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The Effect of Cash Transfers on Fertility:

Evidence for Argentina ♣

Santiago Garganta *, Leonardo Gasparini *, Mariana Marchionni *, Mariano Tappatá **

Abstract

In 2009 Argentina implemented a large poverty-alleviation program (AUH) that provides monthly cash transfers per child to households without workers in the formal sector. In this paper we estimate the potential unintended effect of that program on fertility decisions using a diff-in-diff strategy. The results suggest a significant positive impact on fertility in those households with already at least one child (around 2 percentage points), but no significant effect on those households without children. We are unable to identify whether the positive effect in the former group reflects changes in the time pattern of fertility or in the equilibrium number of children.

Resumen

A fines de 2009 se implementó en Argentina el programa de Asignación Universal por Hijo (AUH) que consiste en una transferencia monetaria mensual para aquellos niños o jóvenes cuyos padres estén desocupados o se desempeñen en la economía informal. En este trabajo se estima el potencial efecto no intencionado de la política sobre fecundidad utilizando una estrategia de diferencias en diferencias. Los resultados sugieren un impacto positivo y significativo del programa sobre la probabilidad de tener un nuevo hijo. Dicho efecto se encuentra presente en aquellos hogares con al menos un hijo pero no resulta significativo sobre aquellas parejas sin hijos. Los resultados de este trabajo, sin embargo, no permiten identificar si el efecto encontrado sobre el primer grupo obedece a cambios transitorios o permanentes en fecundidad.

JEL Code: H55, I38, J13

Key words: fertility, cash transfers, social protection, AUH, Argentina.

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1. Introduction

Since the late 1990s all countries in Latin America have launched initiatives to extend their social protection systems, implementing cash transfers programs targeted to poor households. The evidence suggests that these programs have played an important role in the short-term reduction of poverty and income inequality in the region, and it also suggests long-term positive impacts through the promotion of assets and human capital accumulation in poor families (Fiszbein and Schady, 2009). However, there is concern about the possibility that some features of these programs may imply some unintended effects. In this paper, we focus on the impact on fertility decisions. Specifically, a program that provides a cash transfer per child may encourage couples to have a child to become eligible, or induce current participants to increase the size of their families to raise the amount of the subsidy. Although the existence and quantitative relevance of this effect is relevant for the current social protection debate in Latin America, the empirical literature on this issue is still incipient.

In this paper we study *Asignación Universal por Hijo* (AUH), a conditional cash transfer (CCT) program launched in 2009 aimed at reducing poverty in Argentina. The AUH provides monthly cash transfers per child to households whose members are unemployed or working in the informal sector (*i.e.* unregistered). This is a massive anti-poverty program that delivers more than 3.5 million cash payments each month and amounts to around 0.8% of Argentina's GDP. The implementation of the AUH received ample political support as it proved successful at easing the high poverty and income inequality levels in the country (Gasparini and Cruces, 2010).

The AUH was created with no explicit demographic goal. However, the program may imply an incentive to increase the number of children a couple decides to have and/or may affect the time pattern of the fertility decisions. Given the popularity and large scale of the program, it is important to inform policy-makers of the potential impact on fertility decisions by the at-risk population.

Unfortunately, it is not simple to identify the causal effect of the AUH program on fertility. First, the program was not randomly assigned in the population.

Second, there is no data that allows the researcher to follow individual beneficiaries of the AUH over time. We therefore use the Argentina's national household survey (EPH) to identify the AUH eligible households and compare the fertility outcomes with the rest of the population over time. This strategy of differences-in-differences is effective in alleviating several endogeneity problems that arise when comparing heterogeneous observations.

We find that the AUH increased fertility by about 2 percentage points among the program potential beneficiaries. The effects are not symmetric across households, however. In particular, we find a significant fertility increase only for those couples that have already a child. We are unable to identify whether this positive effect reflects changes in the time pattern of fertility or in the equilibrium number of children.

Our paper contributes to the literature that analyzes the indirect effects of CCT programs on fertility and other variables associated with long-run poverty. For example, Stecklov et al. (2007) find mixed evidence. While the Social Protection Network program in Honduras increased (unintentionally) fertility by between 2 and 4 percentage points, the programs PROGRESA (now Oportunidades) and Family Assistance Program in Mexico and Nicaragua had no impact on childbearing. Unlike the AUH, the latter two programs provide lump-sum and not per-child transfers. We relate this critical difference in program design to the different findings.

