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# AN IN-DEPTH LOOK INTO INTERGENERATIONAL FLOWS

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**Abstract**

The goal of this paper is to carefully document the characteristics of within-family monetary transfers in the United States, using all nine waves of the *Health and Retirement Study* (HRS). Using the HRS, we construct a novel child-level longitudinal dataset and augment it with detailed information at the parent level. Consistent with previous studies, we document that intra-family transfers are significant in their incidence and magnitude and that, on average, they flow downward, from parents to children. Since we observe families for as long as 18 years, we are able to document new facts and establish a link between the early parental transfers and children's characteristics later in life. Among many facts we document, we find a strong incidence of parental transfers during child episodes of negative financial shocks, such as a job loss or divorce. We also find that children receiving larger transfers early in life are more likely to belong to a higher income class later. Parental giving is positively related to parental wealth, age, and liquidity, and children's permanent income, while it is related negatively to children's age and children's income category at the time of giving. We find that providing parents with help and attention is not a significant determinant of parental transfers overall. However, after conditioning on the parental decision to give to at least one child, levels of attention and help provided by a given child are important determinants of the relative (to one's siblings) parental transfers. Overall, we find that, independent of the motive for giving, parental transfers help improve children's welfare.

# 1 Introduction

The goal of this paper is to carefully document the life-cycle characteristics and the main determinants of within-family monetary transfers in the United States.

Most macroeconomic models have omitted within-family transfers from their consideration. However, incorporating those transfers into such models may be important for macroeconomic analysis. For instance, if these flows represent insurance against negative financial shocks or tight borrowing constraints, then their welfare implications may be extremely important when analyzing different social insurance policies. In addition, incorporating inter-vivos flows into models that study issues such as the effect of population aging on aggregate savings can be extremely important.[1] Further, intra-family transfers can also be an important determinant of the college entry decision and, therefore, relevant for the calibration of models that examine human capital accumulation decisions (e.g. Violante et al, 2010).

While development economists have widely accepted the role of families as risk-sharing units (e.g., Townsend 1994), most macroeconomists have not yet incorporated motives for inter-vivos transfers in their frameworks. An important reason for this is the lack of careful documentation of inter-vivos

[1] Weil (1994) estimates the response of consumption to inheritance (which is manifested in lower savings rates by the working age population in countries with older populations) and argues that it may be large enough to explain the puzzling empirical fact that countries with older populations tend to save less, while the micro evidence points to the lack of significant dissaving by the elderly. (Also see Bosworth et al. 2004).

flows, and hence the lack of understanding of how significant these flows may be. The latest paper to document the amounts of inter-vivos flows is McGarry (1999), which considers the first waves of Health and Retirement Study (HRS) and Asset and Health Dynamics of the Oldest-Old (AHEAD) — 1992 and 1993, respectively— and hence cannot exploit the cohort dimension. The statistics reported in that paper are still used in the calibration of models that do choose to explicitly incorporate the intra-family links. Since the first waves, eight more waves have become available, which allow us to follow individuals and their family and parent histories over time for as many as 18 years.

Thus, we construct a novel child-level longitudinal dataset. This dataset is based on HRS respondent-level and child-level files and the RAND dataset based on HRS respondent-level files. We then use this newly constructed dataset to document the descriptive statistics regarding the magnitude and direction of intergenerational flows.

Previous empirical studies (e.g., Gale and Scholtz 1994, and McGarry 1999) show that intergenerational transfer flows are substantial in size. For instance, McGarry (1999) reports that 29 percent of the households in the 1992 HRS sample made an annual cash transfer of more than $500 to at least one non-coresident child, with a mean transfer amount of $3,013.

Consistent with those previous studies, we document that intra-family transfers are significant in their incidence and that, on average, they flow downward, from parents to children. In each wave (every two years during the period 1992-2008), roughly 20 percent of non-coresident children received a transfer, the average amount of which was about $9,000. Moreover, 38

percent of households gave to at least one non-coresident child. The average total transfer amount (at parent household level) was about $14,600. The dollar amounts throughout the paper are stated in 2008 dollars.

Motives for giving are traditionally modeled as purely (or impurely) altruistic or as strategic. The latter motive refers to giving for the purpose of receiving attention from, or simply sharing risk with, another family member. The longitudinal dimension of our new child-level dataset allows us to further analyze the motives and the timing of intra-family transfers.

Consistent with previous studies, we document that intra-family transfers are significant in their incidence and that, on average, they flow downward, from parents to children. In each wave (every two years), roughly 20 percent of non-coresident children received a transfer, the average amount of which was about $9,000. Moreover, 38 percent of households gave to at least one non-coresident child an average total amount of about $14,600. Restricting our attention to families observed for at least 14 years in the sample, we document that 61 percent of non-coresident children received money from the parents over this period of time, with the average total transfer around $28,500.

We document several relationships of child-to-parent and parent-to-child transfer incidence and magnitude with child and parental household characteristics. We find that parents give more when children are younger, when presumably borrowing constraints are tighter and investment in human capital yield the largest return, and during periods of negative financial shocks, such as a job loss or a divorce. Children with lower income classes and higher permanent incomes are also more likely to get parental transfers. Wealthier

and older parents also tend to give more. All of these results are consistent with transfer flows generated by both altruistic and risk-sharing motives within families.

We find that providing parents with help and attention is not a significant determinant of parental transfers, which seems to go against the exchange motive of giving. However, when conditioning on the parental decision to give to at least one child, levels of attention and help provided by a given child are important in determining parental transfers relative to those received by his/her siblings. Conditional on the decision to give, parents also tend to give relatively more to their children with lower incomes and larger families.

We also establish a relationship between early parental transfers and child characteristics later in life. We find that early parental transfers are positively and significantly related with children's education and income class later in life. Income class or education level at adult age can be considered as proxies for child's permanent income. A positive relationship between permanent income and transfers received at young age is consistent with the predictions of both a model of transfers based on altruistic behavior and a model based on risk-sharing.[2]

Overall, our findings support the existence of within-family arrangements in which altruistic motives mix with risk-sharing interactions, rather than validate one framework at the expense of others. Although we find weaker support for the exchange motives at the aggregate level, we do find that,

[2] A positive relationship between the early parental transfers and child permanent income is also consistent with models of endogenous college entry. Early monetary transfers help the child during the human capital accumulation period, leading to higher education levels and income later in life.

after conditioning on parental decision to give and controlling for the relative incomes of children, parents tend to give relatively more to those of their children who provide them with relatively more attention, physical and monetary help.

In all, we find that, independent of the motive for giving, parental transfers significantly help improve children's welfare.

We organize the paper as follows. In Section 2, we describe different theories that give rise to intra-family transfers. In Section 3, we introduce the new dataset and then use it for our empirical analysis. In Section 4, we conclude.

# 2 Theoretical Background

Intergenerational flows can be intended and unintended. Accidental bequests (Yaari 1965) can arise due to the existence of uncertainty regarding the date of death in the presence of imperfections of annuities markets (inability to purchase actuarially fair assets that pay a certain income flow in case the owner is alive and zero otherwise). This creates a precautionary motive for accumulating wealth, with the buffer stock of wealth serving as insurance against running out of resources before dying. In the case of death, the unconsumed wealth is bequeathed. Theoretical papers that model accidental bequests include Attanasio and Hoynes (2000), Lleras-Muney (2005), and Gokhale et al. (1998). The prevalence of accidental bequests is already well documented. Hurd (1989) argues that accidental bequests are of substantial size. Hendricks (2002) finds accidental bequests to account for at least half

of the observed bequests.

In this paper we focus on entirely intended (i.e., voluntary) flows, and hence we do not discuss bequests. Inter-vivos transfers, all intended, can be of several types: purely or impurely altruistic, and strategic. A detailed discussion is helpful in order to guide us in our data analysis.

## 2.1 Altruistic framework

The altruistic motive is probably the most prominent in the literature of intrafamily transfers, dating to Becker (1974). Consider the following model of one parent and one child. The parent maximizes his utility, which includes the utility of his child weighted by $\alpha$. For simplicity, there is no borrowing or lending.

Both parent and child who overlap for $T$ periods face a random income process. Suppose one of the following events can be realized in any given date $s_t \in \{1, 2, ...S\}$, each occurring with probability $\pi(s_t)$, $\Sigma_s \pi(s_t) = 1$. We assume shocks are i.i.d. across time and denote by $s^t = (s_0, s_1, s_2, ..s_t)$ a summary of the realizations of events up to time $t$. The event probabilities and assumption of i.i.d. across time imply probabilities of different event histories $\pi(s^t)$. To be most general, income of agent $i$ at time $t$ depends on a given realization of events up to that time: $y_{pt}(s^t)$ and $y_{ct}(s^t)$. The aggregate income associated with a particular history is $Y_t(s^t) = y_{pt}(s^t) + y_{ct}(s^t)$.

$$[AM]: \quad \max_{\{c_{pt}(s^t), c_{kt}(s^t), T_t(s^t)\}_{s^t,t}} \sum_{t=0}^{T} \sum_{s^t} \beta^t \pi(s^t) \left[\ln\left(c_{pt}(s^t)\right) + \alpha \ln\left(c_{kt}(s^t)\right)\right]$$

$$\text{s.t. } c_{pt}(s^t) + T_t(s^t) = y_{pt}(s^t) \text{ for all } s^t \text{ and all } t$$

$$c_{kt}(s^t) = y_{kt}(s^t) + T_t(s^t) \text{ for all } s^t \text{ and all } t$$

Since the parent can choose a negative transfer, we want to make sure the child will not prefer autarky to this altruistic arrangement, i.e., that $\sum_{t=0}^{T}\sum_{s^t}\beta^t\pi\left(s^t\right)\ln\left(y_{kt}\left(s^t\right)+T_t\left(s^t\right)\right)$ implied by the parent's optimal choice is greater or equal to $\sum_{t=0}^{T}\sum_{s^t}\beta^t\ln\left(y_{kt}\left(s^t\right)\right)$.

