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Public Transfers and the Poverty of Children and the Elderly in Uruguay

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In Uruguay, public direct transfers reduce poverty for society as a whole. Poverty affects mostly children, even after the recent period of fall in poverty. The aim of this article is to analyze whether the reduction in poverty benefits a particular age group over others or if it affects all groups equally. The methodological strategy consists in the estimation of the contribution of public direct transfers to the poverty exit rate and its decomposition in the coverage effect and the amount effect. The main conclusions are as follows: (i) households with children are the least likely to escape poverty through the direct transfer system; (ii) the reason is the relative low per capita amount of the transfer and not the lack of coverage; and (iii) the effectiveness of the amount is relatively low because poverty before transfers is more intense for households with children, and the transfer that they receive is lower than that for other types of households.

KEY WORDS: poverty, public transfers, social spending, children

Introduction

Since 2002, inequality and poverty in Latin America have exhibited a decreasing trend that triggered several studies about the role of different explanations, such as growth, favorable external conditions, implementation of progressive social policies, transfers to poor families with children, improvement in education, demographic change, and other factors (e.g., Cornia, 2010; Gasparini, Gutiérrez, & Tornarolli, 2007; Lustig, Lopez-Calva, & Ortiz-Juarez, 2013; Ros, 2009). Despite this good news, poverty among children and adolescents according to various dimensions, including monetary poverty, is still a question of concern. Indeed, the decrease of poverty was lower among children than in the rest of the population and, particularly, much lower than among the elders (ECLAC, 2013). Thus, the changes that led to poverty reduction have benefited children and adolescents to a lower extent than other age groups.

The debate about child poverty in Latin America began in the mid-1990s in a context of high levels of poverty. Concerns with child poverty are not only motivated by the welfare of children. There is also an understanding that

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deprivation during childhood increases the risk of bad conditions in later life. The main response was the implementation of cash transfers to poor families with children, conditioned on school attendance and primary health care. A large body of empirical research supports that conditional cash transfer programs in Latin America have been effective in reducing child poverty, boosting school enrollment, and decreasing dropout rates (Barrientos & DeJong, 2006; Behrman, Sengupta, & Todd, 2005; Bourguignon, Ferreira, & Leite, 2003; Dubois, De Janvry, & Sadoulet, 2012; Schady & Araujo, 2008).

This overall description suits Uruguay, a country that belongs to the group of the lowest levels of inequality and poverty in Latin America. Uruguay has a long tradition of providing public services and social benefits. The most important direct transfer programs are directed to the poor: a conditional cash transfer called Family Allowances, Assistance Pensions to the elderly, and Food Transfers. The direct transfer system also includes benefits to workers whose activity is interrupted by illness, maternity, accident, or unemployment.

The aim of this article is to assess the age-differentiated effect of direct transfers to alleviate monetary poverty in Uruguay. I attempt to disentangle the role of coverage and benefit amount in lifting the poor from their condition and compare the results for elders and children.

I build population groups based on the household age composition; I estimate their income before and after transfers and identify the before-transfer poor using data from the Household Survey collected in 2009. The methodological strategy consists of the computation of the probability that the before-transfer poor leave poverty after transfers (poverty exit rate) and the decomposition of the exit rate on two components: one measures the role of coverage and the other measures the role of the benefit amount. The main finding is that Family Allowances is the program that most contributes to the poverty exit rate. This result is led by the high child poverty level and the high coverage of the program. However, children are less likely to leave poverty than elders because of the low transfer amount.

The next section offers an overview of the main direct transfer programs in Uruguay. Then I present the characteristics of the data and method. The results are presented in the rest of the sections. First, I describe before-transfer poverty across age groups and the poverty exit rates. Second, I show the results of the poverty exit rate decomposition. This result is revisited in the next section through an analysis of the effect of the programs separately. Finally, I conclude and discuss my results.

Direct Transfers in Uruguay

The public direct transfer system comprises four components: Family Allowances (FA), Assistance Pensions (AP), Food Transfers (FT), and several benefits that I group as Other Transfers (OT).

The FA is the result of recent reformulations of a contributive program. The old program was available to low-wage workers who contributed to the social security system. In 1999 and 2004, the program was expanded to include noncontributing, low-income families. In 2008, these modifications were repealed, and a new, targeted, noncontributory program was created. Now the FA is a means-tested conditional cash transfer program whose main objectives are poverty alleviation and school attendance of children and adolescents. The beneficiaries are children under 19 years of age who are attending school, as well as those under the age of 5 who have not yet entered elementary school. Eligibility to receive the benefit depends on the socioeconomic level of the household to which the child belongs. This level is determined by a set of parameters designed to capture the program's target population, who are households (with children) that fall into the first quintile of per capita income. The benefit amount is higher for secondary than primary students, and the total amount received by the family declines with the number of siblings. This design attempts to encourage educational investments while minimizing such undesirable effects as the reduction of the mother's labor supply and the increase of fertility. In 2009, the FA was equivalent to .4 percent of GDP.

The AP is a traditional program that goes back to the end of the nineteenth century, whose coverage and benefits have widened gradually since then. Now it is a means-tested program concerned with poverty alleviation. It consists of a transfer to poor elders (over 65 years) and to low-income disabled individuals who do not fulfill the requirements to obtain a contributive pension. In contrast to the FA, the threshold refers to income and it is updated yearly. The main reason for accessing this program is the insufficient number of contributions to the social security system of low-wage workers. The AP provides monetary transfers of less value than the contributory system, with the aim of discouraging labor informality in earlier life stages. These transfers were equivalent to .5 percent of GDP in 2009.