The rest of the paper is organized as follows. In section 2 we describe the AUH program and discuss its fertility incentives. Section 3 describes the data used in this study and lays out the methodology. Section 4 presents the main findings and section 5 concludes.

2. The Program

The *Asignación Universal por Hijo* (Universal Child Allowance or AUH) was created in November 2009 (decree 1602/09) and consists of conditional monthly cash transfers to households whose members are either unemployed or working in the informal sector (unregistered workers) with income below the minimum

wage.[1] The monthly transfer was initially set at AR$ 180 for each child under 18 years old up to a maximum of 5 dependent children. By November 2009, the transfer for one child represented around US$ 50 or 13% of the minimum wage. For a typical informal poor household with three children the benefit implied an increase of around 50% in total household income. These values place the AUH benefit among the largest in Latin America (Stampini and Tornarolli, 2013). The monthly amount per child has been adjusted annually to shield the purchasing power of the subsidy against inflation. As Figure 1 shows, the nominal monthly transfers have increased by more than 20% each year, though its purchasing power has remained fairly constant over time.[2]

The AUH is a CCT program that requires compliance with education and health requirements. In particular, 20% of the monthly benefit can only be made effective if the following requirements are met: vaccination and health checks for children under four years old and attendance at a public school for those aged five years or older. In addition, the transfer is contingent on the beneficiary not receiving any allowance from existing contributory and tax-relief programs.

The program covers a large proportion of the Argentinean population, the majority belonging to low-income strata. In 2011 the AUH made payments for 3.6 million children, which represent 29% of all children in the country. The annual budget of the program, around 0.8% of GDP, is one of the highest in Latin America. Thus, its impact on poverty, income inequality, and other demographic variables could potentially be large.

According to the existing estimates, which typically ignore potential changes in individuals' behavior after the program, the AUH had a significant impact on the reduction of poverty and income inequality, and some positive results on school attendance levels (Gasparini and Cruces, 2010; Agis *et al*, 2010; Paz and Golovanevsky, 2011; D`Elía and Navarro, 2011; Rofman and Oliveri, 2011). In contrast, there are almost no studies assessing the impact of the program on labor market outcomes and on fertility decisions.

[1] The AUH was created as a permanent program and potential beneciaries should not consider it as a temporary subsidy. This view is reinforced by the wide support shown by members of almost all political parties in the country.

[2] Given the discrepancies regarding the accuracy of official CPI statistics, we use private CPI estimations from Estudio GB for the Greater Buenos Aires area.

The existence of an economic incentive to increase fertility is clear: having a new child entitles the household to receive a monthly allowance until the child turns 19 years old (assuming the remaining requirements are met). In other words, the AUH reduces the price of a child faced by poor families. Surely, the child allowance can be a minor factor in the decision to procreate, which depends on several non-economic factors.[3] The effect could be negligible if the sensitivity of fertility behavior with respect to monetary incentives is low, or the magnitude of the new incentive is relatively small.

The potential effects of the program are likely heterogeneous across the population. For instance, the decision whether to have a first child or not is probably more strongly affected by non-economic factors, hence less elastic to monetary incentives, than the decision to have an additional child.

The implementation of the program may affect the overall number of children that a couple decides to have and/or the time patterns of the births. The cash transfer could, for instance, accelerate the decision to have a child to take advantage of the subsidy without altering the final number of children. Unfortunately, given the limitations of our data we will not be able to differentiate between these effects.

3. Data and methodology

We use microdata from Argentina's national household survey (Encuesta Permanente de Hogares, EPH) conducted by the National Statistical Office (INDEC). The EPH covers 31 large urban areas, which represent 62% of the total country population. The EPH uses a rotation scheme that allows us to track the same individual during a period of one year and a quarter. Specifically, if an individual is sampled for the first time in quarter t, she would also be surveyed in quarters t+1, t+4 and t+5. We construct 31 short panels for the period 2004q1-2013q4: 22 of these panels are prior to the AUH implementation in November 2009. Each short panel has around 3,000 observations (households).[4]

The EPH collects information on demographic, education, labor and income variables at the household and individual level. However, it does not include

[3] Of course, there are cases where fertility is not a decision (*e.g.* impossibility to get pregnant, or forced pregnancy), and the role of economic incentives are null.

