# An Analysis of Family Transfers: Theory and Evidence*

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Abstract


Families provide support for each other in many ways. In most developed countries support has typically flowed from older to younger generations although there is some recent evidence that this pattern is starting to change. In addition to family support, key support often comes from the government through old age pensions, health care, and welfare programs. In this paper I examine the support network focusing on transfers between family members looking at numerous dimensions of financial support and their variation over time. I begin the paper with a discussion of the economic models behind transfers and then proceed to analyze observed patterns of behavior. My empirical discussion focuses on transfers from parents to their adult children looking first at cash transfers from parents to their adult children, bequests made at the end of the parent's life, and finally, investments in education. When analyzing these transfers in total (and even one by one) I find that parents are extremely generous to their children long after these children leave home.

# 1. Introduction

In policy circles in the United States and in much of the world, there has been a lot of talk over the past decade about how we "fix" transfer programs like Social Security and welfare which face ever growing deficits. Despite some recent increases in public spending, such as the expansion of the Medicare Prescription Drug program in the United States, and the Progressa program in Mexico, many countries are examining ways to reduce spending or better target these programs as they cope with record budget deficits. France and Germany recently raised their normal retirement ages to 67, and Germany, like the United States is considering further increases.

While government transfer programs have been at the center of public attention, as well they should, of at least equal importance in terms of the magnitudes of the funds involved, are transfers between family members. Estimates of aggregate family transfers in the United States, made back in 1986 and brought forward to 2010 dollars, show that parents transferred about $65 billion in inter vivos transfer to their children and close to $200 billion as bequests. In comparison, in 2010 the Federal government in the United States spent about $42 billion on Supplemental Security Income benefits (SSI), $43 billion on Unemployment Insurance (UI), and $31 billion on the Temporary Assistance for Needy Families (TANF) program. Thus, private transfers between family members are as large, or larger, than some of our biggest social insurance programs. And note these numbers refer to just family transfers—excluded are private support through churches and other charitable institutions.

Furthermore, as policy makers around the globe discuss reforms to many programs we need to understand how changes in government transfer programs will affect the recipients of benefits and how we might best implement needed reforms in these programs. In order to assess the potential impact of such changes, we need to understand how generations are linked.

Currently we know very little about intra-family transfers and event less about their interaction with government programs. Basically how the private sector and in particular families respond to changes in government spending depends on the motivation driving these transfers.

Much can be learned by comparing transfers across families. However, because families differ in many unobservable dimensions, important insights regarding the feasibility of the various models can be gained by examining transfers within families and thereby controlling for family fixed effects. Because of data limitations, there has been little work of this type. Therefore, throughout the paper I pay particular attention to the division of parental transfers across children within the family. The theoretical models make strong predictions about how transfers should be allocated, yet these predictions often appear to fly in the face of our intuition, or what patterns we see in the data. For example, inter vivos transfers appear to be by and large divided unequally across children within the same family while bequests are often equal across children.

I begin with a discussion of the economic models of transfer behavior and then present evidence on the empirical patterns and what we know regarding transfers, viewed in light of the theoretical models. I discuss, in turn, inter vivos transfers, bequests, and transfers targeted for human capital investment (or more specifically, a college education). Finally, I note what gaps exist in the current body of research on these topics and offer advice for moving forward with additional research.

**2. Theoretical Models of Transfer Behavior**

Economists have long been fascinated by intra-family exchanges and there are numerous clever theoretical models to guide our thinking on the subject. Foremost among these models are the altruistic model and the exchange model, with less well-known theories of paternalism, warm-

glow and evolutionary motivation recently gathering additional attention. Here I outline the formal specification of these models and what they predict with regard to empirical patterns of behavior. For ease of exposition, in all cases I assume that the parents are the (potential) donors and their children are the (potential) recipients. However, the same ideas carry over more generally.

The altruism model is predicated on the idea that parents (donors) care about the well-being of their children (recipients)—that the child's utility is an argument in the utility function of the parent. Formally,

$$U_p = U_p\,(C_p,\ V(C_k))$$

*subject to the budget constraints:*

$$C_p = Y_p - T \ \text{ and } \ C_k = Y_k + T$$

where $U_p$ is the utility of the parent, $C_p$ is the parent's consumption level, $Y_p$ is their income, and $T$ is the transfer to the child. $V(C_k)$ is the utility of the child as a function of his consumption, $Y_k$ is the child's income. In this model, the higher a child's income (consumption) the lower the marginal utility of a dollar transferred to that child. Similarly, the higher the parent's income, the lower the marginal utility of her own consumption, and the less valuable a dollar spent on herself. Thus, transfers will be negatively related to the child's income and positively related to the parent's income. If there is more than one child in the family, greater transfers will go to the child with the higher marginal utility of consumption.

