figures 5 and 6 show that after the reform the percentage of women in the treatment group that receive a pension increased from approximately 30% to more than 75% and that, as a result, the percentage of women without any personal income fell from roughly 40% to 12%. Importantly, Figures 5 and 6 also show that: 1) the increase in pension coverage and personal income of women in the treated cohorts were effective in 2007; 2) women from the control group were unaffected by the reform.

Table 2 shows the pre- and post-treatment means of a set of relevant variables for the treated and control groups. Differences between the treated and control groups are mostly due to their

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Section 2).

<sup>17</sup>To be precise, the EPH does not include information on “year of birth” and only includes information on “age”. This implies that a proportion, hopefully small, of individuals are misclassified. An example would be a woman who declares she is 60 years old in January 2005 when she is interviewed but turns 61 in February 2005. This woman would not be classified as treated (nor as control for that matter) although she was born in February 1944. We could have included older cohorts, i.e., born before 1941, in the analysis as well but we were concerned that compositional effects due to mortality would become a problem and the age difference in relation to the control group would render it invalid.

age difference. For example, the treatment group has more widows and therefore more heads of household and more pension beneficiaries. In addition, because the younger cohorts are typically better educated, there are also noticeable differences in education. Placebo runs in Section 6 prove that this age difference by itself cannot explain the estimated effects of the reform that we obtain in Section 5.

The difference-in-differences strategy relies on the assumption that the evolution of the outcome of the treatment group in the absence of the reform would have been the same as that of the control group, conditional on observed characteristics. We check the plausibility of this assumption by comparing the evolution of the outcomes of interest for the treated and control groups during the pre-treatment period. Specifically, we plot the estimated quarter-year coefficients of the regression of outcomes on quarter-year dummies, estimated separately for treatment and control cohorts. Naturally, because these are different cohorts and our sample consists of repeated cross sections, it is important to control for the same exogenous characteristics that we use in our main specification (equation 1). Figures 10 to 13 show the estimated values of the quarter-year dummies. The estimated time trends of treatment and control groups for all our outcomes are reasonably similar before the reform took effect in 2007.<sup>18</sup>

In summary, our empirical strategy is a standard difference-in-difference where we compare the evolution of outcomes of the treatment group across time with the evolution of outcomes for the control group. Let  $Y_{it}$  be the outcome of interest for individual  $i$  in time  $t$ . Our model specification is:

$$y_{it} = \alpha + \beta Treat_i \times Post_t + \delta_i^C + \delta_t + X_i' \gamma + \varepsilon_{i,t} \quad (1)$$

where  $Treat_i$  indicates whether woman  $i$  was born in the period 1941 – 1944,  $Post_t$  indicates if the outcome is observed in the post-treatment period 2007 – 2009,  $\delta_i^C$  and  $\delta_t$  are cohort and period (year-quarter) fixed effects, respectively,  $X_i$  is a vector of individual characteristics and  $\varepsilon_{it}$  is a residual. The coefficient  $\beta$  represents the difference-in-difference estimate of the effect of the reform.

For inference, given that the treatment is defined at the cohort level, it is advisable to account for

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<sup>18</sup>In the case of divorce/separation in Figure 10 there are two post-treatment quarters where the estimated period effect for the control group spikes downwardly. We re-estimated the divorce/separation DD model dropping the data of those two quarters and our results do not change significantly.

clustering at the cohort level (Bertrand et al. 2004, Donald and Lang 2007). The most reliable technique to construct standard errors in the presence of a low number of clusters is the wild bootstrap-t (Cameron et al. 2008) with a 6-point distribution, rather than the common 2-point Rademacher weights, as suggested by Webb (2013). MacKinnon and Webb (2014), however, show that when the number of treated cohorts is equal to or lower than 4, the number of treated cohorts in our case is exactly 4, the wild bootstrap-t method also fails considerably.<sup>19</sup> Given the difficulties involved with inference for our specific application, we decided to cluster at the urban area level, for which there are 29 clusters, and show both the p-values obtained from the stata output and p-values computed using wild bootstraps-t techniques for a 6-points weight distribution. Clustering at the urban area level deals with potential correlation from multiple observations (up to four) from the same individual.

An important concern in our setting is related to potential anticipation effects amongst women in the control group as they perceive themselves as future beneficiaries of the moratorium. Such anticipation effects, however, would bias downwards our difference-in-difference estimates, reinforcing our results.<sup>20</sup>

## 5 Results

### 5.1 Effects of the reform on women’s income

In this section we show DD estimates of the effect of the reform on women’s probability of receiving a pension, on the probability of having no personal income, and on their monthly personal income

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<sup>19</sup>One might also consider two-way clustering; for example, at the cohort and period levels. The two-way clustering, however, needs a large number of clusters in both dimensions (Cameron et al. 2011 and Villacorta 2013), which again does not hold in our case with 8 cohorts and 23 year-quarter periods. Cameron et al. (2013) claimed that there is not much one can do in this case besides controlling for the relevant variables, among which is controlling for cohort fixed effects, which we do.

<sup>20</sup>An alternative specification would be to exploit the panel structure of the EPH. Considering the panel would allow us to include individual fixed effects and even include additional cohorts in the study. However, the approach has important drawbacks because it would reduce the sample size considerably (from 27,157 observations to just 7,336) and more importantly, the treated women’s exposure to the reform would be very short-lived, between 1 and 5 quarters. Moreover, there is a potential attrition problem related to treatment in the sense that divorcees may be harder to follow up, creating an automatically lower bias in the probability of divorce/separation estimates. We carried out this analysis and realized that the effects on income were considerably smaller in the shorter term. Perhaps due to the lower income effects, we did not find a short-run effect of the reform on outcomes related to the distribution of household chores. One possible explanation is that women may need to accumulate a minimum amount of income before they can bargain with or separate from their partners; another possibility is that there was not enough time since the implementation of the reform for household members to internalize the change in their relative bargaining power.

using the specification of equation 1. All DD effects on income are statistically significantly different from zero. In Table 3, we report results for the sample of all women regardless of their marital status (columns 1, 2, 5, 6, 9 and 10) and for the sample of married and divorced/separated women (columns 3, 4, 7, 8, 11 and 12). Results for the sample of married women are shown separately in Table 4.

The results presented in Table 3 indicate that the implementation of the pension reform successfully increased the percentage of women receiving a pension by between 43 – 44 percentage points (pp) for the whole sample (145%) and between 53 – 54 pp once widows and singles are excluded (313%). For senior Argentinean women, receiving a pension meant a 27-pp reduction in the probability of having no personal income (67%) or 36-pp once widows and single women are excluded (70%) (Columns 5 – 8 in Table 3). Columns 1 and 2 of Table 4 show that married women benefited most from the reform with a 54 pp increase in the probability of receiving a pension (340%) and a 39 pp decrease in the probability of having no personal income (68%).<sup>21</sup>

Columns 9 – 12 in Table 3 show the estimates of the impact of the reform on women’s monthly personal income. The estimated effect is between 61 – 73 USD PPP 2009, and a similar result is shown in columns 3 and 4 of Table 4 for the group of married women. Note that since these are intention-to-treat effects, that is, not all women in the treatment group were effectively treated, the real income effect on the treated is much higher than values presented in this table. Finally, results shown in the last four columns of Table 4 indicate that the reform had a significant positive and large impact on a wife’s contribution to the couple’s and the household income, which increased by 10 – 11 pp or 50 – 55%.

## 5.2 Effects of the reform on the probability of divorce/separation

Table 5 reports DD estimates of the effect of the reform on the probability of being divorced or separated. Results show that the implementation of the reform had a positive and statistically significant impact on the probability of divorce or separation, increasing it between 1.8 – 2.7 pp. These effects are large if we take into account that the share of women in the treatment group that

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<sup>21</sup>There was a 8-pp effect of the reform on labor force participation (see Table 7), which is likely to decrease the overall income effect. Our results on labor force participation are in line with those of Bosch and Guajardo (2012), although our effects are larger (the reduction of women’s labor force participation is about 4 pp in their paper) due to differences in the definitions of treatment and control groups.

were divorced/separated before the reform was only 10% and that the probability of divorce at these ages is low (see footnote 2).<sup>22</sup> In all tables, the inclusion of control variables improves the precision of results.