[4] Since the panels are short the typical problem of attrition is not important.

questions to identify AUH beneficiaries. We therefore create the treatment and control groups based on AUH eligibility (intention to treat).[5] In most of the cases we restrict the sample to households with a woman between 16 to 45 years old that is the head or head's partner, and divide it into two groups according to their potential AUH eligibility. The treatment group includes all households with adult members that are unemployed or unregistered workers (informal) and have low income. The households in the treatment group could have children that meet the requirements to receive the AUH transfer or have no children but could become eligible if they decided to have a child.[6]

The control group combines three different subgroups: (i) non-poor informal households, (ii) poor formal households, and (iii) non-poor formal households. Since formality is easy monitored by the government, the possibility that individuals included in control groups (ii) and (iii) receive AUH transfers is unlikely. In contrast, income from informal workers is not verifiable, and hence whether middle and high-income informal workers opt out of the program is bound to social responsibility and stigma effects. We include in the treatment group households that belong to the bottom four deciles of the household per-capita income distribution and test our results to other specifications.[7]

We measure fertility using information on the number of children reported by households at each point in time during the panel. Most of our results use the same output variable where we count newborns by looking at the number of children younger than 1 year old reported by the same household in a given panel. Table 1 displays the proportion of households with newborns in the treatment and control groups, for different time periods (before and after the program implementation).

Naturally, the treatment and control groups are heterogeneous in other observable and unobservable characteristics. We show in Table 2 that households differ significantly in many dimensions. In general, households in

[5] The proportion of eligible households not participating in the program is presumably small, since admission and participation costs are low. According to information from the office in charge of the AUH (ANSES), 80% of all eligible children were receiving the transfer six months after the program inception. The rest includes self-excluded households and future participants that are lagged behind in the program enrollment.

[6] We also carry out a separate analysis for these two groups.

[7] SEDLAC (2013) estimates that the share of households covered by AUH is 3.6% in the fourth quintile of the income distribution and 1% in the top quintile.

the treatment group have more members, are less educated, younger and, by definition, perceive lower incomes than the control group.

In order to estimate the program impact on the informality status of workers, we use the *difference-in-difference* methodology (DD), which focuses on the comparison of the differences in the outcome of interest between the treatment and control group, before and after the policy implementation (Card, 1990; Card and Krueger, 1994). This methodology is convenient not only for its simplicity but also for its potential effectiveness to avoid several endogeneity problems that arise when comparing outcomes for heterogeneous individuals (Bertrand, Duflo and Mullainathan, 2004).

The identification assumption in this paper is that in the absence of the AUH program the fertility trends for both treatment and control groups would have been similar. Also, it is assumed the inexistence of other events, contemporaneous with the AUH, that could have involved a differential impact between groups on fertility outcomes.

The following equation provides a standard linear specification of the DD model:

$$F_{it} = \alpha + \beta_1 H_{it} + \beta_2 Post + \gamma\left(H_{it}.Post\right) + \theta X_{it} + u_{it} \quad (1)$$

where F_{it} is the relevant outcome, in our case a binary variable indicating whether a child was born during the period covered by the panel. Variable H_i is an indicator variable for the treatment group and *Post* indicates periods after the AUH implementation. Last, X includes a set of individual and household-level controls.[8]

The model in equation (1) assumes that unobserved events do not have a differential impact on fertility outcome across groups. In other words, considering only two time periods (t=1;0), the mean difference between treatment (T) and control (C) groups is given by

$$DD = \left(F_1^T - F_0^T\right) - \left(F_1^C - F_0^C\right) \quad (2)$$

According to this DD linear specification, it is easy to show that

[8] We also include region and time fixed effects in the estimations.

(3) $$DD = \gamma + \left(u_1^T - u_0^T\right) - \left(u_1^C - u_0^C\right)$$

If the expected value of the last two terms is zero, then DD provides a consistent estimator of the treatment effect. Given that the program assignment is not random, that condition becomes the fundamental assumption of this methodology, which allows causal interpretation of the γ parameter.