The solution involves equalizing period marginal utilities for the parent and child, as well as setting the marginal rate of substitution of consumption across periods equal to the interest rate (i.e. consumption smoothing across time). In fact, with log utility assumed above, we will have,

$$\begin{aligned} c_{pt}\left(s^t\right) &= \frac{1}{1+\alpha}\left(y_{pt}\left(s^t\right)+y_{kt}\left(s^t\right)\right) \\ c_{kt}\left(s^t\right) &= \frac{\alpha}{1+\alpha}\left(y_{pt}\left(s^t\right)+y_{kt}\left(s^t\right)\right) \\ T_t\left(s^t\right) &= \frac{1}{1+\alpha}\left(\alpha y_{pt}\left(s^t\right)-y_{kt}\left(s^t\right)\right) \end{aligned} \tag{1}$$

Children will receive greater transfers in periods in which income realizations are low ($\frac{\partial T_t\left(s^t\right)}{\partial y_{kt}\left(s^t\right)}<0$). Parents will give more in periods in which their incomes are high ($\frac{\partial T_t\left(s^t\right)}{\partial y_{pt}\left(s^t\right)}>0$), in particular in periods in which their incomes are higher than their children.

The pure altruistic model has been rejected by several studies (e.g., Altonji et al. 1997) that tested its prediction regarding the irrelevance of income distribution for consumption distribution among members of the same family, in particular, that $\frac{\partial T}{\partial y_p}-\frac{\partial T}{\partial y_k}=1$. Several extensions of the pure altruistic models, though, can survive these empirical findings. McGarry (2000), for instance, in which parents may not have full information about their children's permanent incomes, represents one study that support the altruistic model.

The altruistic model can be extended to include several children, and

to introduce endogenous relationships between children permanent income and parental transfers received early in life. Early monetary transfers help the child during the human capital accumulation period, leading to higher education levels and income later in life. This mechanism predicts that larger transfers received by children early in life will be positively correlated with their permanent income.

In general, the altruistic motive would be supported if it were found empirically that parental support goes disproportionately to less well-off children and that support tends to occur earlier in life, when the children are liquidity constrained and will benefit from the transfer more. Note that an implicit risk-sharing effect naturally arises in the context of altruistic giving (Kotlikoff and Spivak 1981).

Finally, impurely altruistic transfers are motivated by the mere joy of giving.[3] If this motive were important, then the transfer flow should be independent of the recipient's income.

## 2.2 Strategic frameworks

The strategic framework assumes that, within a family, individuals make monetary transfers or materially help another individual with the selfish purpose of sharing risk or inducing certain actions.

### 2.2.1 Within-family risk-sharing

Parents and children can be linked through risk-sharing arrangements, other than altruism. They can exchange transfers in order to reciprocally insure

[3] See Andreoni (1989) for a detailed discussion of this framework.

themselves against health or income shocks. Kotlikoff and Spivak (1981) represent a seminal work describing how intra-family arrangements can substitute for imperfect annuity markets, even in the absence of altruistic behavior. As in insurance markets, families can set up contracts within their members that discipline risk-sharing arrangements. Presumably, insurance markets are plagued with enforceability and adverse selection issues. Differently from the case of market contracts, members of a family have more ways to enforce transactions and certainly have plenty of information about each other.

Consider the exact same environment as in the altruistic framework, except that the parent derives utility only from her own consumption. Each agent $i = p, k$ maximizes her own utility subject to his lifetime budget constraint:

$$[RSM]: \qquad \max_{\{c_{it}(s^t), T_t(s^t)\}} \sum_{t=0}^{T} \sum_{s^t} \pi\left(s^t\right) \beta^t u\left(c_{it}\left(s^t\right)\right)$$

$$\text{s.t.} \sum_{t=0}^{T} \sum_{s^t} p_t\left(s^t\right) c_{it}\left(s^t\right) = \sum_{t=0}^{T} \sum_{s^t} p_t\left(s^t\right) y_{it}\left(s^t\right)$$

Again, using log utility, we have:

$$\frac{\pi\left(s^t\right)\beta^t}{c_{it}\left(s^t\right)} = \lambda_i p_t\left(s^t\right) \text{ for all } t, \text{ and } s^t.$$

Hence

$$\frac{\pi\left(s^t\right) p_0\left(s_0\right)\beta^t}{\pi\left(s_0\right) p_t\left(s^t\right)} = \frac{c_{it}\left(s^t\right)}{c_{i0}\left(s_0\right)}. \tag{2}$$

This immediately implies that

$$\frac{c_{pt}\left(s^t\right)}{c_{kt}\left(s^t\right)} = \frac{c_{p0}\left(s_0\right)}{c_{k0}\left(s_0\right)}$$

i.e., the ratio of consumption between the two agents is constant over time and across state histories. Let $\theta_i$ denote the share of total family endowment

agent $i$ consumes, so

$$c_{it}\left(s^t\right) = \theta_i \left[y_{pt}\left(s^t\right) + y_{kt}\left(s^t\right)\right], \tag{3}$$

where, as derived in Appendix A,

$$\theta_i = \sum_{t=0}^{T} \sum_{s^t} \pi\left(s^t\right) \beta^t \frac{y_{it}\left(s^t\right)}{y_{pt}\left(s^t\right) + y_{kt}\left(s^t\right)} / \sum_{t=0}^{T} \beta^t.$$

In words, one's claim on total family income depends on the share of one's endowment evaluated at equilibrium prices. So, the richer child, in terms of expected income (permanent income), will always consume more.

Note that at the first glance, this risk-sharing model under perfect commitment predicts identical consumption and transfer allocations as in the case of the pure altruistic model. To see that, compare (3) with (1). We see that $\frac{\alpha}{1+\alpha}$ corresponds to $\theta_k$. The only difference is that $\theta_k$ depends on income flows, while in the altruistic model, $\frac{\alpha}{1+\alpha}$ is determined by the deep parameters of the model. Hence, for the risk-sharing model under perfect commitment, we derive that the optimal transfers from parent to child depend positively on the child's permanent income profile ($Y^k$), i.e. $\frac{\partial T_t\left(s^t\right)}{\partial Y^k} > 0$, where

$$Y^k = \sum_{t=0}^{T} \sum_{s^t} \pi\left(s^t\right) \beta^t y_{kt}\left(s^t\right).$$

If the implicit insurance motive is important, transfers of magnitude comparable to the income shocks faced by the agents should flow in both directions and will positively depend on the agents' permanent income.

As in the altruistic case, this framework can also be easily extended to include several children belonging to the same family pool, in which case each child will eat a fixed fraction of the total family endowment. The fraction

will depend on the value of their endowment relative to the value of the total family endowment. This model predicts that the relative lifetime net transfer, when comparing two siblings, will depend positively on the ratio of their permanent incomes, but negatively on the ratio of their current incomes.

Note that, in general, both altruistic motive and risk-sharing arrangements determine that transfers will flow toward children whenever there is an exogenous decrease in their income.

### 2.2.2 Beneficial exchange contracts

Transfer flows may also arise if parents value their children's attention and make transfers in order to induce it. To describe this framework, we assume for simplicity that children do not derive any utility from providing services of any kind to their parents. They consider the hours spent in providing attention to their parents, with visits or phone calls, very similar to the ones devoted to work in the market sector.

Let $a$ denote the total hours of attention the child provides to the parent. By providing attention, the child earns and the parent makes a transfer payment $\omega_a a$. Since the activity $a$ is similar to any market activity, in equilibrium, the earnings per hour of attention provided by a given child should equal his/her market hourly wage. This wage represents the opportunity cost for the child of diverting hours away from market work.

The parent solves the following problem:

$$\max_{c_{pt}(s^t),a_t(s^t)} \sum_{t=0}^{T} \sum_{s^t} \pi\left(s^t\right) \beta^t u\left(c_{pt}\left(s^t\right), a_t\left(s^t\right)\right)$$

$$\text{s.t. } \sum_{t=0}^{T} \sum_{s^t} p_t\left(s^t\right) c_{pt}\left(s^t\right) = \sum_{t=0}^{T} \sum_{s^t} \left(p_t\left(s^t\right) y_{pt}\left(s^t\right) - \omega_{at}\left(s^t\right) a_t\left(s^t\right)\right)$$

The interior solution must satisfy

$$\frac{\partial u\left(c_{pt}\left(s^t\right), a_t\left(s^t\right)\right)}{\partial c_{pt}\left(s^t\right)} \frac{\partial c_{pt}\left(s^t\right)}{\partial a_t\left(s^t\right)} + \frac{\partial u\left(c_{pt}\left(s^t\right), a_t\left(s^t\right)\right)}{\partial a_t\left(s^t\right)} = 0,$$

which will imply, assuming log-utility $\ln c_{pt}\left(s^t\right) + \phi \ln a_t\left(s^t\right)$, the optimal level of attention demanded by the parent:

$$a_t\left(s^t\right) = \frac{\phi}{1+\phi} \frac{y_{pt}\left(s^t\right)}{\omega_{at}\left(s^t\right)}$$

The level of attention will be positively related to the income of the parent and inversely related to the cost of attention, as perceived by the child, i.e., his/her market wage $\omega_{at}\left(s^t\right)$.