I label FT several programs that are administered by different agencies and account for .3 percent of GDP. The most traditional programs offer free food baskets and dining room service to those in greatest need. The food baskets program explicitly includes indigent women who are pregnant or breastfeeding, households with children under 18 that are living in extreme poverty or show signs of nutritional risk, and low-income individuals with health problems. In order to access the program, a social worker evaluates the family's socioeconomic situation; the cases of nutritional risk are evaluated by the health services. The dining room service provides food assistance in the form of daily lunches to vulnerable individuals. No income limits apply. A social worker decides who shall be granted access to the service and may also remove individuals from the program. In addition to these in-kind programs, there is a food card that allows individuals to obtain food and hygiene products, free of charge. Beneficiaries are households with children under 18 and women who are pregnant or breastfeeding, with low income, and that are able to prove that they experience a situation of severe need. To remain in the program, children under 14 must attend school, and children and pregnant women must make regular visits to health care centers.

I include in OT several benefits that cover wage-loss periods for workers: unemployment insurance, disability and sickness allowances, and maternal benefits. They cover risks of workers who contribute to the social security system. Thus, the design does not aim to target the poor population. The benefit amount depends on the wage of the worker, and it is available over a maximum predetermined period. After its expiration, there is not any benefit program available except the above-mentioned FA, AP, and FT. I also include in OT a children's benefit program offered to contributory private workers of low-income households that are not covered by the FA. To receive the benefit, the child must attend school. The amount of this benefit is lower than the FA. The transfers of all these programs were equivalent to 1 percent of GDP in 2009.

Data and Methodology

In the following three subsections, I present the characteristics of the database, the poverty lines used in the article, and the methodological strategy.

The Database: Taxes, Public Benefits, and Income Variables

I use the so-called CEQ database, which informs the amount of taxes paid by households, their received public benefits, and several income variables.[1] The CEQ database was built from data provided by Uruguay's Household Survey of 2009 (*Encuesta Continua de Hogares* [ECH]) collected by the National Institute of Statistics (*Instituto Nacional de Estadística* [INE]). The data unit is the individual (130,058 observations), to which I assign the per capita taxes, benefits, and income of the household. Thus, I assume that all the individuals of the same household receive a benefit when at least one of the members is covered by a benefit program. I only consider programs that make direct transfers as defined below.

I am interested in three income concepts:

1. Market income includes gross labor earnings and capital income, auto-consumption, imputed rent from owner-occupied housing, private transfers, and the contributory pensions paid by the social security system.
2. Net market income is market income minus direct taxes. Social security contributions are treated as savings (not as taxes), which is consistent with including contributory pensions in market income. As the low-income population does not pay direct transfers because of exemptions, net market income and market income are equal for most of the poor.
3. Disposable income is equal to the net market income plus direct transfers. Direct transfers include the above-described programs: AP, FA, FT, and OT.

The Poverty Lines

I use three criteria for identifying poverty. Two of them correspond to the extreme and moderate lines usually used by international agencies of US$2.5 and US$4 (per capita per day) at 2005 purchasing power parity (PPP). I converted the two international thresholds to local 2009 prices using information about the PPP conversion factor for private consumption provided by the World Bank (2014).

I also work with the moderate official national poverty line (NPL) of Uruguay. Its main advantage when studying differences between age groups is that it has embedded an adult equivalence scale. Its threshold was calculated in 2006 by INE following the usual guidelines: (i) an estimation of a food poverty line (that varies between regions) using information of an expenditure survey; (ii) an estimation of the nonfood component applying Orshansky coefficients that vary with the size of the household according to an equivalence scale (size powered to 0.8). INE (2010) provides the information to update the line. In 2009, the average NPL for all individuals is equal to US$9.5 PPP per capita per day.

The Poverty Exit Rate and Its Decomposition

To analyze the effect of public benefits on poverty, I follow the concept of fiscal mobility proposed by Lustig (2011). Fiscal mobility refers to the movements across income distribution because of fiscal policy within a period. Lustig and Higgins (2012) apply this concept using a fiscal mobility matrix that "measures the proportion of individuals that move from a before taxes and transfers income group (e.g., non-poor) to another income group (e.g., poor) after their income is changed by taxes and transfers." I am aware that the persons may adapt their behavior because of the existence of public benefits. Thus, the state of being poor according to market income incorporates the reactional behavior to the perception of an expected transfer. However, I do not consider these types of reactions, and I treat fiscal policy as exogenous.

In Figure 1, I show the potential transitions between the poverty and nonpoverty conditions, their feasibility, and the proportion of individuals in each path. I am interested in a specific transition: moving from poor under market income to non-poor under disposable income. This transition is the result of a

Market income	Net market income	Disposable income	Proportion of population according to poverty line:		
			US$ 2.5	US$4	National
Poor	Poor	Poor	0.5	3.5	22.1
		Non-poor	2.9	4.4	3.2
	Non-poor	Poor		Not feasible	
		Non-poor		Not feasible	
Non-poor	Poor	Poor	0.0	0.0	0.2
		Non-poor	0.0	0.1	0.3
	Non-poor	Poor		Not feasible	
		Non-poor	96.5	92.1	74.2
All	All	All	100.0	100.0	100.0

Figure 1. Transitions Between Poverty and Non-poverty.

positive amount of net public direct transfers (direct transfers less direct taxes) that is enough to take the poor out of their condition. As shown in Figure 1, this transition involves 2.9, 4.4, or 3.2 percent of the population when considering different poverty lines, whereas 0.5, 3.5, or 22.1 percent remain poor.