The same analysis can be carried out under a nonlinear specification. In that case the conditional expectation of the dependent (binary) variable is a nonlinear function. Analytically,

(4) $$P(F_{it}) = \Phi\left(\alpha + \beta_1 H_{it} + \beta_2 Post + \gamma\left(H_{it}.Post\right) + \theta X_{it}\right)$$

where *P* denotes probability. The impact of the program is estimated as

(5) $$DD = \Phi\left(\alpha + \beta_1 + \beta_2 + \gamma + \theta X_{it}\right) - \Phi\left(\alpha + \beta_1 + \beta_2 + \theta X_{it}\right)$$

The treatment effect will be the incremental probability impact caused by the coefficient of the interaction term (Puhani, 2012). Being Φ(.) a strictly monotonic nonlinear function, the sign of γ will always coincide with the sign of the treatment effect. These results apply to all nonlinear models with this parametric structure. In particular, in this paper we use a *Probit* model to estimate the causal effect of the treatment (the AUH program) on the probability of having a newborn.[9]

4. Results

As it is shown in Table 1, the proportion of households with newborns in the treatment group (poor and informal) increased approximately 1.7 percentage points (pp.) after the AUH implementation, while the corresponding mean value for the control group remained almost unchanged. The increase in the fertility level of the treatment group is sizeable: it represents 27% of the pre-intervention level.

[9] Angrist and Pischke (2009) find that the estimates from a linear probability model are not far from those obtained with a nonlinear *Probit* model.

These non-conditional results hold in a multivariate regression framework. Table 3 shows the results of a *probit* model of the probability of having a newborn, restricting the sample to households with at least one woman between 16 and 45 years old. In that model the coefficient of the interaction variable between the treatment dummy (poor and informal household) and the after dummy (post-2009) is positive and statistically significant in all the specifications.[10] The treatment effect, which is almost unchanged when including a large set of controls,[11] represents a mean increase of around 30% in the probability of having a newborn, respect to what would have happened in the absence of the program.

In Table 4 we estimate the treatment effect for alternative samples (i) all households with at least one woman between 16 and 45 years old (Sample 1), (ii) households with women aged between 16 and 45 that are either household head, spouse, daughter or daughter-in-law of the household head (Sample 2), and (iii) households with women in the same age bracket that are only household head or spouse (Sample 3). In all the specifications the treatment effect is positive and statistically significant. We consider alternative samples since in the EPH survey the family relationships among household members are only registered in terms of the household head (e.g. spouse, father, mother or child of that member). Thus, we try to be more precise to identify the multiple "mother-child" relationships within each household. Sample 3 is a better option than sample 1 in this sense, but it implies a considerable reduction in the number of observations. So, we choose Sample 2 for the rest of the analysis in the paper in order to gain more precision in the treatment effect identification than Sample 1, and at the same time not lose too much information as in Sample 3. Using Sample 2, the estimated coefficient for the interaction between the dummy for the treatment group and the after dummy is 1.86.

[10] We carried out several robustness checks considering modifications of the identification of the treatment group and the definition of the outcome (e.g. taking into consideration the potential delay between the couple's decision of having a baby and the moment the woman gets pregnant). All the results hold. Results are available upon request.

[11] The set of controls include household head and household women characteristics, demographic characteristics of the household and regional and time dummies.

Placebo experiments

A crucial assumption of any diff-in-diff strategy is that, in the absence of the program, the outcome in the treatment group would have moved in tandem with the outcome in the comparison group. This underlying assumption cannot be proved, but confidence in its validity could be enhanced through a placebo test. To that aim we run the same models for the probability of having a new born but pretending that the program was not implemented in late 2009 but in a previous date. Table 5 shows the results for alternative fake dates; in all cases the coefficient for the interaction variable is clearly non-significant: something happened at the end of 2009, and not in any previous date.

Of course, the results we find could be due to other events, contemporaneous with the inception of AUH at the end of 2009, that could have involved a differential impact between groups on fertility outcomes. Although we cannot rule out that possibility, it is important to note that AUH was a major policy intervention, that was not accompanied by other social or labor policy initiatives.[12]

Heterogeneity

Table 6 reveals that the impact on fertility takes place only in the group of couples that already have children. According to this conditional model the estimated probability of having a new born during a year for a couple with children (with observable characteristics similar to the sample mean) increased around 1.8 pp (or around 35%) as a consequence of the program. In contrast, the impact of the program on fertility in households with no children appears to be not statistically significant.