The most popular alternative to the standard altruism model is an exchange model. In an exchange regime, parents care about their own consumption and about services purchased from the child. The parent's utility function can thus be written as

$$U_p = U_p\,(C_p,\ S_k)$$

where S represents services provided by the child. The price of these services depends on the price of the child's time. The parent's budget constraint is again,

$$C_p = Y_p - T \quad \text{where} \quad T = p_k S_k$$

In this case transfers will be positively related to the parent's income because services from the child are a normal good so higher income parents will purchase more services. Parents will also be less likely to purchase services from a high income (high priced) child so the probability of a transfer will be negatively related to a child's income. However, conditional on a transfer being made, the relationship between a child's income and the amount of the transfer could be either positively or negatively related to income, depending on the price elasticity of demand. Fewer services will be purchased from a high income child, but the price is higher. But whether the product, $p_k S_k$ increases with income depends on whether the price of time rises more in percentage terms than the amount of time falls. Thus, a key mechanism for distinguishing between an altruism model and an exchange model is the relationship between a child's income and the amount of the transfer, conditional on a transfer being made.

Very much related to the altruism model is the paternalism model wherein the parents care about the specific consumption bundle of their children rather than the child's utility, so the form of the utility function is $U_p = U_p(C_p, C_k)$. In this case the parent might transfer resources to help a child attend school or buy a home but not to take a vacation. Anecdotal evidence often supports this model wherein children might beg a parent for a new car or other luxury which would increase their current period utility by more than would semester at college, but parents refuse to use the money for this other purpose.

A second model in which parents are in some sense "buying" services from the child is the demonstration effect advocated by Cox. This model relates specifically to caregiving. Here a parent provides care to her own mother under the observation of her child. The parent thus

"demonstrates" that a child ought to provide care to an elderly parent and hopefully inculcates the child in this belief so that the parent herself will receive care from a child when old. As appealing as this idea is, prima facie evidence against this model is the empirical regularity that it is often unmarried, childless daughters who provide care for needy parents.

An alternative model is a warm glow model in which parents get utility from the gift itself, so $U_p = U_p\,(C_p,\,T_k)$ (Androni, 1989). Such a model might be well used to explain charitable giving in which individuals receive utility from the public recognition of a gift whereas they may care less about the well-being of the charitable institution—perhaps a museum or symphony.

Finally, consider a model in which parents care not about their children per se, but about the survival of their genes. In this case parents will invest in their children to produce grandchildren and insure the continuation of the genetic line (Cox, 2007, 2008).

## 3. Empirical Patterns of Transfer Behavior in the Cross Section

Empirical tests of these models have centered on testing the altruism model with the implicit or explicit alternative model being exchange. Recall that the two models can make different predictions about the relationship between the child's income and the amount of the transfer (conditional on a transfer being made). The altruism model predicts a strictly negative relationship, but the exchange model allows for either a positive or negative relationship, depending on the price elasticity of demand for the child's services.

The first empirical work testing these sorts of models found a negative relationship between the income of a potential recipient and the probability a transfer is made, but a positive relationship between the recipient's income and the amount of the transfer (conditional on a transfer being made). This result is in conflict with the altruism model and lends credence to the

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exchange model (Cox, 1987). However, the data used for this paper did not contain measures of the income of parents (potential donors). Instead, the author relied on proxies based on mean income of the survey block in which the child lived. Children who have higher than average income, even conditional on the income in their neighborhood, are likely to have higher wealth parents who, because of their financial status, are more likely to make transfers. Thus, the resulting positive relationship between the income of the recipient and the amount of the transfer was spurious.