Note that some individuals who are non-poor under market income become poor under disposable income. This transition accounts for 0.2 percent of the population when using the NPL and is null with the other lines. Although this case is theoretically important, I do not address this issue in this article because of its low incidence.

I am interested in a particular transition as measured by the poverty exit rate. It is equal to the proportion of non-poor under disposable income but poor under market income, in the poor population under market income. I denote this probability as $P(E_{m,d})$. To disentangle the effect of the programs' coverage and the value of the benefit, I use the following statistical property of probabilities:

$$P(E_{m,d}) = P(C)P(E_{m,d}/C) \tag{1}$$

where $P(C)$ is the probability of being covered and $P(E_{m,d}/C)$ is the probability of being taken out of poverty, given that the individual is covered. I am also interested in the distinction between programs. I follow a strategy used in poverty dynamics studies, under which the transition over time is decomposed between the frequency with which the population at risk experiences a relevant event and the probability of transition, given the occurrence of the event (Beccaria, Maurizio, Fernández, Monsalvo, & Álvarez, 2013; Jenkins & Schluter, 2001).

In this article, I interpret the occurrence of an event as the fact of being covered by a benefit program. Thus, I split the poor population in terms of market income according to mutually exclusive coverage status. These groups respond to the coverage of the already mentioned programs: AP, FA, FT, and OT. As I want to classify all the population, one group corresponds to noncoverage.

I build the classification, taking into account that I need a minimal number of cases in each one for statistical purposes. In fact, I work with two groupings: G1 comprises 10 states, and G2 aggregates those states into five. The two groupings of coverage status are described in Figure 2.

Because the groups are mutually exclusive and encompass 100 percent of the possibilities, the probability of transition is equal to the sum of the transition probabilities associated with each coverage status. That is, if *Em,d* indicates the transition from poverty under market income to nonpoverty under disposable income, C_i is the occurrence of the coverage status I (being covered by the group of programs i), and n is the number of groups ($n = 10$ in G1 and $n = 5$ in G2), then

$$P(E_{m,d}) = \sum_{i=1}^{n} P(E_{m,d}, C_i) \tag{2}$$

States		At least one member of the household is covered by:			
G1	G2	Assistance pensions (NCP)	Family allowances (FA)	Food transfers (FT)	Other direct transfers (OT)
I	A	Yes	No	No	No
II		Yes	No	Yes (at least one of the programs)	
III	B	No	Yes	No	No
IV		No	Yes	Yes (at least one of the programs)	
V	C	No	No	Yes	No
VI		No	No	No	Yes
VII		No	No	Yes	Yes
VIII	D	Yes	Yes	No	No
IX		Yes	Yes	Yes (at least one of the programs)	
X	E	No	No	No	No

Figure 2. Description of the Classification of the States.

The decomposition of the distribution of this transition involves summing up, for included programs, the products of two terms:

$$P(E_{m,d}) = \sum_{i=1}^{n} P(C_i)(E_{m,d}/C_i) \tag{3}$$

The first term, $P(C_i)$, is the probability that a poor person according to market income is covered by the groups of program i. The second term, $P(E_{m,d}/C_i)$, is the probability that a poor person leaves poverty conditional on being covered by i. In other terms, the decomposition allows us to disentangle the effect of the coverage of a group of programs from the amount of the transfer to that group for alleviating poverty.

Poverty by Age

I am interested in poverty by age and the extent to which public transfers alleviate child poverty. The option of classifying the population according to its individual age or to the age composition of the households is not obvious. It makes sense to think that individuals of the same household share the benefits they receive, at least to some extent. Even if the benefit received by an individual is not shared explicitly with the rest of the household members—a clear example is attendance at a dining room service—it means a relief of the income available to all of them. Under these considerations, I opt to build population groups according to the age composition of the households. I consider children and elders the individuals younger than 19 years and older than 64 years, respectively, and I distinguish the following: (i) households with children (which account for 56 percent of the population); (ii) households with elders (18 percent); (iii) households with children and elders (7 percent); and (iv) households without children and elders (19 percent).

To analyze the poverty dominance among these groups, I use the graphical instrument three I's of poverty (TIP) curves proposed by Jenkins and Lambert (1997). The TIP curves are an appropriate graphical instrument to rank poverty of different populations without a specification of a proper poverty line.

The TIP curve is a plot of the cumulated proportion of population on the x-axis and the cumulated (normalized) per capita poverty gap on the y-axis. The gap is defined only for the poor and is calculated as the difference between income and the maximum poverty line. In the curve, gaps are ordered from largest to smallest. As the curve becomes horizontal when the smallest gap is considered, at this point, the x-axis value is equal to the incidence of poverty at the maximum poverty line. The height of the TIP curve indicates intensity of poverty: it is equal to the average poverty gap for the maximum poverty line. The curvature reflects inequality among the poor. Note that the curve reflects the incidence, intensity, and inequality for all lines below the maximum line. Drawn for several populations, the curves provide dominance criteria to order them in terms of the class of the normalized measures of poverty gap.