The group of households with no children is a highly heterogeneous one, that includes people who cannot have children, and people who have decided not to procreate yet (or ever). The economic incentives introduced by the inception of a cash program are irrelevant for the first group, but not for the second one. Since we cannot identify these groups in the data, the estimated impact becomes some average of both effects. The results in Table 6 suggest that the

[12] *Plan Nacer*, a large health program with potential impact on fertility was implemented in 2005. As discussed above, we find a fertility effect only starting in 2010, in coincidence with the implementation of the AUH, and not before.

program does not affect the incentives of the second group, or at least that the effect is hidden in the overall impact and it is not sufficiently significant to show up.

We have shown that the probability for childless couples to have a first baby is statistically the same regardless of the existence of the program, but that in contrast the fertility decision of those parents with kids is affected by the program. These results suggest that economic incentives are not relevant, or at least are not sufficiently large, to affect the crucial decision of having a first child -the extensive margin of the fertility decision-, but they are a significant incentive for the decision on the number of children -the intensive margin – or on the time pattern of the births.

Given the results reported above, we focus on the model of the probability of newborns for those households with children. We examine whether there are other heterogeneities in the impact of the program. Table 7 suggests that fertility outcomes are affected particularly on mothers in the age bracket in which pregnancy is more likely (26-36). Instead, no significant effects are found for younger and older mothers.

We identify also that the fertility impact is present in the group of households with 1-4 children, but not in couples with 5 or more children (Table 8). This result is not surprising since the household subsidy is capped at 5 children and then does not increase with a sixth child. The result however could also be the consequence of few observations of large households.

Additional examination reveals that the estimated effect on fertility is relevant for mothers with children younger than 6 years old (Table 8), but is not statistically significant for couples where the youngest child is older than 6. The economic incentive introduced by the AUH seems not enough to convince a couple to have another child after a long period without newborns.

Finally, the incremental probability of having a newborn increases particularly for less educated mothers and it is also significant for two-parent families but not in single-parent households (Table 9).

An important issue is to investigate whether the results are due to transient or permanent changes in fertility. Unfortunately, lack of information does not allows us to identify if the increase in newborns after the inception of the new program modifies the equilibrium number of children or reflects instead a

change in the timing of the fertility decisions, without altering the total number of children a couple decides to have. Specifically, it is not possible to accurately discriminate mothers who have already fulfilled their fertility desires from those ones who are still active in this sense.

5. Concluding Remarks

The key question of whether fertility is significantly affected by a cash transfer program can only be answered with empirical evidence referred to specific concrete cases. We have applied a diff-in-diff strategy in search of evidence for the potential impact on fertility of a large child allowance program in Argentina aimed at poor informal households. The results suggest a significant and positive impact on fertility in those households with already at least one child, but no significant effect on childless households. In fact, even among couples in the first group, the impact is small for older and more educated mothers with older children, whose fertility decisions seem to be rather inelastic to the economic incentives of the program. Instead, the impact is larger in those households with younger children and less educated mothers. Unfortunately, we are unable to identify clearly if the increase in newborns after the inception of the new program refers to a transient or permanent impact on fertility.

The magnitude of the estimated effect is sizeable: the probability of having an additional child during a year for a couple with observable characteristics similar to the treatment group mean increases almost 2 percentage points with the program. Insofar this is an unintended effect of the program, it deserves careful consideration. A rigorous assessment of the incentives embedded in the design of cash transfer programs could feed the debate leading to better and more effective social protection systems.

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Table 1: Proportion of households with newborns

	Treatment	Control	Ratio Treat/Control
Before AUH	6.2	5.3	1.2
After AUH	7.8	5.3	1.5
Diff. After-Before	1.7	0.01	0.3

Source: Author's calculation based on EPH data.