If this motive is important, then parental income and inter-vivos transfers to children should represent a principal determinant of children's attention. Although Bernheim et al. (1985) documents a statistically significant positive relationship between attention received and the amount of parental bequeathable wealth, Perozek (1998) claims that this relationship is not robust to including child and family characteristics in the specification, concluding that child characteristics play an important role in determining attention given to parents.

# 3 Data

The Health and Retirement Study (HRS) is a panel data of the lives of older Americans. It includes the original HRS survey of 7,703 households born from 1931 to 1941 conducted in 1992 and followed up on every two years since, and the Asset and Health Dynamics of the Oldest Old (AHEAD) survey of 6,046 households born in 1923 or earlier conducted in 1993 and 1995. These studies were merged in 1998 and expanded with two new cohorts, Children of the Depression (CODA) 1923-1930 cohort and War Babies (WB) 1942-47 cohort. Each cohort sample is representative when properly weighted. Data collection was repeated every two years and is ongoing.

The study contains detailed information on the demographics, health status, housing, family structure and transfer flows, employment status, work history and current employment, disability, retirement plans, wealth, wealth composition, income, and health and life insurance, and intended bequests. For the later waves, exit interviews also provide information on the actual bequests distributed. Table 1 summarizes the age distribution of the head of the household (respondent), by wave. We employ all nine available waves in our analysis.

Household-member- or child-level files (depending on the wave) contain information regarding children's characteristics, such as income, education, age, number of own children, frequency of contact with parents. Limited information is also available for children's spouses, such as their employment status.

Transfer (to) - level files contain information regarding monetary transfer flows from parents to children (or grandchildren). Transfer (from)- level

files contain information regarding monetary transfer flows from children to parents.

Finally, the helper-level files can be used to identify children (or grandchildren) providing physical help to the parents, or those paying a hired helper. In case, the child helps the parents, the frequency of help and amount, if any, compensated for the help are specified. We attribute transfers made to grandchildren to the corresponding child household (the grandchild's parent).

Most social scientists working with household-level HRS data employ the publicly available HRS dataset, compiled by RAND corporation from raw household-level files. This dataset is enriched with various imputations of household variables. The obvious advantage of using this dataset is that it makes the study comparable to other existing studies. Unfortunately, the RAND dataset does not include information regarding transfer flows or child-level information, imperative for our objectives. Hence, we use the raw HRS household-member (or child-) level, helper- level, and transfer- level files and merge them with the RAND dataset using the appropriate household and person identifiers.

We restrict our attention to respondent households that did not change their subhousehold ID throughout the period we examine. In other words, these are the households that did not split due to divorce in the period they were surveyed. By doing so, we eliminate only a very small fraction of the households, as the likelihood of divorce is relatively low at older ages. This restriction makes our analysis much more tractable, and less prone to mistakes.

## 3.1 Analysis using respondent-level pooled data

In this section, we use respondent-level pooled data to present general summary statistics on within-family transfer flows. We treat respondent household (respondent and spouse) in any given wave as a unit of observation. We investigate how often a given respondent household transfers to any of his or her children, how often it receives a transfer from any of the children, and how large these monetary flows are in magnitude.

Table 2 summarizes total household-level transfers by wave, 1992, 1994, ..., 2008. The question about transfers refers to the time elapsed between the waves, i.e., transfer amounts are specified for every two years. All dollar amounts are translated into 2008 dollars using the Consumer Price Index.

Roughly 38 percent of all households report giving a transfer to at least one child in every wave. On average, the total transfer (to all children) is around \$14,600, and translates into \$6,023 when it is divided by the number of children in the household. On average, 5.3 percent of households report receiving money from their children, and those who do, receive an average of about \$6,037. This is the total transfer amount received from all children. Adjusting by the number of children for each household reduces this average amount to \$2,219. Next, we examine transfer flows at a more disaggregated level.

In Figure 1, we plot transfer summary statistics, conditional on the respondent's age group (*ragegroup*). The age groups are defined on the basis of the age of the household head as follows: (1) <55, (2) 55-60, (3). 60-65, ...(8). 85-90. The left panel reports both the incidence of parental transfers to children (*hgave*) and the incidence of receiving a transfer from

any of the children (*hgot*). The right panel reports the average levels of the respondent's total (positive) transfers given to children (*htotaltrans*) and received from children (*htotalfctransfer*), and the average corresponding per child amounts (*htransper* and *hfctransferper*).

We observe that, with age, the households give less often to their children and receive financial help more often from their children. Transfer amount given to children and per child rises dramatically for 85-90 year olds relative to 80-85 year olds. This can be motivated by estate tax planning, if transfers are taxed at lower rates than estates bequeathed after death. The amount the household receives from children, both total and per child, does not seem to increase much with age, or at least it seems to increase less than the probability of receiving transfers from children.

Figure 2 displays transfer summary statistics conditional on the decile of households' total income (*hitot*). Variable definitions are the same as those used in Figure 1.

Incidence of receiving a transfer by the respondent household declines with this household's income, while the incidence of giving a transfer to children increases with the household's income. Interestingly, however, the amount of transfers to children increases the greatest when moving from the $9^{th}$ to the $10^{th}$ decile of income, suggesting that people at the very top of the income distribution behave very differently: these households give much more, but do not receive more. Again, the estate tax considerations could play an important role here.

Figure 3 plots transfer summary statistics conditional on the number of children (*hnchildren*). Variable definitions are the same as those used in

Figures 1 and 2.

As the number of children increases, fewer households report giving a transfer to any of their children. This is despite the increased number of potential recipients. Also, the probability of receiving a transfer from any of the children is roughly independent of the number of children (It increases very slightly in the number of children). Total transfer to children slightly declines with the number of children, and the transfer per child declines even more rapidly with the number of children.

## 3.2 Analysis using child-level data

In this section, we use our newly constructed longitudinal child-level dataset to study the magnitude, directions and determinants of intra-family transfers. The child-level dimension allows us to report summary statistics conditional on child characteristics. For the summary statistics below, we treat a child in a given wave as a unit of observation, effectively pooling child-level data across all waves.

### 3.2.1 Summary statistics

Table 3 reports summary statistics of child-level transfers by wave, 1992, 1994, . . . 2008. All dollar amounts are quoted in 2000 dollars and transfer amounts refer to the period elapsed since the previous wave.

The table reveals that transfer flows from parents to children are substantial in size. Every wave, approximately 20 percent of children receive a transfer in the period elapsed since the previous wave. The average amount of positive transfers is $9,094. The summary statistics also display that very

few children, only around 3 percent, help their parents with their daily tasks. Only 4.6 percent of helping children get paid for this help. In other words, children receive substantial amounts of money from the parents despite the fact they do not help.

Table 3 also reveals that only 2.6 percent of children in our full dataset gave money to their parents. Those who did paid, on average, $4,020, or less than half the size of the average parent-to-child transfer. The incidence of parent-to-child transfer is 7.4 times greater (0.1927/0.026) than the incidence of the child-to-parent transfer. Finally, we do not observe any detectable trend in the transfer incidence or size over time, even though the mean child age changes from 29 to 44 as the respondents age.

Table 4 reports transfer statistics by child age group for all waves compiled together.

The probability of receiving a transfer declines with age, in a convex-like manner, with transfer incidence dropping quickly at early ages, and slowly for older ages. This evidence is consistent with transfers being aimed at helping children in investing in education or in lifting off tighter liquidity constraints, both of which children face early in their lifecycle. If we report the same statistics but for strictly non-student children, the incidence of transfers by age groups looks very similar, except the amount for the youngest group is about $3,000 less, while the incidence for that group is lower by about 3 percent.

Figure 4 reports transfer incidence by the child household's income. Child household's income is reported in income categories that are available only in current dollars. The income categories are: <10,000, 10,000-35,000, 35,000-

70,000, >70,000. Only for wave 3 (1995-1996), we also have information on the actual child income for almost all children in the sample. We report both the incidence of receiving a parental transfer (*cgottransfer*) and the incidence of making a transfer to parents (*cgavetransfer*), by the child household's income category (*cinccat*). For comparability across waves, we must consider waves 3 and above only. Thus, to report summary statistics by child household's income category, we pool waves 3 and above together.

The two panels on the left reveal that the probability of getting a transfer from the parents declines with the child's income category. The probability of giving to one's parents rises only very slightly with the child's income class. The incidence of transfer received and the average amount of these transfers drops most significantly when children move from the first income class to the second. The two panels on the right give the same graphs except the dataset is restricted to non-student children. Similar patterns emerge, but the probability of receiving a transfer and its average amount, conditional on receipt, are much lower for the first income category, into which most students would fall. Transfer amounts that non-student children give to parents are greater by roughly $1,000, although giving incidence is very similar.