In Figure 3, at the top left, I present the TIP curve of market income by population group with a maximum line of US$8 PPP per day. The graph is clear in terms of dominance and shows two distinct groups. The highest levels of poverty in terms of incidence, intensity, and inequality correspond to the population group in households with children (first position) and households with children and elders (second position). The distance between the second and third positions notably increases as the gap decreases. The third position corresponds to households with elders and, although closer in the fourth position, households without elders and children. Below these graphs, I report the TIP curves of disposable income. I see again that poverty, although lower for all groups, is higher (in terms of incidence, intensity, and inequality) when there are children in the household. Unlike the market income TIP curves, the curves of the groups in households with elders and households without children and elders overlap.

In the right-hand graphs in Figure 3, I present the TIP curves using the NPL as the maximum line. Keep in mind that an adult equivalence scale is embedded in the NPL, so the differences because of household size are narrow. However, the TIP curves for market and disposable income give support to the main conclusions obtained without using an equivalence scale: groups with children are poorer than groups without children.

I capture this overall picture in Table 1, where I show the poverty and exit poverty rates. For all the populations, the headcount ratio is 3.5 percent under market income and declines to 0.5 percent under disposable income when I use the standard international extreme poverty line (EPL). Thus, even with a low headcount ratio before public benefits, policy is very successful in reducing

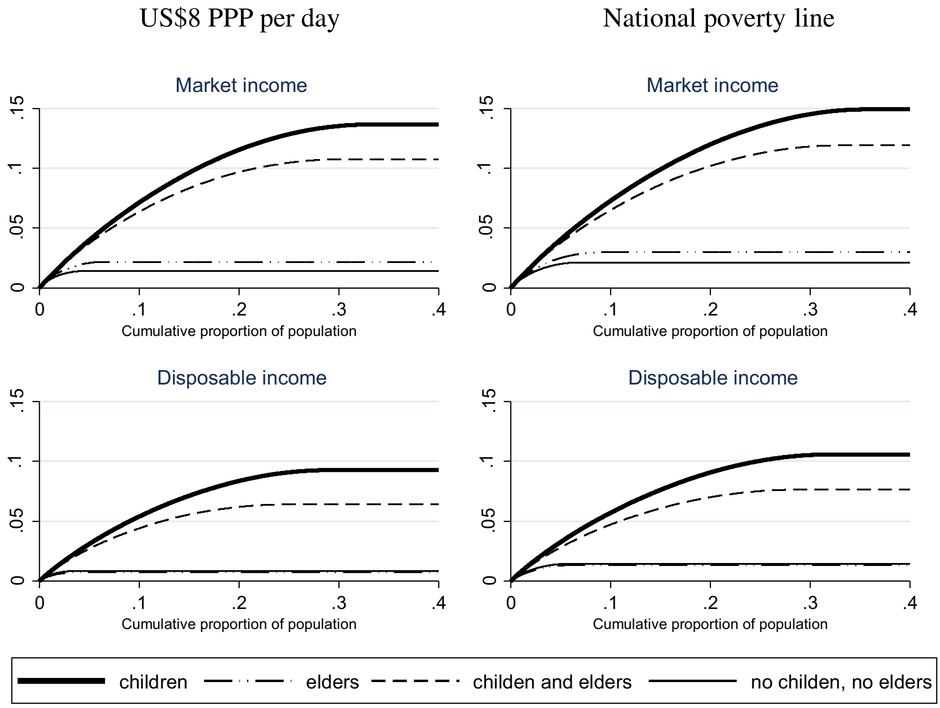

Figure 3. Three I's of Poverty (TIP) Curves by Type of Household With Two Different Maximum Poverty Lines.

poverty: the exit rate is 85 percent, and all population groups exhibit high levels of exit.

Naturally, poverty is higher when I use the international moderate poverty line (MPL): 7.8 percent under market income and 3.5 percent under disposable income. Meanwhile, the exit rate declines to 56 percent, and, most importantly, differences between groups emerge. The exit rate for households with children (and no elders) is 53 percent, whereas the presence of an elder in the household is associated with a higher exit rate: 90 percent when there are only elders and 67 percent when there are children and elders.

Finally, according to the NPL, the incidence of poverty is 25.3 and 22.3 percent under market and disposable income, respectively. Thus, poverty increases sharply when I use national standards, whereas the ability of transfers to reduce it drops steeply: the exit rate is only 13 percent. According to their exit rate, the order of the population groups is the following: households with children (10 percent), households with children and elders (14 percent), households without children and elders (16 percent), and households with elders (32 percent).

The Exit From Poverty: The Roles of Coverage and Amount

In the columns $P(E_{m,d})$ of Table 2, I report the exit rate from poverty for the whole population and by group calculated for the EPL, MPL, and NPL. As stated

Table 1. Poverty Rate Under Market and Disposable Income, Composition of the Poor and Exit Rate for Three Poverty Lines, by Groups (Confidence Interval at 95% in Brackets)