Table 2: Descriptive statistics. Treatment and control group

Variables	Treat (i)	Control (ii)	Diff. (ii)-(i)	t	p-value
Age (household head)	43.7	45.3	1.6	9.6	0.00
Age (women 16-45)	27.1	28.7	1.510	15.2	0.00
Male	0.62	0.74	0.121	22.4	0.00
Married	0.66	0.76	0.10	19.75	0.00
Years of education (household head)	8.06	10.87	2.81	61.07	0.00
Years of education (women 16-45)	9.31	12.12	2.80	69.28	0.00
Number of members	4.98	4.22	-0.76	-34.00	0.00
Number of Children	2.33	1.43	-0.90	-51.27	0.00
Household per capita income	176.93	781.27	604.34	70.68	0.00
Observations	9874	24025			

Source: Author's calculation based on EPH data.
Note: means correspond to pre-intervention panels.

Table 3: Probability of having a newborn

	(1)	(2)	(3)
Treat * After	**0.0157****	**0.0156****	**0.0143****
	(0.00764)	**(0.00724)**	**(0.00661)**
Treat	-0.00142	-7.61e-06	-0.000208
	(0.00413)	(0.00404)	(0.00367)
After	0.00123	0.000482	-0.00770
	(0.00336)	(0.00313)	(0.0113)
Household Head's Characteristics	Yes	Yes	Yes
Women and Demographic Characteristics of Household	No	Yes	Yes
Regional and time dummies	No	No	Yes
Observations	56,293	56,293	56,293
Pseudo R2	0.029	0.058	0.062

Probit estimations. Marginal effects reported. Treatment group: poor and informal households.

Table 4: Probability of having a newborn. Alternative Samples.

	Sample 1	Sample 2	Sample 3
Treat * After	**0.0143****	**0.0186****	**0.0204****
	(0.00661)	**(0.00840)**	**(0.00870)**
Treat	-0.000208	0.000142	0.00324
	(0.00367)	(0.00469)	(0.00445)
After	-0.00770	0.0136	-0.00210
	(0.0113)	(0.00972)	(0.00894)
Household Head's Characteristics	Yes	Yes	Yes
Women and Demographic Characteristics of Household	Yes	Yes	Yes
Regional and time dummies	Yes	Yes	Yes
Observations	56,293	54,370	35,868
Pseudo R2	0.062	0.064	0.065

Probit estimations. Marginal effects reported. Treatment group: poor and informal households.

Table 5: Probability of having a newborn. Placebo regressions.

	Intervention in 2008	Intervention in 2007	Intervention in 2006	Intervention in 2005
Treat * After	**-0.00190**	**-0.00467**	**0.000937**	**0.000687**
	(0.0101)	**(0.00891)**	**(0.00646)**	**(0.00684)**
Treat	0.00107	0.00238	0.000132	9.35e-05
	(0.00490)	(0.00637)	(0.00542)	(0.00594)
After	0.00630	0.0200**	-0.00873	-0.0199**
	(0.00906)	(0.00914)	(0.00664)	(0.00920)
Household Head's Characteristics	Yes	Yes	Yes	Yes
Women and Demographic Characteristics	Yes	Yes	Yes	Yes
Regional and time dummies	Yes	Yes	Yes	Yes
Observations	32,789	32,789	32,789	32,789
Pseudo R2	0.062	0.062	0.062	0.062

Probit estimations. Marginal effects reported. Treatment group: poor and informal households.

Table 6: Probability of having a newborn. Heterogeneity results. With children and Without children

	Total	With Children	Without Children
Treat * After	**0.0186****	**0.0179****	**0.0187**
	(0.00840)	**(0.00832)**	**(0.0162)**
Treat	0.000142	-0.00128	0.00479
	(0.00469)	(0.00430)	(0.0105)
After	0.0136	6.13e-05	0.0205
	(0.00972)	(0.0162)	(0.0157)
Household Head's Characteristics	Yes	Yes	Yes
Women and Demographic Characteristics of Household	Yes	Yes	Yes
Regional and time dummies	Yes	Yes	Yes
Observations	54,370	36,945	17,425
Pseudo R2	0.064	0.053	0.136

Probit estimations. Marginal effects reported. Treatment group: poor and informal households.