An interesting pattern emerges for the parent-to-child transfers when comparing income categories 2, 3, and 4: although the incidence of receiving a parental transfer declines, the amount of transfer, conditional on receipt, increases with the child's income category. It is possible that this pattern is driven by the risk-sharing arrangement discussed in Section 2. When a negative financial shock hits a child family in the highest income category, which can proxy for the permanent income, the amount of payment that a

risk-sharing contract would specify would also be the largest.

Figure 5 displays transfer statistics, conditional on the decile of parental wealth-per-child (*hatot*). We exclude wave 3 from the analysis as no information on parental assets is available in that wave. We report the incidence of the parental transfers to children (*cgottransfer*), the incidence of the transfers made by children (*cgavetransfer*) and the corresponding average amounts of these transfers (*ctransfer*, and *cfctransfer*), by the parents' wealth per child.

The incidence of receiving a transfer from parents increases considerably with parental wealth, while the incidence of giving a transfer to parents decreases with parental wealth. The asset value of the top decile is significantly greater than the value of the assets in the second decile, consistent with the large wealth inequality present in the United States. This observation may explain why the probability of giving a child a transfer and its average amount rises most sharply as we move from the $9^{th}$ to the $10^{th}$ (top) decile of parental wealth. If we exclude households in the top $100^{th}$ percentile of the wealth distribution, the amount the wealthiest decile receives does not change much, but the amount they give drops by a significant amount, to \$13,000. In other words, while the most wealthy do not receive more from each child, then do give significantly more to their children.

Finally, Table 5 reports even more detailed statistics. We broke our observations into smaller groups by child age group and income interval.

We observe that the aggregate patterns by age and by income reported earlier still hold for these disaggregated groups.

### 3.2.2 Determinants of parental transfers

In this section, we investigate how some of the transfer patterns reported in the previous section are determined. We focus on parental transfers to children, since the summary statistics in the previous sections clearly indicate that the parent-to-child transfers are much more significant in incidence and magnitude, relative to the child-to-parent transfers. To see how giving to children depends on children's income and parental income or wealth, we need to control for many individual characteristics.

We estimate the following logit equation on child-level data across all waves:

$$T_{i,t} > 0 \text{ if } \beta_0 + \beta_1^{'} Z_{i,t}^k + \beta_1 I_{divorce,t}^k + \beta_2 I_{unemp,t}^k + \beta_3^{'} Z_{i,t}^p + \varepsilon_{i,t} > 0, \qquad (4)$$

where $T_i$ denotes the transfer received by the child, $Z_{it}^k$ is a vector of child's characteristics (e.g., income category, age, sex, education, marital status), $Z_i^p$ : vector of parents' characteristics (e.g., household income, household wealth per child, age, health status, education), $I_{divorce}^k$ indicates that the child divorced since the previous wave, and $I_{unempl}^k$ indicates that the child changed employment status from full time employment to not working. The data does not allow us to distinguish between movement into unemployment or out of labor force, however, both imply a drop in income. The motivation for the inclusion of the divorce and unemployment indicators, which stand for negative income shocks, come from the altruistic and the risk-sharing model discussed in Section 2. Both models predict that $\beta_1$,$\beta_2 > 0$.

Table 6 reports the results of the estimation of equation 4 under four specifications. In specifications 2, 3, and 4, we include the children's family

income category. Hence, to estimate these specifications, we do not use the observations from waves 1 and 2, as income categories are not comparable to the ones used in the later waves.

As reviewed in the theoretical background section, some conceptual frameworks lead to empirical specifications in which some variables are endogenous predictor of the parental transfers. For example, if transfers are generated by exchange motives and the parents make a transfer as a payment for child's attention (e.g., phone calls or material help) those variables included in the equations as predictors are endogenous. Since children attentions can be determined simultaneously to the parent decision of making a transfer we control for the endogeneity by using a fixed-effect empirical (logit) specification and lagged values of variables used as proxies for children attention toward parents. Household fixed-effects control for any omitted household-level variables that could be correlated with children attention. The lagged values of the variables used as proxies for children informal care toward the parents (phone calls and material help) control for the simultaneity of parent-children decisions, in the specifications where those variables are used as predictors.[4]

The regressors used in the most detailed specification are: the child's age group as defined in the construction of Figure 4 (*cagegroup*), an indicator that the child is a female (*cfemale*), an indicator that the child is a step child (*cstepchild*), an indicator that the child is a student (*cstudent*), an indicator that the child is married (*cmarried*), the child's number of children (*cnchildren*), the respondent's (parent's) (*rage*), an indicator that the parent is married (*rmarried*), the respondent years of education (*reducation*), the

[4] Our approach follows Norton and Van Houtven (2006).

respondent household's total assets (*hatot*), the fraction of those assets that are liquid, defined as financial assets/total wealth (*hfrliquid*), the parent household's earnings (*hearnings*), the child income category as previously defined (*cinccat*), an indicator that the child got divorced since the last wave (*cdivorced*), an indicator that the child lost a job since the last wave (*clostjob*), a lagged indicator that the child helps the parents in the previous wave (*lag_ chelper*), and finally, the number of times the child contacted the parents per week in the previous wave (*lag_ cncontacts*).

Some of the relationships highlighted by the summary statistics are confirmed. The probability of receiving a transfer decreases with the child's age and current income category (which is informative of the child's current liquidity needs). This probability is also lower for stepchildren and married children. The probability of receiving a transfer is higher for students and females. This probability increases with the number of children's children, parental age, parental household's wealth, and liquidity of parental wealth. Even after controlling for income and other characteristics, child age is an important determinant of receiving a transfer, consistent with the hypothesis that transfers are aimed at human capital accumulation, which yields highest returns if pursued at younger ages.

Negative financial shocks in the previous two years, such as a divorce or a job loss, increase the probability of transfer receipt. Both coefficients are positive and significant. This finding, together with the estimated dependence of transfer incidence on the child's income and parental income and wealth variables, are consistent with both the altruistic and risk-sharing, arrangements within families, laid out in Section 2.

Importantly, we find that the coefficents on the frequency of contacting one's parents and on the indicator that the child helped during the previous survey period are not statistically significant. These latter findings fail to provide empirical support for the exchange framework that predicts that attention or physical help exerted by children should correlate positively with the monetary transfers they receive. This result is in line with those derived in Perozek (1998).

## 3.3 Analysis using child-level "life-cycle" data

The advantage of our child-level panel dataset is that we observe families over a long period of time. Observing long histories can help document additional facts regarding intrafamily flows. For example, we can document the relationship between transfers received early in life and children's characteristics later in life, such as their income class and schooling attainment.

In general, the panel dimension allows us to examine the dependence of family transfers history on the family's history of events and child/parent characteristics. Considering the entire history is much more informative for the analysis of the parental giving behavior, especially in light of the lumpy nature of transfers. In certain waves, for example, poor children may receive nothing because they were given a large transfer in the previous wave. A job loss may not necessitate a parental transfer immediately, but only after the child runs out of savings after a long period of unemployment. Analysis using pooled data will not pick up these relationships.

Finally, considering a long period of history of family transfers is crucial for the analysis of relative giving to different children. The panel dimension

allows you to examine, for example, whether children who received more parental help in the past are also more likely to take care of their frail parent or pay for the caregiver.

### 3.3.1 Early transfers

In this section, we summarize transfer incidence histories by child's income in the last wave (wave 9). These summary statistics allow us to observe the relationship between the early parental transfers and child characteristics later in life. We use the child's income category in the last wave as a proxy for the child's permanent income. Alternatively, we could use educational attainment as a proxy for permanent income. To derive this summary statistics, we restrict our attention to households with children who were interviewed in at least 7 waves and that appear in the last wave. We construct a life transfer variable by summing over all (including zero) transfers from waves 1, 2, 8. Note the transfer from wave 9 is not included.

In Table 7, we report transfer incidence in each wave by the child's income category in the last wave. Considering the entire transfer history reveals an even more significant presence of parental transfers: 61 percent of all children received a transfer at some point over the period we observe them (14-18 years). This is in contrast to roughly 20 percent of children receiving a transfer in each given wave, reported earlier.

In Table 8, we report the average transfer amounts among the positive transfers. These average amounts correspond to transfer incidence reported in Table 7.

Consistent with both the purely altruistic and risk-sharing family arrange-

ments, the summary statistics show that the amount received by the child at the early stages of the lifecycle (wave 1) is positively associated with his/her permanent income (income category in wave 9). It is likely that this association is observed because the early parental transfers are aimed at human capital investments. Later transfers (e.g., transfer incidence in wave 9) are negatively related to the child income category, consistent with our earlier findings following the analysis of pooled data: contemporaneous parental transfers negatively associated with the child income, i.e., transfers flow to children with greater liquidity needs.

Table 9 reports the results of a linear regressions of the child educational attainment as recorded in wave 9 (*ceducation9*) on the early transfer receipts (those reported in wave 1, *cgottransfer1*) . The educational attainment in the last wave is used as proxies for the child's permanent income. In the same specification, we also control for the main child and family characteristics: an that indicator that the child is a female (*cfemale*), the household total number of children (*hnchildren*), the parental educational attainement (*reducation*), an indicator that the child is jobless during the last wave (*clostjob9*), an indicator that the child is married (*cmarried9*), an indicator the the child has more children than in wave 1 (*cnchildren_more*), and an indicator that the child is a student (*cstudent9*). In particular, we include the parental educational attainment under the assumption that if parents have a higher degree they will encourage their children to study more.