	Extreme Poverty Line: US$2.5 PPP				Moderate Poverty Line: US$4 PPP				National Poverty Line			
	Poverty Rate				Poverty Rate				Poverty Rate			
Population Groups	YM	YD	Comp. of the Poor YM (%)	Exit Rate	YM	YD	Comp. of the Poor YM (%)	Exit Rate	YM	YD	Comp. of the Poor YM (%)	Exit Rate
All the population	.035	.005	100.0	.846	.078	.035	100.0	.558	.253	.223	100.0	.126
	[.032; .037]	[.004; .006]		[.817; .876]	[.075; .082]	[.032; .037]		[.533; .583]	[.248; .258]	[.218; .228]		[.118; .135]
With children	.054	.009	87.3	.838	.122	.057	86.8	.534	.357	.322	78.7	.105
	[.050; .059]	[.007; .011]		[.805; .871]	[.116; .128]	[.052; .061]		[.506; .561]	[.348; .365]	[.314; .330]		[.095; .114]
With elders	.009***	.000***	4.6	1.000***	.017***	.002***	3.8	.905***	.097***	.066***	6.8	.332***
	[.007; .011]	[.000; .000]		—	[.014; .019]	[.001; .002]		[.858; .952]	[.090; .103]	[.061; .072]		[.300; .364]
With children/elders	.029***	.005*	6.1	.830	.077***	.026***	7.1	.668***	.322***	.279***	9.2	.140**
	[.021; .037]	[.001; .009]		[.717; .943]	[.063; .090]	[.017; .034]		[.579; .758]	[.298; .345]	[.256; .301]		[.108; .171]
Without children/elders	.004***	.000***	2.1	.887	.010***	.004***	2.3	.578	.070***	.060***	5.3	.159***
	[.003; .005]	[.000; .001]		[.751; 1.022]	[.008; .011]	[.003; .005]		[.474; .681]	[.065; .076]	[.055; .065]		[.131; .187]

Note: $^{*}p<.1$; $^{**}p<.05$; $^{***}p<.01$, where p is the p-value of the test (Ho) column-indicator for row-group—column indicator households with children = 0. YM = income market; YD = disposable income.

Table 2. Exit Rate, Probability of Being Covered, and Probability of Leaving Poverty Given Coverage, by Groups (Confidence Interval at 95%)

	Extreme Poverty Line: US$2.5 PPP			Moderate Poverty Line: US$4 PPP			National Poverty Line		
Population Groups	$P(E_{m,d})$	$P(C_i)$	$P(E_{m,d}/C_i)$	$P(E_{m,d})$	$P(C_i)$	$P(E_{m,d}/C_i)$	$P(E_{m,d})$	$P(C_i)$	$P(E_{m,d}/C_i)$
All the population	.846	.980	.863	.558	.959	.582	.126	.836	.151
	[.817; .876]	[.971; .990]	[.834; .893]	[.533; .583]	[.951; .967]	[.556; .608]	[.118; .135]	[.827; .844]	[.141; .162]
With children	.838	.980	.855	.534	.968	.551	.105	.895	.117
	[.805; .871]	[.970; .991]	[.823; .888]	[.506; .561]	[.960; .976]	[.523; .580]	[.095; .114]	[.886; .903]	[.107; .128]
With elders	1.000***	1.000***	1.000***	.905***	.922***	.982***	.332***	.548***	.606***
	—	—	—	[.858; .952]	[.879; .965]	[.959; 1.004]	[.300; .364]	[.513; .582]	[.560; .652]
With children/elders	.830	.995**	.834	.668***	.964	.694***	.140**	.831***	.168**
	[.717; .943]	[.986; 1.005]	[.721; .947]	[.579; .758]	[.932; .996]	[.603; .784]	[.108; .171]	[.796; .866]	[.131; .205]
Without children/elders	.887	.887	1.000***	.578	.676***	.855***	.159***	.334***	.476***
	[.751; 1.022]	[.751; 1.022]	—	[.474; .681]	[.577; .775]	[.758; .951]	[.131; .187]	[.298; .371]	[.410; .542]

Note: $^{**}p < .05$; $^{***}p < .01$, where p is the p-value of the test (Ho) column-indicator for row-group—column indicator households with children = 0. $P(E_{m,d})$ = poverty exit rate; $P(C_i)$ = probability of being covered; $P(E_{m,d}/C_i)$ = probability of leaving poverty conditional on coverage.

in equation (1), the exit rate is equal to the product of the probability that a poor individual, according to market income, receives public benefits, reported in columns $P(S_i)$, and the probability that a poor person leaves poverty conditional on being covered by a benefit program, reported in columns $P(E_{m,d}/C_i)$.

As already mentioned, the exit rate is 85 percent when I work with EPL and diminishes to 56 percent and to 13 percent when considering MPL and NPL, respectively. The probability of coverage is 98 percent for EPL and declines slightly to 96 percent for MPL and 84 percent for NPL. Thus, the sharp fall of the exit rate when the line increases is driven by the decrease of the probability that covered poor leave poverty: from 85 percent for EPL to 58 percent for MPL and 15 percent for NPL.

When I analyze the population groups, I already know that the lowest exit rate corresponds to individuals in households with children. The coverage of this group is much extended with the three poverty lines. Indeed, the probability of a poor person being covered is 98, 97, and 90 percent under ELP, MLP, and NLP, respectively (Table 2). However, the probability of leaving poverty given coverage decreases from 0.855 under ELP to 0.551 under MLP and 0.117 under NLP. The low exit rate relies on the low amount of the transfer.

On the other extreme, the highest exit rate corresponds to the population in households with elders. The poor of the group are totally covered under ELP, and the coverage slightly declines to 97 percent under MPL. However, the probability of being covered decreases sharply to 55 percent under NLP, that is, to lower levels than for households with children. Thus, the success of public benefits in terms of exit rate relies on the amount of transfer. Indeed, the amount is enough to lift almost all its beneficiaries out of poverty under MLP and 61 percent of them under NLP.