A fair criticism of our analysis would be that our results are potentially affected by compositional effects originating from a different evolution of the proportion of widows in the treated and control groups. For example, women that were married in the pre-treatment but are widows in the post-treatment do not remain in the sample of divorced and married women (“d+m” in the tables) in the post-treatment period. Hence, a higher probability of widowhood amongst the treated group automatically generates a larger increase in the rate of divorce/separation ( $d/(d+m)$ ) for the treatment group because the number of married women in the denominator decreases. Similarly, a higher probability of marriage among single women in the control group, given they are younger than the treated, would lead to an increase in the post-treatment denominator for this group and an upward bias in our estimated impact on divorce/separations. We follow three approaches to check that these compositional effects cannot explain our results: 1) we estimate equation 1 but using as an outcome variable an indicator for being a widow; 2) we estimate equation 1 but using as an outcome variable an indicator for being single; 3) we show that including widows and single women in the sample does not qualitatively alter our results. The results of the first two exercises show that the estimated DD parameter is zero, which indicates that the results presented in Table 5 are not driven by differences in the evolution of widowhood or singlehood among treated and control groups (results not shown here for the sake of brevity, but available upon request). Mortality is an additional source of compositional effects. Mortality rates increase with age and, therefore, should be higher in the treatment group than in the control group. The restriction of treatment cohorts born after 1940 minimizes this possibility. In addition, mortality would only bias our results upwards if it was disproportionately higher amongst married women (versus divorced women), which research shows is not the case (Manzoli et al. 2007).

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<sup>22</sup>We believe this effect is mainly driven by separations rather than divorces because in Argentina getting a divorce is costly and alimony is not guaranteed. In Argentina there is no unilateral divorce and couples need to be separated for a minimum of 2 years before they can file for a divorce. Moreover, if a woman files for divorce and she has no income source, it is up to the judge to decide how much and for how long her ex-husband should grant her alimony.

### 5.3 Effects of the reform on the bargaining power of women

Table 6 shows the DD estimates of the effects of the reform on different outcomes related to the bargaining power of married women. The results reported in even-numbered columns of the table come from a regression that includes additional controls to the benchmark model, such as age and educational differences within couples. The differences in age and education in the couple are commonly used in the literature as *distribution factors* (Browning et al. 2011) and proxy for women’s bargaining power previous to the reform. Their inclusion does not affect the estimated effects substantially but does slightly reinforce some of our results by making them larger and more precisely estimated.

Our first outcome, the probability that women are the head of the household, increases by 1.3–1.4 pp, a large increase (19%-20%), although not statistically significant. To further analyze changes in married women’s bargaining power, we estimate the impact of the pension reform on outcomes related to the division of housework within the household. Given that women are traditionally the ones in charge of housework, for example during the pre-treatment period in our sample 40% of women (see Table 2) were the only person responsible for housework, an increase in women’s bargaining power within the household is likely to affect these outcomes.<sup>23</sup> In columns 3 and 4 of Table 6 we show that the reform significantly reduced by 5 pp the probability that the wife is the *only* person responsible for household chores. However, this result would not reflect changes in bargaining power if it were entirely driven by a pure income effect associated with the reform that allowed women to substitute their own time for paid domestic services. In columns 5-8 we find no significant effect on the probability of having domestic service or other kinds of external help and that husbands or male partners significantly increase their participation in household chores.<sup>24</sup> Taken together, the results from Table 6 reflect that gender roles in the household become more alike with the reform.

The effects on the distribution of household chores could, at least in part, be explained by a reduction in labor market participation of spouses and the consequent increase in available time to

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<sup>23</sup>In Lundberg and Pollak (1993)’s “separate spheres” bargaining model, where divorce is not an option, negotiation failure between the couple leads to a non-cooperative equilibrium with an under-provision of the public good that each member of the couple provides according to gender specialization (e.g. the supply of household services in the case of women).

<sup>24</sup>Bittman et al. (2003), for example, find that an increase in the share of women’s income in the household is not related to an increase in husbands’ participation in housework. In their paper, however, although they have a large set of controls, observed income shares are taken as exogenous variables, while in our case, we have an exogenous income change.

dedicate to household activities. On the one hand, since the reform occurred simultaneously with a (small) reduction in women's labor force participation,<sup>25</sup> we argue that our estimates of columns (3) – (4) of Table 6 are lower, in absolute terms, than what would be obtained by a pure income effect. In which case, our conclusion about the reform bringing an increase in the bargaining power of women and thus allowing them to be less involved in housework activities is reinforced. On the other hand, husbands also reduced their labor market participation (around 11pp) simultaneously with the reform, providing them with more time to help in domestic activities. This increase in availability, as we argue in Section 7, does not hinder our interpretation of wives' gains in bargaining power.

## 6 Placebos

One concern with our methodology is that different age profiles in the treatment and control groups may blur the identification of the treatment effect. While effective in controlling for age differences within treatment and control groups, the cohort and period dummies included in all the estimations are ineffective in controlling for age differences across groups because age profiles do not overlap. Hence, to discard the possibility that the results obtained so far are driven by different outcome trends associated with the different age profiles across groups, we estimate a placebo treatment effect using data from pre-treatment years. The idea is to show that age differences across groups have zero impact on DD estimates.<sup>26</sup>

Specifically, as in our original framework, we include 6 years in our analysis (1996 – 2001), and define 1996–1998 as the placebo pre-treatment period, and 1999–2001 as the placebo post-treatment period.<sup>27</sup> In the placebo treatment group, we include women born between 1933 and 1936, while in the placebo control group we have women born between 1942 and 1945. Therefore, the individuals in these placebo treatment and control groups are the same age as individuals included in our original groups (see Tables 1 and 8). If an age effect drives our results rather than an income effect the results of this placebo DD should be similar to those presented in Tables 5 and 6.

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<sup>25</sup>Results in Table 7 show that, on average, the reform reduced women's labor force participation by 8 – 9 pp.

<sup>26</sup>For this placebo analysis we use data from the EPH Puntual, a survey that was replaced by the EPH Continua at the end of 2003.

<sup>27</sup>We deliberately avoid including the year 2002 in our placebo sample period because it immediately follows the severe financial crisis that hit Argentina in December 2001.

Tables 9 and 10 present the results of the placebo DD. First, in columns 1 to 12 of Table 9 we check that the evolution of incomes are similar for the placebo treatment and control groups in the pre- and post-treatment periods. Indeed, all coefficients are close to zero in magnitude and not statistically different from zero, except for the probability of receiving a pension, which increases by 4pp due to aging. The estimated effects on the probability of being divorced/separated (Columns 13-16) always have the opposite sign to those in Table 5 and are never statistically significant. The effects on married women, Table 10, are all close to zero and not statistically significant, except on two occasions: the probability of receiving a pension, which again presents a small increase of 3pp; and female headship, which goes in the opposite direction. The latter effect is particularly important because it reveals that in the absence of the reform, female headship decreases, perhaps due to the more frequent presence in the household of retired spouses. Unfortunately, the EPH Puntual used in the placebo estimations does not include questions about sharing household chores.

## 7 Heterogeneous Impacts of the Reform by Educational Groups

The analysis in this section reveals major differences in the way different educational groups were affected by the permanent income shock. While high-educated women opted out of their unions by increasing the probability of divorce/separation, low-educated women opted in and gained more bargaining power within their marriages. To analyze the possible heterogeneous effects of the reform, we ran the same regressions as in Section 5, but separating the samples by educational level, high and low, where low education indicates less than a high school diploma.