The results show that early transfers (see e.g., transfer incidence in wave 1) are positively and significantly related to the child's education level later in life. These characteristics can be considered as a proxy for the child's

permanent income profile. This result is consistent with previous findings (e.g., Cox 1990).

The positive relationship between transfers received early in life and the permanent income is consistent with both models of altruism (McGarry, 1999) and models of strategic interaction between family members, as showed in Section 2. The relationship, already explored in some of the summary statistics, also points to the fact that early transfers may be an important determinant of permanent income if these transfers are aimed at increasing investment in schooling, thereby increasing the child's earning ability. It would be useful to extend the models sketched in Section 2 to endogenize the permanent income profiles by introducing its dependence on the early parental transfers.

In the same Table 9 we also test the relationship between the early transfer incidence (*cgottransfer1*) and an indicator of having more children (relative to those recorded in wave 1) later in life (*cnchildren_more*) through a probit regression, controlling for the variables defined above. Parental transfers received when young are correlated with larger families later in life and a likely greater total household consumption.[5]

In all, independently of the motive for transfers, early parental transfers are correlated with higher levels of the child household's welfare.

[5] We also test the reverse, that is, whether having received a transfer at a young age increases the likelihood of a larger family later in life. The results are available from the authors upon request.

### 3.3.2 Transfer histories

In this section, we investigate the determinants of the total parental transfer flow over a relatively long period of child's life (14 to 18 years depending on a child-parent pair). We also examine the determinants of the relative magnitude of transfers to different children who share the same parents. For the analysis in this section, the lifetime parental transfer refers to the sum of transfers over all waves. We also construct variables summarizing other relevant features of children's history, such as indicators of having experienced a divorce or a job loss at any point in time over the period observed. We also construct variables that summarize the number of periods the child was married over the period observed and the number of periods the child was a student.

Table 10 reports our estimates for the linear regression that regresses the amount of lifetime transfer on the main child characteristics, already explored in previous sections. We use schooling years as of wave 9 (*ceducation9*) as a measure of permanent income. We also include as explanatory variables the total amount of child-to-parent transfers made during the entire period observed (*cfctransfer*), an indicator variable that captures whether the child ever helped the parent during the period observed (*ceverhelper*) and the total number of contacts the child had with the parent household during the entire period (*ctotcontact*).[6] By including these variables, we control for the "reciprocity" effect: parental giving could simply represent payments

[6] We assume that using the entire infomation contained in the whole nine waves about children helping parents or about the frequency of their contacts with parents will make the analysis less sensitive to simulaneity issues.

for the previously received gifts, physical help, or attention. The presence of monetary flows in both directions would also signal the presence of risk-sharing arrangements within families. If there are implicit contracts that incentive children to provide help and attention to their parents, service flows may occur in periods different from payments that induce them. So, the entire sample period perspective helps us identify the presence of this relationship.

We find that the coefficients on children's giving and levels of attention and physical help are not significant. This shows that there was no relationship between the level of parental transfers and children's services or giving, which seemes to contradict the hypothesis that parents made financial transfers following some form of a strategic agreement.

The main parental household characteristics, such as the average wealth-per-child (*avghwlthperchild*), and the household number of children (*hnchildren*) are significant. We also control for the average health status of the parent during the whole sample period (*avgrhealth*) to capture the fact that child transfers or attention can be related positively to the average level of good health of the parent and to the need of resources for medical expenses or child attention. This corresponding coefficient is not significant. Some child characteristics, such as the child total periods of marriage (*ctotperdmarried*) and the indicator that the child ever lost a job in the sample period (*ceverlostjob*), are significant and of the same sign as reported for similar variables in the previous sections.

We finally use the entire transfer history and information during the 18 years of the sample to investigate why parents may make larger transfers

to some of their children relative to others. We restrict our attention to households ever (in the period observed) giving a transfer to at least one child. For each child belonging to the same household, we construct a measure of total parental transfers during the entire period observed relative to the average parental transfer per child in that family (*ctransfer_rel*). We control for each given child behavior toward the parent relative to his or her siblings. We also control for the main child characteristics. This analysis enables us to study whether, conditional on the decision of the parent to give to a certain child, the parent's relative transfer to that child is motivated by this child's historical behavior (or experience) relative to those of his/her siblings. Higher levels of attention or physical help that a particular child provides relative to the average behavior of his siblings might induce a greater parental transfer. Table 11 reports the obtained estimates resulting from regressing the relative lifetime transfer amount on different parental and child characteristics.

We find that many of the family characteristics that are related to the absolute level of parental transfers to children, as found above, are not significant determinants of relative transfers (within families). For example, neither the average parental wealth-per-child (*avghwlthperchild*) nor the indicator that the wealth is liquid (*hfrliquid*) are significant. The coefficient on the parental birth cohort (*rbirth*) is also not significant.

The coefficient of most of the child characteristics are significant, except for the ones of the indicator variable that the child is female (*cfemale*), the total number of periods that the child was married (*cperdmarried*) and the indicator variable that the child is a stepchild (*cstepchild*). Conditional on the decision to give, parents tend to give relatively more to their children

with lower incomes. The coefficient of the child income category relative to that of his or her siblings ($cinccat\_rel$) is negative and significant. Parents also tend to make higher relative transfers to children with larger families ($cnchildren\_rel$).[7]

Controlling for the relative incomes of children, parents tend to give relatively more to those of their children who provide them with relatively more attention, physical and monetary help. The coefficients on the measure of relative attention ($ccontact\_rel$) and relative frequency of physical help ($chelper\_rel$) are both significant, while the coefficient on the child monetary transfer to the parent (relative to that of their siblings) is not significant.

Our findings confirm that parental transfers help improve children's welfare. While variables that proxy levels of attention and help that the child provides to the parent have no significant effect on the absolute decision of parents to give, they appear to significantly affect how much parents transfer to a child relative to his or her siblings. In all, our findings support the existence of within-family arrangements in which altruistic behaviors mix with strategic interactions rather than validate one framework at the expense of the other.

[7]In this case as already mentioned, we assume that the using long histories of children attentions towards the parents would help controlling for endogeneity issues. We also ran a fixed-effect linear regression with relative transfers as a dependent variable and we use lagged values for the proxies of children informal cares. The results confirm those in the main text and are available from the author.

# 4 Conclusions

The goal of this study is to extensively characterize intergenerational flows in the United States. To this aim, we construct a novel child-level longitudinal dataset based on the Health and Retirement Study (HRS) files at respondent level, at transfer from and to levels, and household member level.

Consistent with previous studies, we document that intra-family transfers are significant in their incidence and that, on average, they flow downward, from parents to children. In each wave (every two years), roughly 20 percent of non-coresident children received a transfer, the average amount of which was about $9,000. Moreover, 38 percent of households gave to at least one non-coresident child an average total amount of about $14,600. Restricting our attention to families observed for at least 14 years in the sample, we document that 61percent of non-coresident children received money from the parents over this period of time, with the average total transfer around $28,500.

We document several relationships of child-to-parent and parent-to-child transfer incidence and magnitude with child and parental household characteristics.

We also estimate several empirical models. We find that parents give more when children are younger, when presumably borrowing constraints are tighter and investment in human capital yield the largest return, and during periods of negative financial shocks, such as a job loss or a divorce. Children with lower income classes and higher permanent incomes are also more likely to get parental transfers. Wealthier and older parents also tend to give more. All of these results are consistent with transfer flows generated

by both altruistic and risk-sharing motives within families.

We find that providing parents with help and attention is not a significant determinant of parental transfers, which seems to go against the strategic motive of giving. However, when conditioning on the parental decision to give to at least one child, levels of attention and help provided by a given child are important in determining parental transfers relative to those received by his/her siblings. Conditional on the decision to give, parents also tend to give relatively more to their children with lower incomes and larger families.

Overall, our findings support the existence of within-family arrangements in which altruistic motives mix with risk-sharing interactions, rather than validate one framework at the expense of others. Although we find weaker support for the exchange motives at the aggregate level, we do find that, after conditioning on parental decision to give and controlling for the relative incomes of children, parents tend to give relatively more to those of their children who provide them with relatively more attention, physical and monetary help.

In all, we find that, independently of the motive for giving, parental transfers significantly help improve their children's welfare.

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# Appendix A

## Within-family risk-sharing: The determination of $\theta$

Let $\theta_i$ denote the share of total family endowment agent $i$ consumes, so

$$c_{it}\left(s^t\right) = \theta_i Y_t\left(s^t\right).$$

Substituting this into (2) gives equilibrium prices.

$$\begin{aligned}
\frac{\pi\left(s^t\right)p_0\left(s_0\right)\beta^t}{\pi\left(s_0\right)p_t\left(s^t\right)} &= \frac{\theta_i Y_t\left(s^t\right)}{\theta_i Y_0\left(s_0\right)}, \text{ i.e.} \\
\frac{\pi\left(s^t\right)\beta^t Y_0\left(s_0\right)}{\pi\left(s_0\right)Y_t\left(s^t\right)} &= p_t\left(s^t\right),
\end{aligned}$$

where we normalized $p_0\left(s_0\right) = 1$.