The graph of the population in households with children and elders is rather close to that of households with children: high levels of coverage with low levels of transfer. Finally, households without children are in an intermediate situation.

In sum, the amount transferred is crucial to understand the high probability of the elders and the low probability of children to leave poverty. Is this due to the fact that poverty is more intense among the children than among the elders? I attempt to answer this question graphically. In Figure 4, I show the histogram of the poverty gap of each group of the population under market income and fixing of the poverty line at NLP. Overlaid, I draw a scaled kernel density estimate of the gap. Vertical dashed lines are placed in the values of the percentiles 0.25, 0.50, and 0.75 of the distribution of the per capita transfer among the poor beneficiaries (all members of the household that receives a benefit) of each group.

The histograms are consistent with the TIP curves. Because the density function of the group in households with elders has a peak at low values of the gap and onward, the graph looks convex. Instead, the appearance of the histogram for households with children corresponds to a group with a higher intensity of poverty: a higher mass is present at higher levels of the gap. This picture means that given a transfer, the probability that the transfer lifts the beneficiary out of poverty will be higher for elders than for children. However,

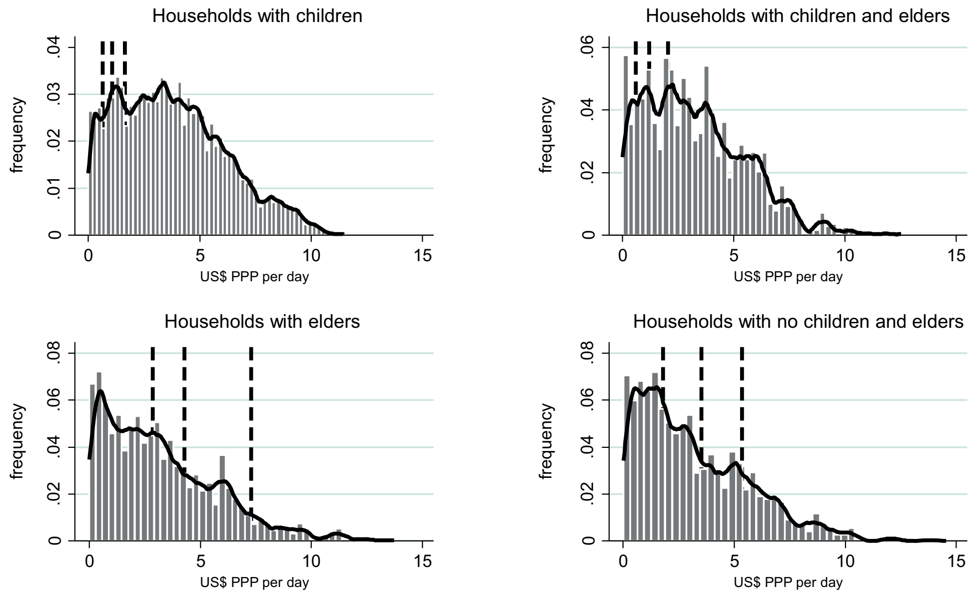

Figure 4. Histogram of the Poverty Gap by Groups of the Population.

the vertical lines show that transfers are rather different between groups. Thus, the different success of public transfers between groups is linked to the different amount transferred by each of the programs.

The Role of Public Programs

I saw that under the EPL, direct transfers are successful in taking out people from poverty, but the exit rate declines as the line increases. This fall is mostly related to the amount of the transfer and not to coverage. I also learned that the fall of the exit rate as the poverty line increases is sharper among households with children than those with elders. Besides, the exit rate fall among households with children is mostly related to the amount of the transfer, whereas among households with elders, both coverage and amount contribute to the fall.

How do the different programs explain this picture? To answer this question, I perform the decompositions stated in equations 2 and 3. I first analyze the contribution of coverage and transfer amount of the groups of programs to exit from poverty for all the poor population. Because by design, the programs are directed to different age groups, these findings help to explain the difference of the success by age of direct transfers. Thus, second, I perform the decomposition for each household type, using only the NPL.

Decomposition for All the Poor Population

In columns $P(E_{m,d})$ of Table 3, I report the poverty exit rate for all the poor population and for the poor covered by the different program groups (including

Table 3. Decomposition of the Exit Rate From Poverty for Three Poverty Lines by Groups of Programs (Confidence Interval at 95%)