Table 12 shows that both high and low educated women have been affected by the reform, although the former to a lesser extent (in the interest of brevity, we only report results when controlling for all covariates). The reform increased the probability of receiving a pension by 50 – 61 pp for women with low education and by 31 – 38 pp for those with high education.<sup>28</sup> The results also indicate that the probability of not having any personal income was reduced by 30 – 41 pp for women with low education and by 19 – 26 pp for women with high education. Despite the greater

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<sup>28</sup>Research using other data for Argentina raises concerns that people with higher incomes are more likely to either under-report income or not report it (Cruces and Wodon 2003). The income imputation rate varies by education, a good proxy for income (6% for low educated vs 14% for high educated). The estimated effects for the low-educated, where imputation is lower, however, should be regarded as closer to the real treatment values since the low educated are less attached to the formal labor market and hence more likely to benefit directly from the reform.

attachment to the formal labor market by the high-educated, which should grant them higher pensions conditional on claiming benefits under the reform, the results show that the average increase in the monthly personal income was greater for the low educated women, between 83 – 92 USD (PPP 2009), than for the high-educated women, between 52-76 USD (PPP 2009). This simply confirms that high-educated women were less likely to enjoy the benefits from the reform. All results related to income effects are similar for the subsample of married women. Consistent with the previous results, the low-educated married women saw a larger jump in their relative share of the household (12.5 pp) and couple’s incomes (15 pp) compared to the high-educated group (6 pp and 5 pp, respectively). All income effects are highly statistically significant for both educational groups.

We now discuss the effects of the reform on the probability of divorce/separation by educational attainment. Results reported in the first two columns of Table 13 indicate that the effect of the reform on divorces and separations is mainly driven by high-educated women although they are less affected on average by the reform. We find a significant increase in the probability of divorce/separations for high educated women, between 3.1 – 5.6 pp, while the effect for the low educated women is not statistically significant. We can think of at least three non-exclusive explanations for why there are no effects on divorce/separation for the low-educated women: (a) given their pre-reform disadvantage in the household, the gains of a negotiated reallocation of resources may outweigh the gains from divorce or separation; (b) the resources obtained from a pension are not sufficient for women to live on their own; indeed, in the post-reform period the average monthly income of the low-educated women in the treated group was around 396 USD PPP 2009, while the average of the high-educated women was around 895 USD PPP 2009; (c) social and cultural factors may be important obstacles that prevent low-educated women from taking such decisions.<sup>29</sup> We now give evidence that the income increase brought about by the reform led to gains in bargaining power among the low-educated women that remained married.

Finally, we look at differential effects of the reform on the bargaining power of married women. We find that the effect of the reform on the probability of being the head of the household is not statistically significant for either of the two educational groups. We observe an interesting pattern in the division of housework. The negative effect of the reform on the probability that wives are the only one responsible for housework is driven by the effects on the low-educated women. The

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<sup>29</sup>It is conceivable that divorce/separation is not an option for the low-educated, as argued in Lundberg and Pollak (1993).

decrease in women's responsibility for housework is partially compensated by an increase in husbands' participation and a small increase in domestic service. The fact that we only find significant effects for low educated women, together with the result that husbands' labor force participation decreases in the same magnitude for both low and high educated,<sup>30</sup> allows us to discard the hypothesis that all the gains in the distribution of household chores is because husbands have more time.

## 8 Conclusion

What happens inside the household is often not observable to researchers. However, there seems to be consensus that processes that occur inside the household have potentially major consequences for economic and social outcomes of individuals and society as a whole. The economic literature has provided evidence that transfer programs can, presumably by altering such processes, have large effects on economic outcomes (e.g., labor force participation, child development). In this paper we focus on senior women, all over retirement age, and ask whether transfers can affect their marital status and bargaining power within the household. We find surprising effects in this population; both union dissolution and outcomes related to bargaining power are affected by public transfers.

Our empirical application comes from a differences-in-differences estimation of the effects of the 2004/2005 Argentinean pension reform. We use data from the Argentinean Continuous Permanent Household Survey (*Encuesta Permanente de Hogares Continua*) for the years 2004 – 2009. The Argentinean pension reform is an interesting application because it affected the permanent income of almost 2 million women in Argentina; in particular, their income share within the couple increased by an average of 50 – 55%. This large income shock had an impact on the probability of divorce/separation, which increased by 19% for 60 – 65-year-old women; a major but not statistically significant impact on the probability of female headship, which increased by 20% amongst married women; and finally, an 11% decrease in the likelihood that women are the only person responsible for household chores and a 13% increase in the probability that husbands do most of the housework.

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<sup>30</sup>We find a 10pp reduction in the labor force participation of the husbands of low educated women, while the reduction is 12pp for the husbands of high educated women.

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## Tables and Figures

Table 1: Definition of treated and control groups

Women	Pre treatment (2004-2006)	Post treatment (2007-2009)
Treated cohorts born 1941-1944	ages 60-65	ages 63-68
Control cohorts born 1950-1953	ages 51-56	ages 54-59

Table 2: Sample Means

Variable	Control cohorts		Treated cohorts		All sample	
	2004-06	2007-09	2004-06	2007-09	2004-06	2007-09
<b>All women</b>						
Pension recipient	0.08	0.12	0.30	0.77	0.18	0.39
No personal income	0.36	0.34	0.40	0.12	0.38	0.25
Personal income (Argentine Pesos: AR\$)	510	1017	412	928	468	980
Personal income (2009 PPP USD)	341	615	275	562	313	593
Divorced or separated	0.16	0.15	0.10	0.10	0.13	0.13
Education (high=1, low=0)	0.45	0.46	0.32	0.33	0.39	0.40
Born abroad	0.07	0.08	0.10	0.10	0.08	0.09
Live with partner	0.09	0.09	0.07	0.07	0.08	0.08
Married	0.58	0.57	0.52	0.48	0.56	0.53
Widow	0.08	0.11	0.23	0.26	0.15	0.17
Single	0.08	0.09	0.08	0.09	0.08	0.09
Active (in the labor market)	0.61	0.56	0.37	0.24	0.50	0.43
<b>Divorced &amp; married</b>						
Pension recipient	0.04	0.06	0.17	0.72	0.09	0.31
No personal income	0.41	0.39	0.52	0.16	0.45	0.31
Personal income (Argentine Pesos: AR\$)	481	958	333	783	424	893
Personal income (2009 PPP USD)	321	580	222	474	283	541
Divorced or separated	0.19	0.18	0.14	0.16	0.17	0.18
Education (high=1, low=0)	0.46	0.47	0.34	0.33	0.41	0.42
Born abroad	0.07	0.09	0.10	0.11	0.08	0.09
Active (in the labor market)	0.58	0.55	0.34	0.22	0.49	0.43
<b>Married</b>						
Pension recipient	0.04	0.06	0.16	0.72	0.09	0.31
No personal income	0.48	0.46	0.57	0.18	0.52	0.35
Personal income (Argentine Pesos: AR\$)	412	849	298	722	367	801
Personal income (2009 PPP USD)	276	514	199	436	245	485
Wife's share of income within household	0.21	0.21	0.18	0.28	0.20	0.24
Wife's share of income within couple	0.26	0.27	0.22	0.34	0.24	0.29
Head of household	0.08	0.11	0.07	0.11	0.07	0.11
Wife is the only responsible for housework	0.37	0.40	0.44	0.41	0.40	0.40
Husband responsible for housework	0.11	0.15	0.13	0.18	0.11	0.16
Have domestic service or external help	0.04	0.05	0.03	0.03	0.04	0.04
Education (high=1, low=0)	0.45	0.46	0.33	0.31	0.40	0.40
Born abroad	0.07	0.09	0.11	0.11	0.09	0.09
Couple's age difference	2.65	2.51	2.50	2.50	2.59	2.50
Couple's education difference	0.06	0.06	-0.15	-0.16	-0.03	-0.02
Active (in the labor market)	0.52	0.50	0.30	0.18	0.44	0.38
Observations	13471	13359	9537	9680	23008	23039

Table 3: Effects of the reform on income

	Probability of receiving a pension				Probability of not having any personal income				Women's personal income (dollars PPP)			
	Whole sample		Divorced & married		Whole sample		Divorced & married		Whole sample		Divorced & married	
	d+m+w+s		d+m		d+m+w+s		d+m		d+m+w+s		d+m	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Post*Treated	0.437	0.434	0.535	0.532	-0.269	-0.267	-0.361	-0.362	73.12	68.47	60.97	65.64
p-value	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.009)***	(0.000)***
p-value wild bootstrap	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.001)***	(0.001)***	(0.001)***	(0.003)***	(0.023)**	(0.019)**	(0.013)**	(0.005)***
Education high (dummy)		x		x		x		x		x		x
Born abroad		x		x		x		x		x		x
Region fixed effects		x		x		x		x		x		x
Observations	46,047	46,047	34,039	34,039	46,047	46,047	34,039	34,039	46,047	46,047	34,039	34,039
Obs. in treatment group	19,217	19,217	12,554	12,554	19,217	19,217	12,554	12,554	19,217	19,217	12,554	12,554
Mean dependent variable	0.3	0.3	0.17	0.17	0.4	0.4	0.52	0.52	275	275	222.3	222.3