Table 7: Probability of having a newborn. Heterogeneity results. By mother's age group

	Age groups		
	16-25	26-36	37-45
Treat * After	**0.00124**	**0.0279****	**0.00848**
	(0.0179)	**(0.0132)**	**(0.00765)**
Treat	-0.0189	0.00122	0.00105
	(0.0131)	(0.00710)	(0.00298)
After	0.0206	-0.0180	-0.00632
	(0.0212)	(0.0195)	(0.0103)
Household Head's Characteristics	Yes	Yes	Yes
Women and Demographic Characteristics of Household	Yes	Yes	Yes
Regional and time dummies	Yes	Yes	Yes
Observations	5,545	15,266	8,673
Pseudo R2	0.061	0.033	0.135

Probit estimations. Marginal effects reported. Treatment group: poor and informal households. Sample of Households with children.

Table 8: Probability of having a newborn. Heterogeneity results. By number and age of children

	Number of children		Age of youngest child		
	1-4	**5 or More**	**0-6**	**7-11**	**12-17**
Treat * After	**0.0186****	**0.0741**	**0.0203****	**0.0192**	**0.00658**
	(0.00873)	**(0.0520)**	**(0.00986)**	**(0.0199)**	**(0.00928)**
Treat	-0.00188	0.00113	-0.00501	0.0125	-0.00149
	(0.00570)	(0.0157)	(0.00678)	(0.0101)	(0.00446)
After	0.0191	-0.00235	0.00806	0.0238	0.00260
	(0.0159)	(0.0410)	(0.0211)	(0.0330)	(0.00719)
Household Head's Characteristics	Yes	Yes	Yes	Yes	Yes
Women and Demographic Characteristics	Yes	Yes	Yes	Yes	Yes
Regional and time dummies	Yes	Yes	Yes	Yes	Yes
Observations	28,242	1,188	24,060	8,163	4,722
Pseudo R2	0.064	0.289	0.039	0.108	0.177

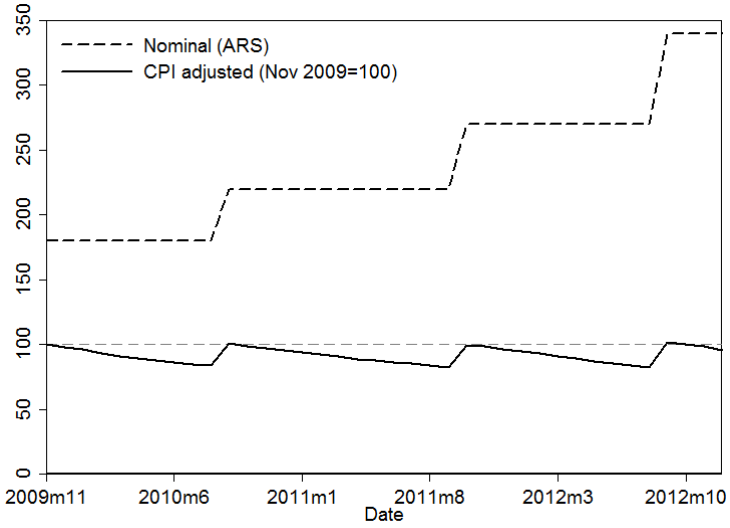
Probit estimations. Marginal effects reported. Treatment group: poor and informal households. Sample of Households with children.

Table 9: Probability of having a newborn. Heterogeneity results. By education and type of family

	Educational Level		Type of Family	
	Low Education	High Education	Two-Parent	Single-Parent
Treat * After	**0.0371***	**0.00461**	**0.0275****	**0.0199**
	(0.0218)	**(0.0113)**	**(0.0124)**	**(0.0155)**
Treat	0.0129	-0.0135*	-7.45e-05	-0.00298
	(0.0120)	(0.00720)	(0.00560)	(0.00777)
After	0.0707***	0.0185	0.00378	0.00885
	(0.0199)	(0.0124)	(0.0119)	(0.0210)
Household Head's Characteristics	Yes	Yes	Yes	Yes
Women and Demographic Characteristics	Yes	Yes	Yes	Yes
Regional and time dummies	Yes	Yes	Yes	Yes
Observations	17,534	19,411	25,363	4,598
Pseudo R2	0.054	0.086	0.053	0.140

Probit estimations. Marginal effects reported. Treatment group: poor and informal households. Sample of Households with children. The "Low Education" group includes mothers with incomplete highschool or less educational level. Mothers with higher education (complete highschool level or more) are included in the "High Education" group.

Figure 1: AUH monthly allowance over time



Source: own estimations based on CPI from Estudio GB.