Then substituting for $p_t\left(s^t\right)$ into the agent $i$'s budget constraint and using our previous result that $c_{it}\left(s^t\right) = \theta_i Y_t\left(s^t\right)$ we have:

$$\begin{aligned}
\sum_{t=0}^{T}\sum_{s^t}\frac{\pi\left(s^t\right)\beta^t Y_0\left(s_0\right)}{\pi\left(s_0\right)Y_t\left(s^t\right)}c_{it}\left(s^t\right) &= \sum_{t=0}^{T}\sum_{s^t}\frac{\pi\left(s^t\right)\beta^t Y_0\left(s_0\right)}{\pi\left(s_0\right)Y_t\left(s^t\right)}y_{it}\left(s^t\right) \\
\sum_{t=0}^{T}\sum_{s^t}\pi\left(s^t\right)\beta^t\frac{c_{it}\left(s^t\right)}{Y_t\left(s^t\right)} &= \sum_{t=0}^{T}\sum_{s^t}\frac{\pi\left(s^t\right)\beta^t}{Y_t\left(s^t\right)}y_{it}\left(s^t\right) \\
\theta_i\sum_{t=0}^{T}\sum_{s^t}\pi\left(s^t\right)\beta^t &= \sum_{t=0}^{T}\sum_{s^t}\pi\left(s^t\right)\beta^t\frac{y_{it}\left(s^t\right)}{Y_t\left(s^t\right)} \\
\theta_i &= \sum_{t=0}^{T}\sum_{s^t}\pi\left(s^t\right)\beta^t\frac{y_{it}\left(s^t\right)}{Y_t\left(s^t\right)}\Big/\sum_{t=0}^{T}\beta^t
\end{aligned}$$

**Table 1: Age Distribution of Respondents (Parents) in HRS by Cohort and Wave**

| Cohort | 1992 | 1994/93 | 1996/95 | 1998 | 2000 | 2002 | 2004 | 2006 | 2008 |
|---|---|---|---|---|---|---|---|---|---|
| Early Baby Boomers | | | | | | | 51-56 | 52-58 | 54-60 |
| War Babies | | | | 51-56 | 53-58 | 55-60 | 57-62 | 59-64 | 61-66 |
| Original HRS | 51-61 | 53-63 | 55-65 | 57-67 | 59-69 | 61-71 | 63-73 | 65-75 | 67-77 |
| Children of Depression | | | | 68-74 | 70-76 | 72-78 | 74-80 | 76-82 | 78-84 |
| AHEAD | | >69 (93) | >71 (95) | >74 | >76 | >78 | >80 | >82 | >84 |
| HRS spouses of AHEAD age | | >69 (93) | >71 (95) | >74 | >76 | >78 | >80 | >82 | >84 |

**Table 2: Household-level Transfers**

| wave | Fraction of households giving to children | Average transfer to (all) children | Fraction of households receiving from children | Avg. transfer received from (all) children | Avg. transfer to (all) children per child | Avg. transfer received from (all) children per child |
|---|---|---|---|---|---|---|
| 1 | .392629 | 11180.48 | . | . | 4314.138 | . |
| 2 | .3880066 | 15360.39 | .0322843 | 5093.682 | 6029.977 | 1774.911 |
| 3 | .4177242 | 17610.61 | .0839985 | 3926.988 | 6749.525 | 1492.306 |
| 4 | .3621876 | 13938.12 | .0440931 | 9098.523 | 5886.635 | 3344.031 |
| 5 | .3690406 | 13827.2 | .0479302 | 10423.96 | 5426.308 | 3765.111 |
| 6 | .3512797 | 16628.25 | .0541402 | 6995.06 | 7000.833 | 2622.805 |
| 7 | .4043091 | 13478.65 | .0525856 | 5398.398 | 5611.399 | 1896.622 |
| 8 | .3896649 | 14425.34 | .0517384 | 4376.309 | 6141.536 | 1619.735 |
| 9 | .3771657 | 14492.79 | .0579997 | 4411.977 | 6307.38 | 1691.033 |
| **Total** | **.3824052** | **14642.06** | **.0528043** | **6037.805** | **6023.405** | **2218.482** |

**Table 3: Inter Vivos Flows by Wave**

| wave | Fraction of Children Receiving | Average Parent-Child Transfer | Fraction Helping Parents | Fraction of Helpers Paid | Avg. Amt. of Helpers' Pay | Fraction of Children Giving | Average Child-Parent Transfer |
|---|---|---|---|---|---|---|---|
| 1 | .1760684 | 7350.745 | . | . | . | . | . |
| 2 | .1930186 | 9301.964 | .0208263 | .0552281 | 668.4986 | .0297856 | 3089.35 |
| 3 | .2209453 | 10158.05 | .0352338 | .0361551 | 244.2857 | .0457962 | 2170.406 |
| 4 | .1838481 | 8518.936 | .0330478 | .0404301 | 222.5286 | .0200014 | 6106.781 |
| 5 | .1819436 | 8651.137 | .0293938 | .0421965 | 918.6824 | .0220453 | 6993.26 |
| 6 | .1722218 | 10603 | .0329842 | .037379 | 482.2536 | .0240574 | 4879.711 |
| 7 | .2081964 | 8409.107 | .0303813 | .0556723 | 599.1347 | .0253261 | 3619.032 |
| 8 | .201492 | 9006.668 | .035393 | .0462315 | 430.4274 | .0224247 | 3247.98 |
| 9 | .1896411 | 9270.451 | .0330264 | .0525938 | 335.9629 | .0260058 | 3211.031 |
| **Avg.** | **.1927277** | **9093.601** | **.0315419** | **.0455206** | **474.5498** | **.0259918** | **4020.835** |

**Table 4: Inter Vivos Flows by Child Age, All Waves**

| **Age group of child** | **Fraction of Children Receiving Transfers** | **Avg. Parent-Child Transfer** | **Fraction of Children Giving to Parents** | **Avg. Child-Parent Transfer** |
|---|---|---|---|---|
| 18-25 | .3989046 | 10851.68 | .0163964 | 4449.828 |
| 25-30 | .2550643 | 7049.857 | .0222289 | 4086.511 |
| 30-35 | .1870772 | 7514.641 | .0229474 | 4456.213 |
| 35-40 | .1584609 | 7767.07 | .0234793 | 3847.368 |
| 40-45 | .146186 | 9037.354 | .0256099 | 3828.29 |
| 45-50 | .1430424 | 9606.505 | .0293714 | 3959.375 |
| 50-55 | .1378063 | 10023.48 | .0336873 | 3552.237 |
| 55-60 | .1152144 | 12779.79 | .0396936 | 3859.78 |
| 60-65 | .1050716 | 18583.56 | .0436422 | 4443.535 |
| 65+ | .0776824 | 14228.89 | .0512974 | 4543.731 |
| **Average** | **.1927277** | **9093.601** | **.0259918** | **4020.835** |

**Table 5: Transfers by child age and income, waves 3, 4. . . 9 pooled**

| **Child income** | **<10000** | | **10000-35000** | | **35000-70000** | | **70000+** | |
|---|---|---|---|---|---|---|---|---|
| **Age group of child** | **Fraction of Children Receiving Transfers** | **Average Parent-Child Transfer Amount** | **Fraction of Children Receiving Transfers** | **Average Parent-Child Transfer Amount** | **Fraction of Children Receiving Transfers** | **Average Parent-Child Transfer Amount** | **Fraction of Children Receiving Transfers** | **Average Parent-Child Transfer Amount** |
| 18-25 | .5537404 | 14855.14 | .4492588 | 6765.096 | .3957635 | 7658.465 | .3296736 | 12469 |
| 25-30 | .354071 | 7272.623 | .3441826 | 7617.85 | .2722629 | 6483.998 | .2379063 | 8062.046 |
| 30-35 | .2295632 | 5954.134 | .2443064 | 5361.233 | .2195844 | 6645.141 | .1858634 | 16051.97 |
| 35-40 | .1933839 | 6723.969 | .2111442 | 5433.753 | .2068852 | 8135.865 | .1632269 | 11783.6 |
| 40-45 | .1830318 | 7042.281 | .1942302 | 7024.164 | .1909783 | 9147.496 | .1603316 | 13416.35 |
| 45-50 | .1581902 | 6908.512 | .187101 | 7761.169 | .1890344 | 10017.08 | .166805 | 11882.2 |
| 50-55 | .1686469 | 5509.613 | .1845279 | 7728.731 | .1770133 | 8700.752 | .1684865 | 14857.86 |
| 55-60 | .1315937 | 7159.687 | .1851439 | 11091.73 | .1447856 | 12053.83 | .1444423 | 28830.56 |
| 60-65 | .1490744 | 10835.98 | .131384 | 8876.917 | .1173043 | 8060.719 | .1719186 | 54125.85 |
| 65+ | .1227064 | 11603.42 | .1110411 | 9245.218 | .093929 | 27258.15 | .1094704 | 6037.065 |
| **Average** | .3526195 | 11822.48 | .2651443 | 6811.442 | .2117996 | 8103.44 | .1732837 | 14435.11 |