The dependent variables are: a dummy that equals one when the woman receives a pension (columns 1-4); a dummy that equals one when she has no personal income (columns 5-8); and the woman's monthly personal income in international 2009 PPP dollars (columns 9-12). The coefficient on Post\*Treated is the estimated parameter  $\beta$  of equation 1 which is the DD estimates (OLS) of the effect of the reform on each of the outcomes. Period 2004-2006 is the pre-treatment period and period 2007-2009 is the post-treatment period. The treatment group includes women born between 1941 and 1944, and the control group women born between 1950 and 1953. All regressions include the following control variables: cohort dummies, year-quarter fixed effects and a dummy that indicates whether the woman belongs to the top 1% of personal income. The whole sample includes all women regardless of their marital status. Other individual characteristics in the even columns are: a dummy variable that equals one if the maximum level of education attained is at least a high school diploma; a dummy variable that equals one if the woman was born abroad; and regions fixed effects (29 urban areas). All results come from regressions using as sample weights the variable *pondera* in the EPH. The sample "divorced & married" is restricted to married (m) and divorced/separated women (d), i.e. it excludes singles (s) and widows (w). Data source: Argentine Continuous Permanent Household Survey (Encuesta Permanente de Hogares Continua, EPH). In parentheses, we show two-tail p-values clustered at the level of urban area. "P-value" in the second row indicates the stata outcome for two-tail p-values clustered at the urban area level while "p-value wild bootstrap" indicates two-tail p-values computed using wild bootstrap-t techniques as in Cameron et al. (2008) with a 6-point distribution as in Webb (2013) and 1500 bootstrap iterations. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 4: Effects of the reform on income.  
*Sample of married women*

	Probability of receiving a pension		Wife does not have personal income		Wife's personal income (PPP Dollars)		Wife's share of income within household		Wife's share of income within couple	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Post*treated	0.546	0.544	-0.387	-0.390	63.98	71.01	0.101	0.102	0.110	0.112
p-value	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.011)**	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
p-value wild bootstrap	(0.000)***	(0.000)***	(0.001)***	(0.001)***	(0.028)**	(0.003)***	(0.003)***	(0.000)***	(0.000)***	(0.000)***
Education high (dummy)		x		x		x		x		x
Region fixed effects		x		x		x		x		x
Couple's age difference		x		x		x		x		x
Couple's education difference		x		x		x		x		x
Born abroad		x		x		x		x		x
Observations	27,157	27,157	27,157	27,157	27,157	27,157	26,954	26,954	26,544	26,544
Obs. in treatment group	10,304	10,304	10,304	10,304	10,304	10,304	10,304	10,304	10,304	10,304
Mean dependent variable	0.16	0.16	0.57	0.57	199.3	199.3	0.18	0.18	0.22	0.22

The dependent variables are: a dummy that equals one when the wife receives a pension (columns 1-2), a dummy that equals one when she has no personal income (columns 3-4), wife's personal income in international 2009 PPP dollars (columns 5-6), the share of wife's income within the household (columns 7-8) and within the couple (columns 9-10). The coefficient on Post\*Treated is the estimated parameter  $\beta$  of equation 1 which is the DD estimates (OLS) of the effect of the reform on each of the outcomes. Period 2004-2006 is the pre-treatment period and period 2007-2009 is the post-treatment period. The treatment group includes all women born between 1941 and 1944, and the control group women born between 1950 and 1953. All regressions include the following control variables: cohort dummies, year-quarter fixed effects and a dummy that indicates whether the woman belongs to the top 1% of personal income. Other individual characteristics in the even columns are: a dummy variable that equals one if the maximum level of education attained is at least a high school diploma; a dummy variable that equals one if the woman was born abroad; regions fixed effects (29 urban areas); husband's age, and differences between spouses' age and level of education attained. All results come from regressions using as sample weights the variable *pondera* in the EPH. Data source: Argentine Continuous Permanent Household Survey (Encuesta Permanente de Hogares Continua, EPH). In parentheses, we show two-tail p-values clustered at the level of urban area. "P-value" in the second row indicates the stata outcome for two-tail p-values clustered at the urban area level while "p-value wild bootstrap" indicates two-tail p-values computed using wild bootstrap-t techniques as in Cameron et al. (2008) with a 6-point distribution as in Webb (2013) and 1500 bootstrap iterations. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 5: Effects of the reform on the probability of being divorced/separated

	Probability of women being divorced/separated			
	Whole sample		Divorced & married	
	d+m+w+s		d+m	
	(1)	(2)	(3)	(4)
Post*treated	0.0180	0.0183	0.0254	0.0269
p-value	(0.013)**	(0.006)***	(0.003)***	(0.002)***
p-value wild bootstrap	(0.125)	(0.097)*	(0.111 )	(0.095)*
Education high (dummy)		x		x
Region fixed effects		x		x
Born abroad		x		x
Observations	46,047	46,047	34,039	34,039
Obs. in treatment group	19,217	19,217	12,554	12,554
Mean dependent variable	0.10	0.10	0.14	0.14

The dependent variables is a dummy that equals one if the woman is divorced or separated . The coefficient on Post\*Treated is the estimated parameter  $\beta$  of equation (1) which is the DD estimates (OLS) of the effect of the reform on the outcome. Period 2004-2006 is the pre-treatment period and period 2007-2009 is the post-treatment period. The treatment group includes all women born between 1941 and 1944, and the control group women born between 1950 and 1953. All regressions include the following control variables: cohort dummies, year-quarter fixed effects and a dummy that indicates whether the woman belongs to the top 1% of personal income. Other individual characteristics in the even columns are: a dummy variable that equals one if the maximum level of education attained is at least a high school diploma; a dummy variable that equals one if the woman was born abroad; and regions fixed effects (29 urban areas). All results come from regressions using as sample weights the variable *pondera* in the EPH. The “whole sample” includes all women regardless of their marital status, i.e., married (m), divorced (d), single (s) or widow (w). The sample “divorced & married” is restricted to married (m) and divorced/separated women (d), i.e. it excludes singles (s) and widows (w). Data source: Argentine Continuous Permanent Household Survey (Encuesta Permanente de Hogares Continua, EPH). In parentheses, we show two-tail p-values clustered at the level of urban area. “P-value” in the second row indicates the stata outcome for two-tail p-values clustered at the urban area level while “p-value wild bootstrap” indicates two-tail p-values computed using wild bootstrap-t techniques as in Cameron et al. (2008) with a 6-point distribution as in Webb (2013) and 1500 bootstrap iterations. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 6: Effects of the reform on the bargaining power of women  
*Sample of married women*

	Wife is the head of household		Wife is the only responsible for housework		Domestic service or external help		Husband does most housework	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post*treated	0.0134	0.0141	-0.0502	-0.0497	0.0049	0.0062	0.0140	0.0164
p-value	(0.342)	(0.350)	(0.0002)***	(0.000)***	(0.645)	(0.440)	(0.0897)*	(0.0134)**
p-value wild bootstrap	(0.751)	(0.756)	(0.007)***	(0.011) **	(0.588)	(0.557)	(0.303)	(0.080)*
Education high (dummy)		x		x		x		x
Region fixed effects		x		x		x		x
Couple's age difference		x		x		x		x
Couple's education difference		x		x		x		x
Born abroad		x		x		x		x
Observations	27,157	27,157	27,157	27,157	27,157	27,157	27,157	27,157
Obs. in treatment group	10,304	10,304	10,304	10,304	10,304	10,304	10,304	10,304
Mean dependent variable	0.07	0.07	0.44	0.44	0.03	0.03	0.13	0.13