	Extreme Poverty Line: US $2.5 PPP			Moderate Poverty Line: US $4 PPP			National Poverty Line		
	$P(E_{m,d})$	$P(C_i)$	$P(E_{m,d}/C_i)$	$P(E_{m,d})$	$P(C_i)$	$P(E_{m,d}/C_i)$	$P(E_{m,d})$	$P(C_i)$	$P(E_{m,d}/C_i)$
All the population	.846	.980	.863	.558	.959	.582	.126	.836	.151
	[.817; .876]	[.971; .990]	[.834; .893]	[.533; .583]	[.951; .967]	[.556; .608]	[.118; .135]	[.827; .844]	[.141; .162]
A. AP and eventually FT and/or OT	.089	.091	.976	.073	.078	.938	.034	.069	.500
	[.073; .104]	[.075; .107]	[.929; 1.022]	[.063; .083]	[.067; .088]	[.897; .979]	[.031; .038]	[.063; .075]	[.459; .540]
I. AP only	.027	.027	1.000	.022	.022	.985	.016	.027	.584
	[.019; .034]	[.019; .034]	—	[.017; .026]	[.017; .027]	[.955; 1.014]	[.014; .018]	[.024; .030]	[.526; .642]
II. AP and (FT or OT)	.062	.064	.966	.051	.056	.920	.019	.042	.445
	[.049; .075]	[.050; .078]	[.901; 1.031]	[.042; .060]	[.046; .065]	[.864; .975]	[.016; .021]	[.037; .047]	[.391; .499]
B. FA and eventually FT and/or OT	.582	.693	.840	.350	.675	.518	.053	.512	.104
	[.544; .620]	[.659; .727]	[.802; .878]	[.326; .374]	[.652; .698]	[.486; .550]	[.047; .060]	[.499; .525]	[.091; .116]
III. FA only	.028	.042	.648	.032	.077	.414	.012	.130	.090
	[.017; .038]	[.027; .058]	[.454; .842]	[.023; .040]	[.064; .090]	[.329; .498]	[.009; .014]	[.122; .139]	[.071; .110]
IV. FA and (FT or OT)	.555	.651	.852	.318	.598	.532	.041	.382	.108
	[.516; .593]	[.615; .686]	[.815; .890]	[.294; .342]	[.574; .622]	[.498; .566]	[.035; .047]	[.369; .395]	[.093; .123]
C. FT and/or OT only	.052	.071	.738	.058	.110	.522	.031	.205	.151
	[.036; .068]	[.051; .090]	[.611; .866]	[.046; .069]	[.095; .126]	[.448; .596]	[.027; .035]	[.194; .215]	[.131; .171]
V. FT only	.016	.028	.564	.018	.048	.372	.004	.066	.062
	[.007; .024]	[.015; .040]	[.335; .793]	[.011; .025]	[.037; .058]	[.260; .485]	[.002; .006]	[.059; .073]	[.036; .088]
VI. OT only	.014	.017	.848	.021	.032	.668	.016	.096	.167
	[.006; .022]	[.008; .025]	[.670; 1.025]	[.015; .028]	[.024; .040]	[.546; .791]	[.013; .019]	[.089; .104]	[.140; .194]
VII. FT and OT	.023	.026	.851	.018	.030	.603	.011	.043	.250
	[.011; .034]	[.014; .039]	[.682; 1.021]	[.012; .025]	[.022; .039]	[.459; .748]	[.008; .014]	[.037; .048]	[.192; .308]
D. AP and FA and eventually FT and/or OT	.124	.126	.983	.078	.096	.813	.008	.050	.163
	[.097; .150]	[.099; .152]	[.960; 1.006]	[.064; .092]	[.081; .112]	[.741; .886]	[.006; .010]	[.043; .056]	[.119; .206]
VIII. AP and FA	.007	.007	1.000	.003	.005	.684	.001	.006	.168
	[.002; .013]	[.002; .013]	—	[.001; .006]	[.002; .008]	[.392; .976]	[.000; .002]	[.004; .009]	[.053; .283]
IX. AP and FA and (FT or OT)	.116	.118	.982	.075	.091	.821	.007	.043	.162
	[.090; .142]	[.092; .144]	[.958; 1.007]	[.061; .089]	[.076; .107]	[.746; .895]	[.005; .009]	[.037; .049]	[.115; .209]
E./X. No program	.000	.020	.000	.000	.041	.000	.000	.164	.000
	[.000; .000]	[.010; .029]	[.000; .000]	[.000; .000]	[.033; .049]	[.000; .000]	.000	[.156; .173]	.000

Note: $P(E_{m,d})$ = poverty exit rate; $P(C_i)$ = probability of being covered; $P(E_{m,d}/C_i)$ = probability of leaving poverty conditional on coverage.

the group of noncovered poor). The other columns correspond to the terms of the decomposition in equation 3: in $P(C_i)$, I report the probability that a poor person is covered by a program of the group *i*, and in $P(E_{m,d}/C_i)$, I report the probability that a poor person leaves poverty conditional on being covered by a program of group *i*.

For the three poverty lines, the group that contributes the most to the total exit rate is group B, composed by the poor covered by family allowances (FA) and, eventually, food transfers (FT) and/or other transfers (OT) (but not assistance pensions [AP]). The high contribution of B relies on the wide coverage reflected by a high value of $P(Ci)$, which is partly due to the demographic composition of the poor: the proportion of children (to which AF are directed) is higher than that of elders. Besides, most households with children are covered by the group of programs B, as I will discuss in the next subsection.

When I look at the probability of leaving poverty, given that the person belongs to a group, the highest values correspond to group A, that is, the beneficiaries of AP and, eventually, FT and/or OT (but not FA). According to the EPL, the probability of leaving poverty conditional to A is rather similar to the probability conditional to B. However, the difference between A and B increases sharply with the poverty line. Indeed, when I consider the MPL, the probability of exit from poverty is 94 percent conditional to A and 52 percent conditional to B. With NPL, these rates decrease to 50 and 10 percent, respectively.

The coverage by multiple programs merits a few words. The majority of the poor covered by AP and/or FA also receive benefits from FT and/or OT. The value of $P(E_{m,d}/S_i)$ suggests that this combination is helpful to leaving poverty, particularly for the poor covered by FA. Besides, FA beneficiaries have the highest probability of leaving poverty when they also receive AP (group D). Anyway, the results for group D are much closer to group B than to group A.

Finally, the results show that the poor of group C (covered by FT and/or OT) show a particular characteristic: the coverage increases with the poverty line.