| Table 6: Logit Fixed-Effect (Robust standard errors in parentheses ) | | | | |
|---|---|---|---|---|
| *** p<0.01, ** p<0.05, * p<0.1 | | | | |
| | (1) | (2) | (3) | (4) |
| VARIABLE | cgottransfer | cgottransfer | cgottransfer | cgottransfer |
| cagegroup | -0.319826*** | -0.269580*** | -0.271171*** | -0.307727*** |
| | (0.008709) | (0.014284) | (0.014292) | (0.025516) |
| cfemale | 0.170228*** | 0.181706*** | 0.176061*** | 0.165431*** |
| | (0.017139) | (0.027585) | (0.027607) | (0.049278) |
| cstepchild | -0.734209*** | -0.657004*** | -0.654955*** | -0.665478*** |
| | (0.033824) | (0.059588) | (0.059619) | (0.107019) |
| cstudent | 0.191847*** | 0.343189*** | 0.345479*** | 0.351225*** |
| | (0.022282) | (0.044698) | (0.044691) | (0.082359) |
| cmarried | -0.618020*** | -0.207675*** | -0.171662*** | -0.186443*** |
| | (0.018461) | (0.034333) | (0.035711) | (0.063292) |
| cnchildren | 0.128021*** | 0.155090*** | 0.151024*** | 0.173367*** |
| | (0.006647) | (0.010923) | (0.010984) | (0.019532) |
| rage | 0.014230*** | 0.014364*** | 0.013700*** | 0.019642** |
| | (0.002261) | (0.004580) | (0.004586) | (0.008306) |
| rmarried | -0.249145*** | -0.423385*** | -0.426610*** | -0.515812*** |
| | (0.034688) | (0.067469) | (0.067502) | (0.120692) |
| hatot | 2.73E-08*** | 2.14E-08 | 2.10E-08 | 2.26E-08 |
| | (5.97E-09) | (1.35E-08) | (1.35E-08) | (3.13E-08) |
| hfrliquid | 0.369472*** | 0.366425*** | 0.363432*** | 0.210262* |
| | (0.037377) | (0.067409) | (0.067445) | (0.120274) |
| hearnings | 8.00E-07*** | -7.00E-08 | -5.79E-08 | -6.90E-07 |
| | (2.06E-07) | (3.39E-07) | (3.39E-07) | (7.23E-07) |
| cinccat | | -0.556430*** | -0.556163*** | -0.591897*** |
| | | (0.018135) | (0.018206) | (0.032570) |
| cdivorced | | | 0.296545*** | 0.285792** |
| | | | (0.070805) | (0.123219) |
| clostjob | | | 0.217955*** | 0.265129** |
| | | | (0.058165) | (0.105452) |
| lag_chelper | | | | 0.044553 |
| | | | | (0.139538) |
| lag_cncontacts | | | | -0.000783 |
| | | | | (0.001160) |
| | | | | |
| N. Obs | 142,987 | 47,614 | 47,614 | 13,681 |

Table 7: **Fraction of Children Receiving a Transfer by Child Income in Wave 9**

| **Child Income, w9** | **Frac. Ever Rec-g** | **Frac. Rec-g in w1** | **Frac. Rec-g in w2** | **Frac. Rec-g in w3** | **Frac. Rec-g in w4** | **Frac. Rec-g in w5** | **Frac. Rec-g in w6** | **Frac. Rec-g in w7** | **Frac. Rec-g in w8** | **Frac. Rec-g in w9** |
|---|---|---|---|---|---|---|---|---|---|---|
| <10,000 | .587919 | .151376 | .258968 | .241464 | .20717 | .205885 | .211050 | .21221 | .202566 | .233549 |
| 10-35G | .608933 | .146828 | .255092 | .259582 | .21365 | .206573 | .197071 | .226674 | .202200 | .215148 |
| 35-70G | .633072 | .164186 | .265572 | .279526 | .22297 | .21750 | .200689 | .213467 | .19971 | .204200 |
| >70,000 | .606984 | .188132 | .260859 | .271911 | .21382 | .198989 | .167883 | .173144 | .166804 | .157371 |
| **Avg.** | **.61260** | **.16952** | **.26070** | **.26850** | **.21561** | **.20618** | **.18685** | **.19894** | **.18644** | **.18923** |

**Table 8: Average Positive Lifetime Transfer, and Average Positive Transfer Amount by Wave and Child Income in Wave 9**

| Child Income, w9 | Tot Amt Rec-d | Amt Rec-d, w1 | Amt Rec-d, w2 | Amt Rec-d, w3 | Amt Rec-d, w4 | Amt Rec-d, w5 | Amt Rec-d, w6 | Amt Rec-d, w7 | Amt Rec-d, w8 | Amt Rec-d, w9 |
|---|---|---|---|---|---|---|---|---|---|---|
| <10G | 22091 | 5590 | 6404 | 6448 | 6153 | 8635 | 8022 | 8133 | 9033 | 9430 |
| 10-35G | 25106 | 5579 | 7082 | 19185 | 5749 | 6792 | 5984 | 7545 | 8052 | 6624 |
| 35-70G | 26577 | 8700 | 8924 | 15572 | 6644 | 7312 | 8663 | 8399 | 7589 | 10720 |
| >70G | 32525 | 8493 | 10299 | 12773 | 9833 | 11243 | 16397 | 11322 | 14482 | 15633 |
| Avg. | 28408 | 7768 | 8896 | 14351 | 7762 | 8944 | 10962 | 9252 | 10476 | 11324 |

**Table 9: Linear and Probit Regressions (Robust standard errors in parentheses)**

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

| DEPENDENT VARIABLES | ceducation9 | cnchildrem_more |
|---|---|---|
| | | |
| cgottransfer1 | 2.142017*** | 0.6125088*** |
| | (0.477629) | (0.115571) |
| | | |
| cfemale | 0.268643*** | -0.030937*** |
| | (0.043858) | (0.010900) |
| hnchildren | -0.097392*** | 1.70E-03 |
| | (0.011202) | (2.67E-03) |
| clostjob9 | -0.556413*** | -0.065265** |
| | (0.114379) | (0.027649) |
| cmarried9 | 0.733427*** | 0.383923*** |
| | (0.053360) | (0.013183) |
| cstudent9 | 0.716631*** | -0.089637*** |
| | (0.162851) | (0.027894) |
| cagegroup9 | -0.041317** | -0.030112*** |
| | (0.016170) | (0.004081) |
| cnchildren_more | -0.165626*** | |
| | (0.015783) | |
| reducation | 0.264588*** | |
| | (0.009225) | |
| ceducation9 | | 0.006838*** |
| | | (0.002489) |
| | | |
| N. Obs. | 10,381 | 10,392 |
| Pseudo-R2 | 0.193 | 0.083 |

Table 10: **Regression Analysis of Total Parental Transfers**
*** p<0.01, ** p<0.05, * p<0.1

| VARIABLE | coeff | std err |
|---|---|---|
| cfemale | 312.998 | 940.948 |
| ceducation9 | 1373.975*** | 211.429 |
| cnchildren9 | -432.662 | 302.903 |
| ctotcontact | -1.02185 | 10.4126 |
| ceverhelper | -1032.482 | 2197.221 |
| cfclifetransfer | -0.11898 | 0.10446 |
| ceverdivorced | -108.738 | 2891.442 |
| ceverlostjob | 5752.499** | 2204.375 |
| cperdmarried | -2097.973*** | 736.688 |
| avghwlthperchild | 0.05372*** | 0.00169 |
| avgrhealth | -403.169 | 576.335 |
| maxhnchildren | -873.757*** | 213.849 |
| constant | 11119.07 | 7602.408 |
| No Obs | 18555 | |
| R-squared | 0.072 | |

Table 11: **Regression of Total Relative Parental Transfers to Children**

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

| VARIABLE | coeff | std err |
|---|---|---|
| cinccat_rel | -0.75651*** | 0.04900 |
| cage_rel | -0.07866*** | 0.00345 |
| ccontact_rel | 0.26507*** | 0.01820 |
| chelper_rel | 0.23318*** | 0.05757 |
| cfctranfer_rel | 0.00143 | 0.00894 |
| cnchildren_rel | 0.39286*** | 0.06491 |
| cstepchild | -0.03589 | 0.05192 |
| cfemale | -0.00279 | 0.03076 |
| cperdmarried | 0.00709 | 0.02622 |
| avghwlthperchild | -1.27E-07 | 0.00000 |
| avgrhealth | 0.03336* | 0.01880 |
| hrfliquid | -0.01064 | 0.05906 |
| rbirth | 0.00013 | 0.00205 |
| constant | 0.87886 | 3.88477 |
| No Obs | 8587 | |
| R-squared | 0.128 | |