The dependent variables are: a dummy that equals one if the wife is the head of the household (Columns 1-2), a dummy that equals one if she is the only household member responsible for housework (column 3-4), a dummy variable that equals one if the household has domestic service or external help for housework (columns 5-6), and a dummy variable that equals one if he is in charge of most of the housework (columns 7-8). The coefficient on Post\*Treated is the estimated parameter  $\beta$  of equation (1) which is the DD estimates (OLS) of the effect of the reform on each of the outcomes. Period 2004-2006 is the pre-treatment period and period 2007-2009 is the post-treatment period. The treatment group includes all women born between 1941 and 1944, and the control group women born between 1950 and 1953. All regressions include the following control variables: cohort dummies, year-quarter fixed effects and a dummy that indicates whether the woman belongs to the top 1% of personal income. Other individual characteristics in the even columns are: a dummy variable that equals one if the maximum level of education attained is at least a high school diploma; a dummy variable that equals one if the woman was born abroad; regions fixed effects (29 urban areas); husband's age and differences between spouses' age and level of education attained. All results come from regressions using as sample weights the variable *pondera* in the EPH. Data source: Argentine Continuous Permanent Household Survey (Encuesta Permanente de Hogares Continua, EPH). In parentheses, we show two-tail p-values clustered at the level of urban area. "P-value" in the second row indicates the stata outcome for two-tail p-values clustered at the urban area level while "p-value wild bootstrap" indicates two-tail p-values computed using wild bootstrap-t techniques as in Cameron et al. (2008) with a 6-point distribution as in Webb (2013) and 1500 bootstrap iterations. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 7: The effect of the reform on the labor status  
*Sample of married women*

	All married women		Low education		High education	
	(1)	(2)	(3)	(4)	(5)	(6)
Post*treated	-0.0868	-0.0814	-0.0735	-0.0689	-0.113	-0.109
p-value	(0.0036)***	(0.0018)***	(0.0109)**	(0.0104)**	(0.0000)***	(0.0000)***
p-value wild bootstrap	(0.015)**	(0.015)**	(0.0227)**	(0.017)**	(0.0067)***	(0.011)**
Education high (dummy)		x				
Region fixed effects		x		x		x
Couple's age difference		x		x		x
Couple's education difference		x		x		x
Born abroad		x		x		x
Observations	27,122	27,122	16,475	16,475	10,656	10,656
Obs. in treatment group	10,293	10,293	7,049	7,049	3,244	3,244
Mean dependent variable	0.37	0.37	0.33	0.33	0.44	0.44

The dependent variable is a dummy that equals one if the woman is economically “active”. This variable uses the definition proposed in the EPH which is constructed from survey variables related to labor force participation. The coefficient on Post\*Treated is the estimated parameter  $\beta$  of equation (1) which is the DD estimates (OLS) of the effect of the reform on each of the outcomes. Results in columns 3-6 are obtained separating the samples by educational level—high and low, where low education indicates less than high than high school diploma. Period 2004-2006 is the pre-treatment period and period 2007-2009 is the post-treatment period. The treatment group includes all women born between 1941 and 1944, and the control group women born between 1950 and 1953. All regressions include the following control variables: cohort dummies, year-quarter fixed effects and a dummy that indicates whether the woman belongs to the top 1% of personal income. Other individual characteristics in the even columns are: a dummy variable that equals one if the maximum level of education attained is at least a high school diploma; a dummy variable that equals one if the woman was born abroad; regions fixed effects (29 urban areas); and differences between spouses’ age and level of education attained. All results come from regressions using as sample weights the variable *pondera* in the EPH. Data source: Argentine Continuous Permanent Household Survey (Encuesta Permanente de Hogares Continua, EPH). In parentheses, we show two-tail p-values clustered at the level of urban area. “P-value” in the second row indicates the stata outcome for two-tail p-values clustered at the urban area level while “p-value wild bootstrap” indicates two-tail p-values computed using wild bootstrap-t techniques as in Cameron et al. (2008) with a 6-point distribution as in Webb (2013) and 1500 bootstrap iterations. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 8: Placebo DD: Definition of treated and control groups

Women	Placebo pre treatment (1996-1998)	Placebo post treatment (1999-2001)
Placebo treated cohorts born 1933-1936	ages 60-65	ages 63-68
Placebo control cohorts born 1942-1945	ages 51-56	ages 54-59

Table 9: Placebo using pre-treatment data (1996-2001)

	Probability of receiving a pension				Probability of not having any personal income				Women's personal income (Dollars PPP)				Probability of being divorced/separated			
	Whole sample		Divorced & married		Whole sample		Divorced & married		Whole sample		Divorced & married		Whole sample		Divorced & married	
	d+m+w+s		d+m		d+m+w+s		d+m		d+m+w+s		d+m		d+m+w+s		d+m	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Post*Treated	0.0387	0.0412	0.0189	0.0196	-0.0170	-0.0160	-0.0005	0.0017	-7.328	-10.16	-16.39	-19.61	-0.0092	-0.0105	-0.0104	-0.0121
p-value	(0.0016)***	(0.0006)***	(0.1480)	(0.0998)*	(0.337)	(0.334)	(0.982)	(0.933)	(0.558)	(0.344)	0.129	(0.0574)*	(0.704)	(0.658)	(0.745)	(0.701)
p-value wild bootstrap	(0.0787)*	(0.0653)*	(0.337)	(0.229)	(0.369)	(0.332)	(0.976)	(0.927)	(0.812)	(0.724)	(0.356)	(0.329)	(0.769)	(0.753)	(0.761)	(0.747)
Including Covariates		x		x		x		x		x		x		x		x
Observations	34,072	34,072	24,345	24,345	34,072	34,072	24,345	24,345	34,072	34,072	24,345	24,345	34,072	34,072	24,345	24,345
Obs. in treatment group	14,637	14,637	9,189	9,189	14,637	14,637	9,189	9,189	14,637	14,637	9,189	9,189	14,637	14,637	9,189	9,189

The dependent variables are: a dummy that equals one when the women receives a pension (columns 1-4), a dummy that equals one when she has no personal income (columns 5-8), the woman's monthly personal income in international 2009 PPP dollars (columns 9-12), and a dummy that equals one when the woman is divorced or separated (Columns 13-16). The coefficient on Post\*Treated is the estimated parameter  $\beta$  of equation (1) for the placebo DD estimates (OLS) specified in Section 4 (see Table 8). Period 1996-1998 is the placebo pre-treatment period and period 1999-2001 is the placebo post-treatment period. The placebo treatment group includes all women born between 1933 and 1936, and the placebo control group women born between 1942 and 1945. All regressions include the following control variables: cohort dummies, year-quarter fixed effects and a dummy that indicates whether the woman belongs to the top 1% of personal income. Other individual characteristics in the even columns are: a dummy variable that equals one if the maximum level of education attained is at least a high school diploma, a dummy variable that equals one if the woman was born abroad, and regions fixed effects (29 urban areas). All results come from regressions using as sample weights the variable *pondera* in the EPH. The whole sample includes all women regardless of their marital status. The sample "divorced & married" is restricted to married (m) and divorced/separated women (d), i.e. it excludes singles (s) and widows (w). Data source: Argentine Permanent Household Survey (Encuesta Permanente de Hogares Puntual, EPH). In parentheses, we show p-values clustered at the level of urban area. "P-value" in the second row indicates the stata outcome for one-tail p-values clustered at the urban area level while "p-value wild bootstrap" indicates p-values computed using wild bootstrap-t techniques as in Cameron et al. (2008) with a 6-point distribution as in Webb (2013) and 1000 bootstrap iterations. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 10: Placebo using pre-treatment data (1996-2001). Married women.