In sum, the FA program must take much of the credit of the high coverage of the direct transfer system. However, its efficacy of lifting out from poverty is lower than the AP program.

Decomposition by Population Groups

In Table 4, I report the decomposition of the exit rate for the population groups under the NPL.

The difference between households with children and households with elders strongly relies on the difference between the FA and AP programs. On one hand, 48 percent of the population in households with elders is covered by programs of group A, whereas 45 percent are not covered at all. Their probability of leaving poverty given group B is 64 percent. Instead, 61 percent of the poor in households with children are covered by programs of group B, and their probability of being taken out of poverty given coverage is 10 percent. Additionally, 22 percent of households with children benefit from programs of group C. With $P(E_{m,d}/C_i)$

Table 4. Exit Rate, Probability of Being Covered, and Probability of Leaving Poverty Under NLP, Given Coverage, by Groups of the Population and Programs

	With Children			With Children and Elders		
Program Group	$P(E_{m,d})$	$P(C_i)$	$P(E_{m,d}/C_i)$	$P(E_{m,d})$	$P(C_i)$	$P(E_{m,d}/C_i)$
All the population group	.105	.895	.117	.140**	.831***	.168***
A. AP and eventually FT and/or OT	.005	.016	.314	.043***	.144***	.299
B. FA and eventually FT and/or OT	.062	.612	.101	.045	.324***	.139
C. FT and/or OT only	.032	.225	.140	.017**	.178***	.098
D. AP and AF and eventually FT and/or OT	.006	.041	.150	.034***	.185***	.184
E. No program	.000	.105	.000	.000	.169***	.000
	With Elders			**Without Children and Elders**		
All the population group	.332***	.548***	.606***	.159***	.334***	.476***
A. AP and eventually FT and/or OT	.306***	.475***	.643***	.108***	.201***	.535***
B. FA and eventually FT and/or OT	.000***	.001***	.000***	.001***	.014***	.086
C. FT and/or OT only	.025	.069***	.362***	.050**	.118***	.428***
D. AP and FA and eventually FT and/or OT	.001***	.003***	.497***	.000***	.001***	.000***
E. No program	.000	.452***	.000	.000	.666***	.000

Note: $^{**}p < .05$; $^{***}p < .01$, where p is the p-value of the test (Ho) column indicator for row-group—column indicator households with children $= 0$.

equal to 14 percent, its efficacy for lifting out its beneficiaries from poverty is very similar to group B.

Keep in mind that households with children and elders perform rather similar to households with children. According to Table 4, this is the result of a more even distribution among programs, suggesting some heterogeneity within this population group. However, this is the group with the highest probability of receiving both pensions and family allowances.

Finally, households without children and elders have the lowest probability of coverage. Most of the beneficiaries are covered by the groups of programs A and C, each one with $P(E_{m,d}/C_i)$ equal to 53 and 43 percent.

Conclusions

Before fiscal policy, incidence and intensity of poverty are higher for households with children than for all the other types of households. On the other extreme, households without children and elders exhibit the lowest poverty rate. This picture justifies that the two main programs aimed at poverty alleviation are targeted to children (FA) and elders (AP).

The wide coverage of the Family Allowances program, plus the overrepresentation of children in the poor population, makes this program contribute considerably to lifting children out of poverty. However, the low ratio of transfers to market income ratio offsets the positive effect of coverage so that, in the end, the poverty exit rate is higher for the elders than for children. The transfers are not large enough for two reasons. First, as poverty is more intense among households with children, the amount required for being lifted out of poverty is higher than for households with elders. Second, given per capita income, the FA is much lower than the AP.

The benefit gap between programs is due to their basic different aims: AP gives support to the poor elders who do not have another source of income, whereas FA has multiple purposes (including encouraging education and health controls), and the transfer is conceived as an income complement. A correction to the unbalanced treatment of elders and children would require conceiving a transfer to poor children as a mechanism to alleviate their poverty, as it is the case of AP. However, this is not an easy task for a number of reasons.

One of the most quoted explanations of the public transfer gap between children and the elders, and its persistence, is that “children don’t vote.” Whereas the elders can pursue their interests and demand that politicians attend to their needs, children need the adults to act on behalf of them. This vulnerability would increase for children facing poverty.

A society with strong convictions about the need to overcome child poverty would give voice to demands for political changes. But this conviction seems to be limited: for example, FA raises concerns about undesirable effects (such as the discouragement of mothers, labor participation) or noncompliance of conditions (teens who abandon education), whereas AP is usually seen as a right of elders. Why is the extent of this conviction limited? The different historical length of the programs may contribute to explaining it. The long history of the AP helps the program to be an integral part of mature social policies, whereas the FA is a recent and still not well-established instrument.

A fiscal sustainability perspective also may help to explain the benefit gap between programs. The number of poor children and adolescents is much higher than the number of poor elders with no contributive pension. So, a simple accounting about the effect of an increase of FA benefit indicates the need of an important effort in terms of GDP. Thus, a modification would require a reallocation of resources in a country in which studies of public spending impact are really scarce.

In sum, there is not a anti-poverty program. Each program is assessed separately, so I finally observe that households in the same poverty conditions are less likely of being lifted out of poverty when they are composed by children rather than by elders.

Note

1. For method of estimation and definitions, see Lustig and Higgins (2013); for details of the application of the method to Uruguay, see Bucheli et al. (2012).

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