**Figure 1. Transfer incidents and amounts by respondent age group.**

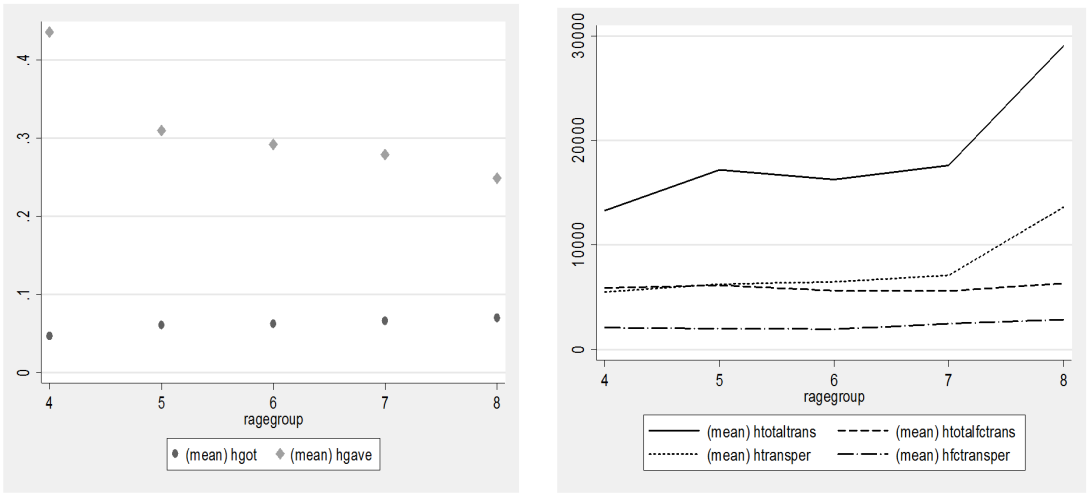
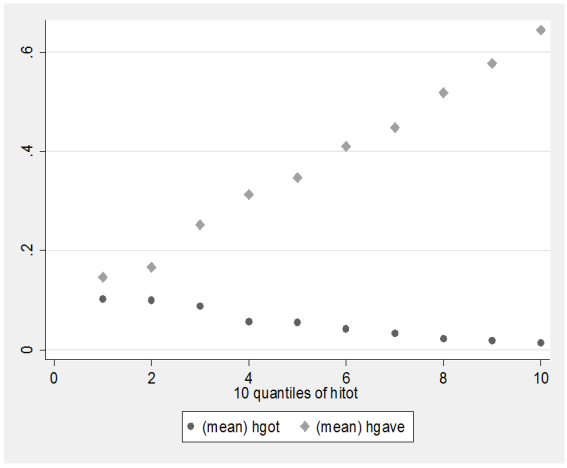


**Figure 2. Transfer incidence and amounts by respondent households' income decile**



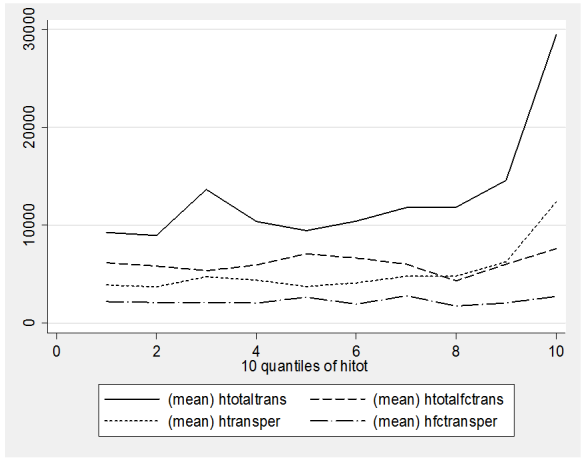
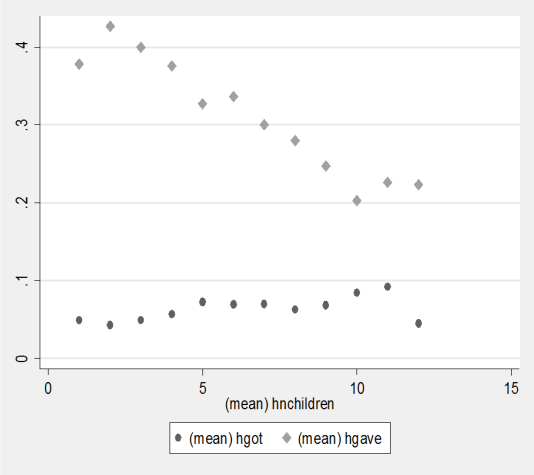



**Figure 3. Transfer incidents and amounts by respondent's number of children**



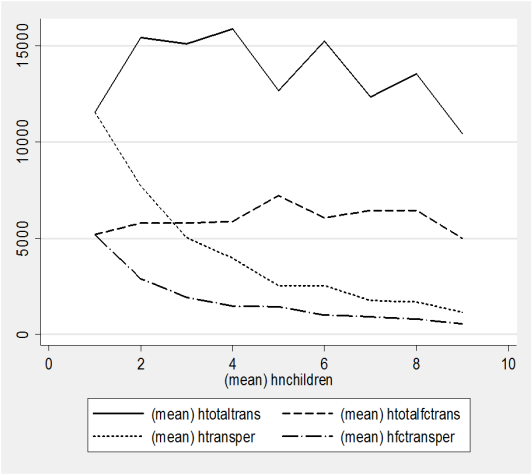
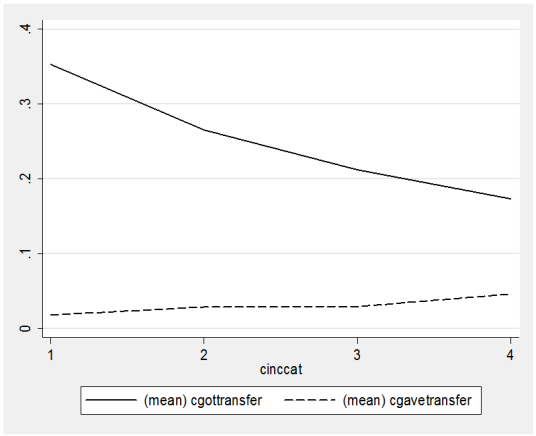
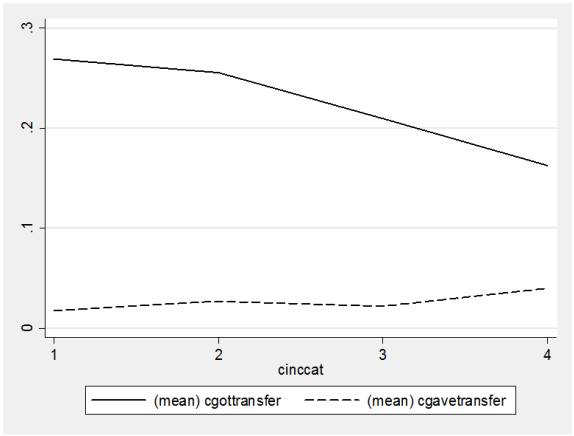
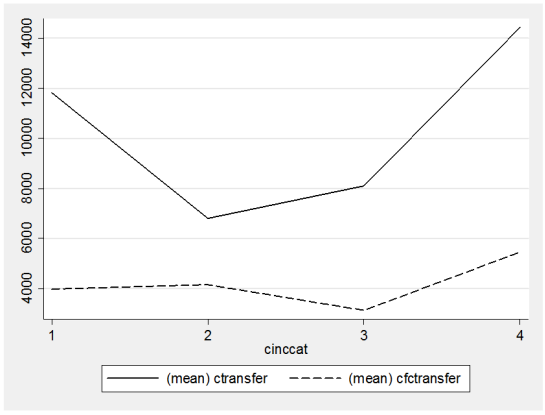



**Figure 4. Transfer Incidence and Average Positive Amounts**
The lower panels restrict attention to non-student children



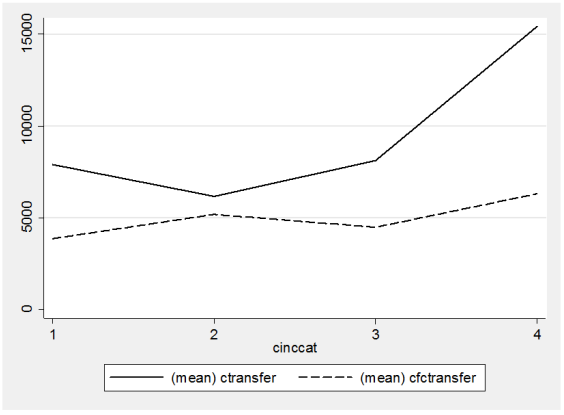
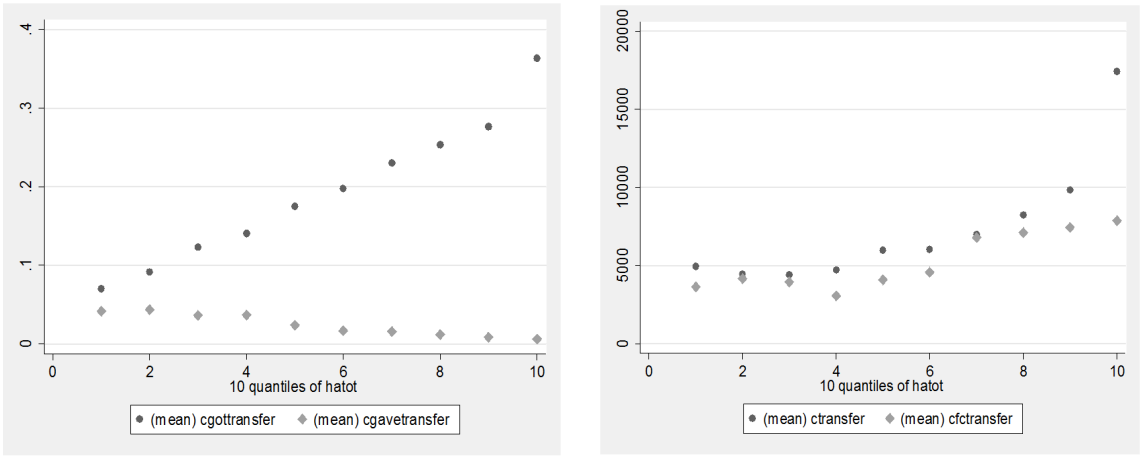



**Figure 5. Transfer incidence and amounts by decile of parental wealth**



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