	Wife receives a pension		Wife does not have personal income		Wife's personal income		Wife's share of income within couple		Wife's share of income within household		Wife is the head of household	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Post*Treated	0.0273	0.0290	-0.0013	-0.0009	-13.33	-13.48	-0.0192	-0.0194	-0.0001	-0.0020	-0.0144	-0.0147
p-value	(0.0284)**	(0.0134)**	(0.957)	(0.973)	(0.357)	(0.402)	(0.230)	(0.250)	(0.993)	(0.889)	(0.0013)***	(0.0004)***
p-value wild bootstrap	(0.132)	(0.117)	(0.947)	(0.975)	(0.702)	(0.784)	(0.456)	(0.548)	(0.961)	(0.953)	(0.105)	(0.077)*
Education high (dummy)		x		x		x		x		x		x
Region fixed effects		x		x		x		x		x		x
Couple's age difference		x		x		x		x		x		x
Couple's education difference		x		x		x		x		x		x
Observations	20,678	20,678	20,678	20,678	20,678	20,678	18,913	18,913	18,220	18,220	20,678	20,678
Obs. in treatment group	7,943	7,943	7,943	7,943	7,943	7,943	7,375	7,375	7,135	7,135	7,943	7,943

The dependent variables are: a dummy that equals one when the wife receives a pension (columns 1-2), a dummy that equals one when she has no personal income (columns 3-4), the wife's monthly personal income in international 2009 PPP dollars (columns 5-6), the share of the wife's income within the household (columns 7-8) and within the couple (9-10), and a dummy that equals one if the wife is the head of the household (Columns 11-12). The coefficient on Post\*Treated is the estimated parameter  $\beta$  of equation (1) for the placebo DD estimates (OLS) specified in Section 4 (see Table 8). Period 1996-1998 is the placebo pre-treatment period and period 1999-2001 is the placebo post-treatment period. The placebo treatment group includes all women born between 1933 and 1936, and the placebo control group women born between 1942 and 1945. All regressions include the following control variables: cohort dummies, year-quarter fixed effects and a dummy that indicates whether the woman belongs to the top 1% of personal income. Other individual characteristics in the even columns are: a dummy variable that equals one if the maximum level of education attained is at least a high school diploma; a dummy variable that equals one if the woman was born abroad; regions fixed effects (29 urban areas); and differences between spouses' age and level of education attained. All results come from regressions using as sample weights the variable *pondera* in the EPH. Data source: Argentine Permanent Household Survey prior to 2003 (Encuesta Permanente de Hogares Puntual). In parentheses, we show two-tail p-values clustered at the level of urban area. "P-value" in the second row indicates the stata outcome for two-tail p-values clustered at the urban area level while "p-value wild bootstrap" indicates two-tail p-values computed using wild bootstrap-t techniques as in Cameron et al. (2008) with a 6-point distribution as in Webb (2013) and 1000 bootstrap iterations. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 11: Means, by education

Variable	Low educated				High educated			
	Control cohorts		Treated cohorts		Control cohorts		Treated cohorts	
	2004-06	2007-09	2004-06	2007-09	2004-06	2007-09	2004-06	2007-09
All women								
Pension recipient	0.09	0.12	0.26	0.78	0.08	0.12	0.39	0.74
No personal income	0.41	0.39	0.45	0.13	0.31	0.28	0.30	0.09
Personal income (Argentine Pesos: AR\$)	259	534	246.64	654.81	823.73	1592.84	758.58	1476.51
Personal income (2009 PPP USD)	173	323	164.58	396.29	550.15	963.28	506.14	895.45
Divorced or separated	0.14	0.13	0.09	0.09	0.18	0.17	0.12	0.14
Born abroad	0.08	0.11	0.12	0.11	0.06	0.05	0.07	0.08
Live with partner	0.12	0.11	0.07	0.08	0.07	0.07	0.05	0.06
Married	0.56	0.55	0.51	0.49	0.61	0.59	0.55	0.45
Widow	0.10	0.14	0.25	0.28	0.06	0.08	0.19	0.23
Single	0.08	0.08	0.07	0.07	0.09	0.09	0.09	0.13
Active (in the labor market)	0.55	0.50	0.33	0.21	0.68	0.63	0.44	0.31
Observations	7,684	7,309	6,572	6,527	5,787	6,050	2,965	3,153
Divorced & married								
Pension recipient	0.03	0.06	0.11	0.74	0.05	0.07	0.27	0.67
No personal income	0.47	0.45	0.59	0.17	0.33	0.32	0.39	0.12
Personal income (Argentine Pesos: AR\$)	224.20	461.44	165.81	546.38	785.54	1523.24	662.36	1263.80
Personal income (2009 PPP USD)	149.96	279.77	110.81	330.47	525.01	921.34	442.51	765.28
Divorced or separated	0.18	0.17	0.13	0.13	0.21	0.21	0.16	0.21
Born abroad	0.08	0.12	0.12	0.12	0.06	0.06	0.07	0.09
Active (in the labor market)	0.52	0.48	0.30	0.18	0.66	0.63	0.42	0.30
Observations	1,029	996	574	544	966	970	354	387
Married								
Pension recipient	0.03	0.05	0.11	0.74	0.05	0.07	0.27	0.68
No personal income	0.54	0.52	0.65	0.19	0.41	0.38	0.42	0.15
Personal income (Argentine Pesos: AR\$)	190.51	406.01	141.91	510.42	687.10	1376.72	619.77	1193.79
Personal income (2009 PPP USD)	127.32	245.94	94.73	308.98	459.56	833.43	413.78	721.48
Wife's share of income within household	0.18	0.17	0.15	0.26	0.25	0.26	0.26	0.32
Wife's share of income within couple	0.23	0.23	0.19	0.33	0.29	0.31	0.30	0.35
Head of household	0.08	0.12	0.07	0.12	0.07	0.10	0.06	0.10
Wife is the only responsible for housework	0.40	0.44	0.46	0.43	0.34	0.35	0.40	0.38
Husband responsible for housework	0.09	0.13	0.12	0.17	0.12	0.17	0.14	0.20
Have domestic service or external help	0.01	0.01	0.01	0.02	0.09	0.10	0.08	0.07
Born abroad	0.08	0.11	0.12	0.11	0.07	0.06	0.07	0.08
Couple's age difference	2.63	2.28	2.46	2.56	2.67	2.78	2.57	2.35
Couple's education difference	-0.31	-0.33	-0.44	-0.43	0.51	0.53	0.43	0.44
Active (in the labor market)	0.46	0.43	0.26	0.15	0.60	0.58	0.38	0.25
Observations	5,161	4,613	3,810	3,527	3,896	3,854	1,724	1,634

Table 12: The effect of the reform on income  
By education

	Prob. receiving		Prob of no		Personal income		Married Women				
	a pension		income		(USD 2009 PPP)		Wife	Wife does	Wife's	Wife's share	Wife's share
	d+m+w+s	d+m	d+m+w+s	d+m	d+m+w+s	d+m	receives a	not have	income	of income	of income
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Education: Low											
Post*treated	0.496	0.610	-0.302	-0.412	82.87	92.04	0.616	-0.450	101.3	0.125	0.149
p-value	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
p-value wild bootstrap	(0.000)***	(0.000)***	(0.001)***	(0.001)***	(0.000)***	(0.001)***	(0.000)***	(0.001)***	(0.000)***	(0.000)***	(0.000)***
Education: High											
Post*treated	0.305	0.375	-0.194	-0.260	76.01	52.52	0.392	-0.265	47.39	0.0581	0.0457
p-value	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.059)*	(0.008)***	(0.000)***	(0.000)***	(0.073)*	(0.003)***	(0.025)**
p-value wild bootstrap	(0.000)***	(0.000)***	(0.001)***	(0.001)***	(0.127)	(0.025)**	(0.000)***	(0.001)***	(0.059)*	(0.001)***	(0.011)**
Couple's age difference							x	x	x	x	x
Couple's education difference							x	x	x	x	x
Husband's age							x	x	x	x	x
Observations Low Edu.	28,092	20,254	28,092	20,254	28,092	20,254	16,483	16,483	16,483	16,340	16,018
Observations High Edu.	17,955	13,785	17,955	13,785	17,955	13,785	10,674	10,674	10,674	10,674	10,674
Mean dep. var. (Low Edu)	0.26	0.11	0.45	0.59	164.6	110.81	0.11	0.65	94.73	0.15	0.19
Mean dep. var. (High Edu)	0.39	0.27	0.3	0.39	506.1	442.51	0.27	0.42	413.78	0.26	0.30

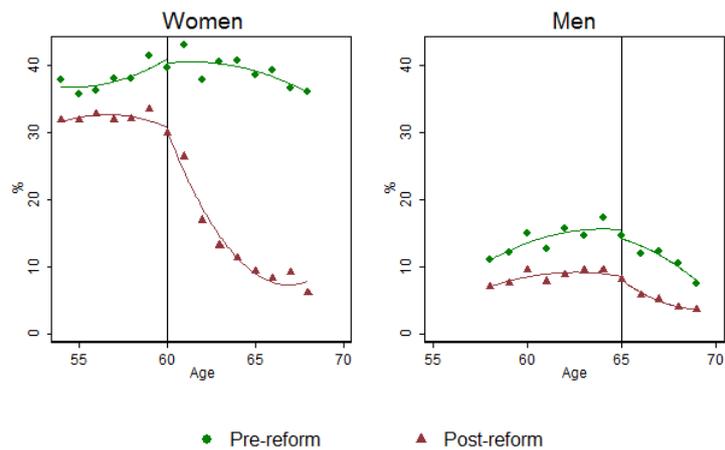
The dependent variables are: a dummy that equals one when the woman receives a pension (columns 1-2 and 7), a dummy that equals one when she has no personal income (columns 3-4 and 8), and the woman's monthly personal income in dollars (PPP 2009) (columns 5-6 and 9). For the subsample of married women additional dependent variables are the share of the wife's income within the household (column 10) and within the couple (column 11). The coefficient on Post\*Treated is the estimated parameter  $\beta$  of equation (1) which is the DD estimates (OLS) of the effect of the reform on each of the outcomes, separating the samples by educational level—high and low, where low education indicates less than high school diploma. Period 2004-2006 is the pre-treatment period and period 2007-2009 is the post-treatment period. The treatment group includes all women born between 1941 and 1944, and the control group women born between 1950 and 1953. All regressions include the following control variables: cohort dummies, year-quarter fixed effects and a dummy that indicates whether the woman belongs to the top 1% of personal income. Other individual characteristics are a dummy variable that equals one if the woman was born abroad and regions fixed effects (29 urban areas). Regressions in columns 7 to 11 also control for husband's age and differences in age and education between spouses. All results come from regressions using as sample weights the variable *pondera* in the EPH. The whole sample includes all women regardless of their marital status. The sample of divorced (d) and married (m) is restricted to married and divorced/separated women, i.e. it excludes singles (s) and widows (w). Data source: Argentine Continuous Permanent Household Survey (Encuesta Permanente de Hogares Continua, EPH). In parentheses, we show two-tail p-values clustered at the level of urban area. "P-value" in the second row indicates the stata outcome for two-tail p-values clustered at the urban area level while "p-value wild bootstrap" indicates two-tail p-values computed using wild bootstrap-t techniques as in Cameron et al. (2008) with a 6-point distribution as in Webb (2013) and 1500 bootstrap iterations. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 13: Effects of the reform on the probability of being divorced/separated and the bargaining power of women  
*By education*

	Women is		Married women			
	divorced/separated d+m+w+s	d+m	Wife is head of household	Wife only responsible for housework	Domestic service or external help	Husband does most housework
	(1)	(2)	(3)	(4)	(5)	(6)
Education: Low						
Post*treated	0.0114	0.0113	0.0142	-0.0612	0.0074	0.0173
p-value	(0.264)	(0.364)	(0.586)	(0.001)***	(0.026)**	(0.004)***
p-value wild bootstrap	(0.621)	(0.629)	(0.897)	(0.052)**	(0.096)*	(0.043)**
Education: High						
Post*treated	0.0312	0.0563	0.0164	-0.0383	0.0045	0.0237
p-value	(0.007)***	(0.015)**	(0.226)	(0.233)	(0.842)	(0.148)
p-value wild bootstrap	(0.132)	(0.093)*	(0.180)	(0.431)	(0.761)	(0.237)
Observations Low Edu.	28,092	20,254	16,483	16,483	16,483	16,483
Observations High Edu.	17,955	13,785	10,674	10,674	10,674	10,674
Mean dep. var. (Low Edu)	0.09	0.13	0.07	0.46	0.01	0.12
Mean dep. var. (High Edu)	0.12	0.16	0.06	0.4	0.08	0.14

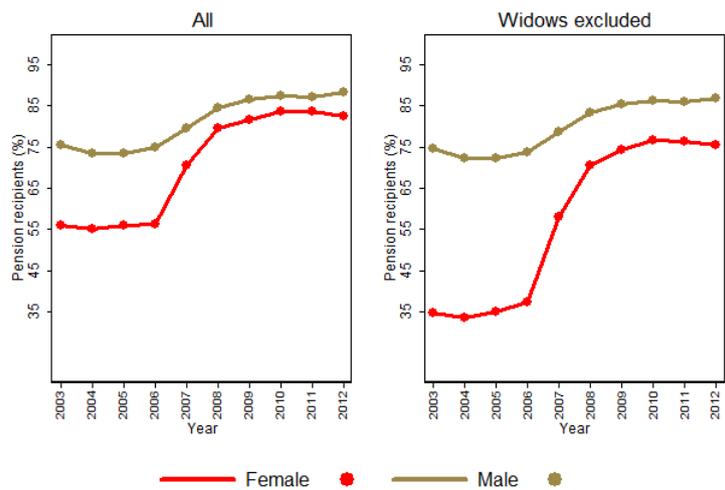
The dependent variables are: a dummy that equals one when the woman is divorced or separated (columns 1-2) and for the subsample of married women, a dummy that equals one when she is the head of the household (column 3), if she is the only household member responsible for housework (column 4); a dummy variable that equals one if the household has domestic service or external help for housework (column 5) and a dummy variable that equals one if he is in charge of most of the housework (column 6). The coefficient on Post\*Treated is the estimated parameter  $\beta$  of equation (1) which is the DD estimates (OLS) of the effect of the reform on each of the outcomes, separating the samples by educational level—high and low, where low education indicates less than high school diploma. Period 2004-2006 is the pre-treatment period and period 2007-2009 is the post-treatment period. The treatment group includes all women born between 1941 and 1944, and the control group women born between 1950 and 1953. All regressions include the following control variables: cohort dummies, year-quarter fixed effects a dummy that indicates whether the woman belongs to the top 1% of personal income, a dummy variable that equals one if the woman was born abroad; and regions fixed effects (29 urban areas). Regressions in columns 3 to 6 also control for husband's age and differences in age and education between spouses. All results come from regressions using as sample weights the variable *pondera* in the EPH. The whole sample includes all women regardless of their marital status. The sample of divorced (d) and married (m) is restricted to married and divorced/separated women, i.e. it excludes singles (s) and widows (w). Data source: Argentine Continuous Permanent Household Survey (Encuesta Permanente de Hogares Continua, EPH). In parentheses, we show two-tail p-values clustered at the level of urban area. "P-value" in the second row indicates the stata outcome for two-tail p-values clustered at the urban area level while "p-value wild bootstrap" indicates two-tail p-values computed using wild bootstrap-t techniques as in Cameron et al. (2008) with a 6-point distribution as in Webb (2013) and 1500 bootstrap runs. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Figure 1: Percentage of individuals with personal income = 0



Source: Argentine Continuous Permanent Household Survey (EPH)

Figure 2: Pension recipients (as % of age-eligible individuals)



Source: Argentine Continuous Permanent Household Survey (EPH)

Figure 3: News related to the moratorium

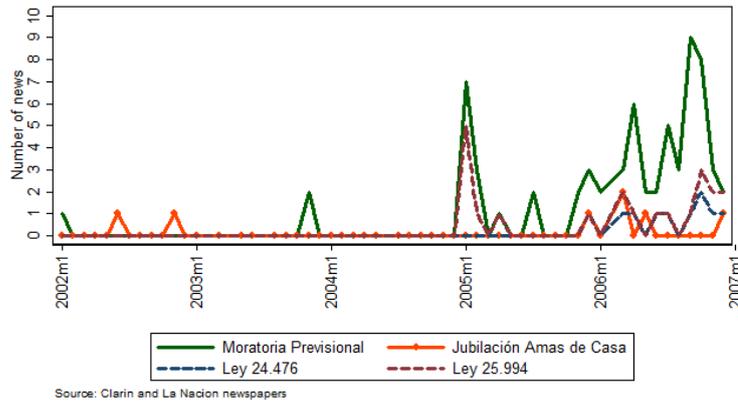


Figure 4: Google searches related to the moratorium

Trends

Web Search Interest: "ley 24476", "jubilacion ama de casa"+"jubilacion amas de casa", "moratoria previsional". Argentina, 2004 - present.



Explore trends

Hot searches

Search terms

- × "ley 24476"
- × "jubilacion ama"
- × "moratoria prev"
- + Add term
- Other comparisons

Interest over time

The number 100 represents the peak search volume

News headlines  Forecast

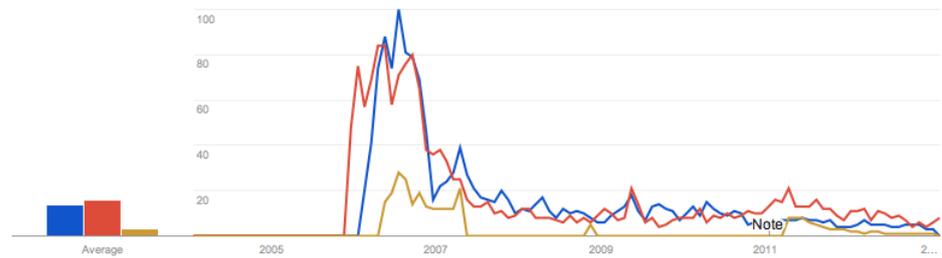


Figure 5:  
Pension recipients

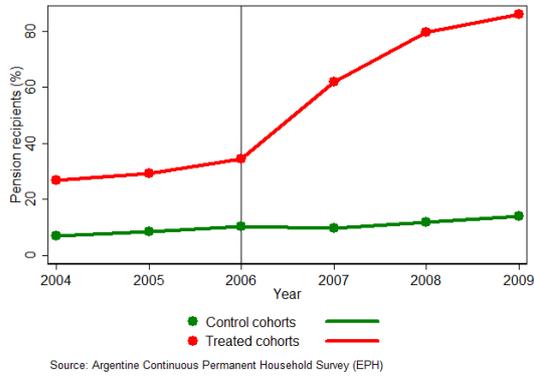


Figure 6:  
Women without personal income

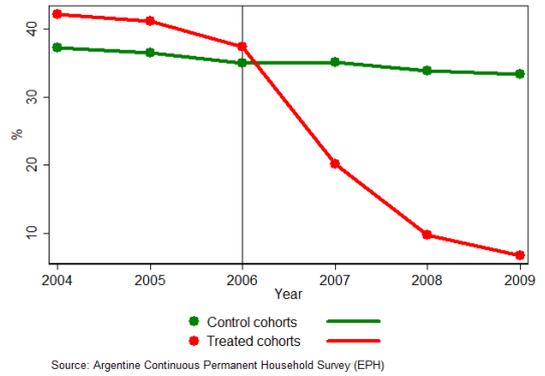


Figure 7:

Wife's share of income within the couple

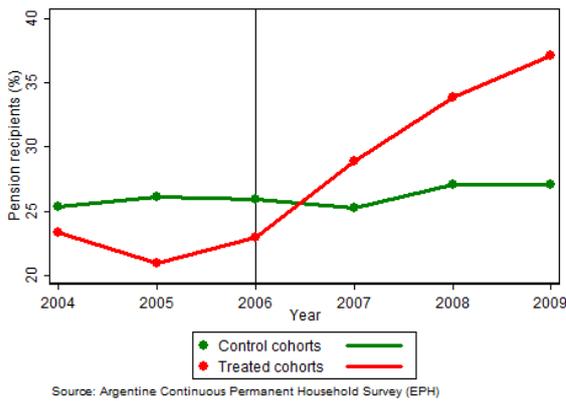


Figure 8:

Wife's share of income within household

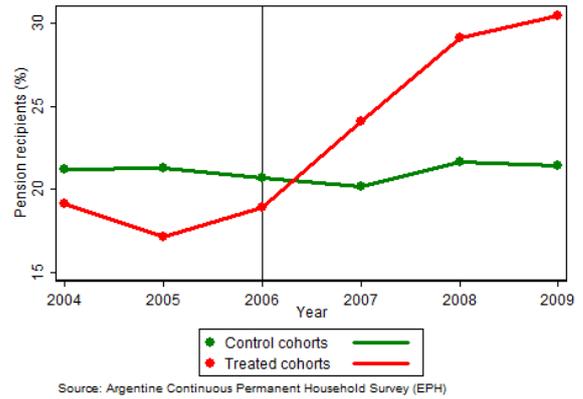


Figure 9:  
Evolution of monthly personal income

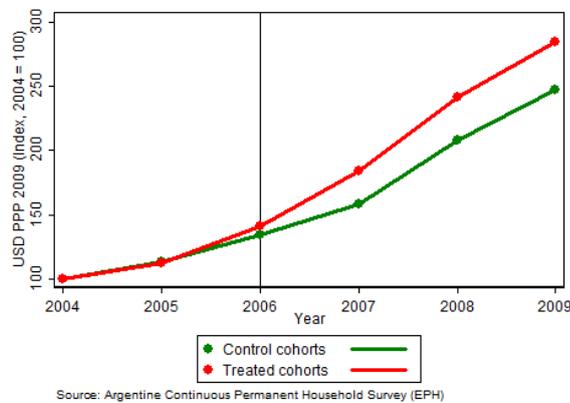


Figure 10:  
Woman is divorced/separated

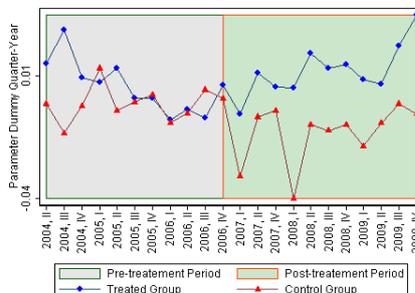


Figure 11:  
Woman is the head of the household  
*Sample of married women*

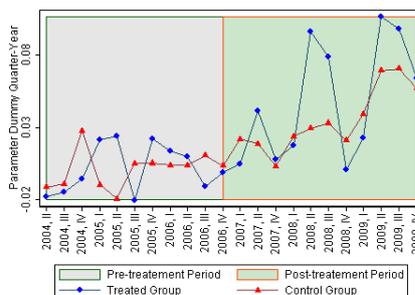


Figure 12:  
Woman is the only responsible for housework  
*Sample of married women*

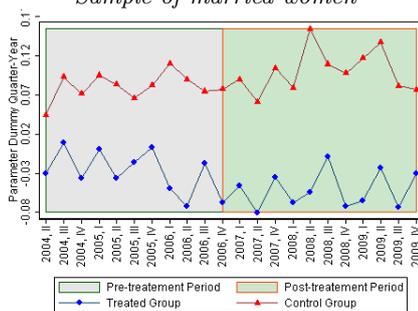
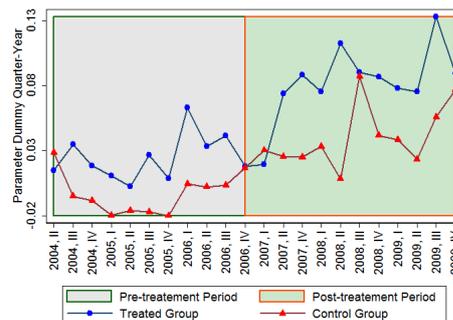


Figure 13:  
Husband does most of housework  
*Sample of married women*



In these figures we plot the estimated parameters  $\delta_{t,g}$  of the following equation, which was run separately for individuals in the control and in the treated group,

$$y_{i,g,t} = \alpha_g + \delta_{t,g} + \delta_{i,g}^C + X_i' \gamma_g + \varepsilon_{i,t} \quad , \quad g = \{\text{treated, control}\}$$

where  $y_{i,g,t}$  is the outcome of interest for individual  $i$ , of group  $g$  (control or treated), in period  $t$ ;  $\delta_{t,g}$  are quarter-year fixed effects;  $\delta_{i,g}^C$  are cohort fixed effects;  $X_{i,g}$  is a vector of individual characteristics (education, born abroad and region fixed effects); and  $\varepsilon_{i,t}$  is a residual.