More recent work, with better quality data has continuously found a negative relationship between the income of a child and both the probability and amount of a transfer (e.g. Dunn, 1994). McGarry and Schoeni (1995), using some of the first available data from the Health and Retirement Study (HRS) examine both downward transfers from parents to their adult children and upward transfers from children to their elderly parents. In both cases transfers are negatively related to the incomes of the potential recipients and positively related to the incomes of potential donors.  Because they have observations on transfers to all children within a family and on transfers to both parents and parents-in-law, they are able to control for unobserved heterogeneity across families—perhaps differences in altruism or dynastic wealth--by using family fixed effects in regression analyses of both types of transfers. The strong correlations with income persist in these specifications, a result consistent with the altruism model but also with an exchange regime. Similar results were found using the older cohort from the Asset and Health Dynamics of the Oldest Old (McGarry and Schoeni, 1997)—both the probability of transfers and the conditional amount were negatively related to the income of the (potential) recipients.

A further stricter test of the altruism model involves the relationship between the magnitudes of the response of transfers to changes in the incomes of the parent and child. Working through the comparative statics of the altruism model, yields the result that if the

parent's income increases by one dollar and the child's income decreases by one dollar, transfers will increase by one dollar. A result termed "the transfer income derivative restriction."

One can demonstrate this prediction in a simple revealed preference argument. Suppose a parent has income of $200 and her son has income of $50 so absent any transfers their consumption bundles would be ($200, $50). If the mother then chooses to transfer $50 to her son they would consume ($150, $100). If instead her income were $1 higher and his $1 lower and she still transferred $50, the amounts would be ($151, $49). If this combination yielded greater utility than ($150, $100) then she would have initially transfers $49. Thus, by a revealed preference argument, she will instead increase her transfer by $1 to $51 yielding ($150, $100). In terms of the coefficients in a transfer equation, the change in transfers for a change in the parents income minus the change in transfers for a change in the child's income must equal negative one. In derivative notation,[1]

$$\partial T / \partial Y_k - \partial T / \partial w_p = -1$$

When the derivatives are tested in this fashion, the altruism test fails. The sum of the coefficients is closer to zero than to negative one (Altonji et al., 1997). In general, the responsiveness of transfers to changes in the incomes of the parent and child is extremely small, with transfers increasing by just pennies for a dollar change in income.

One problem with this test is that the model is specified in a static context with the derivatives of interest being the change in lifetime transfers in response to changes in the lifetime incomes of the parent and child. Using the Panel Study of Income Dynamics (PSID) Altonji et al. (1997) construct measures of permanent and transitory income to test the responsiveness of transfers to these measures. Even with careful controls for measurement error and advanced econometric modeling, they fail to find a relationship of the coefficients that sum to negative

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[1] See Cox (1987) for an exceptionally clear exposition of this result.

one. Several other authors have also noted this low degree of responsiveness, casting doubt on the altruism model. More appealing would be an examination of lifetime transfers and lifetime income or the period to period variation in each.

**4. Dynamic Transfer Behavior**

The altruism and exchange models as specified above are couched in a static context with the variables of interest being lifetime incomes and lifetime transfers. However, the data that have been used to test these models come from a dynamic world and are observations at a single point in time, typically representing income in a single year and transfers too are reported at a single point in time. Recent work by McGarry (2012) provides the first dynamic analysis of transfer behavior. The paper uses an altruistic framework in which parents care about the well-being of their children and thus transfer resources based on the marginal utility of the child's consumption. However, rather than a static decision, the parent must also consider what she might wish to transfer to children in the future. McGarry uses a two period model in which the parent maximizes the sum of utility in the first period and expected utility in the second period. The solution to the model is such that in the first period, parents decide how much to consume, how much to transfer to the child immediately, and how much to save to finance second period consumption and second period transfers. Because the future income of a child is unknown, the parent takes the expected value of future income when optimizing the discounted present value of her utility.

The central point in the model is that the parent uses observations on the income of the child in period one, to update her expectation of the child's income in period two. If a child's income in period one is lower than expected (and if income in the two periods is positively correlated) then the parent will revise downward her expectation of the child's period two

income, and revise upward her expectation of the marginal utility of consumption for the child in the second period. Thus, a low draw on the child's income in period one will cause the parent to increase period one transfers due to the higher marginal utility of transfers to the child, but will also cause the parent to want to save more for a potentially larger second period transfer with the lower expected income. Both effects reduce the parent's period one consumption, but the correlation between the child's income in the two periods means that transfers in the first period will be less responsive to the child's first period income than they would absent the correlation in his income across waves. The derivative is thus dampened and the "transfer income derivative restriction" outlined above need not hold. This result is derived for the specific case of joint normality of income in the two periods and proved for the more general case.

Given this result and the practical interest in the variation in transfers over time, I now focus on some of the patterns observed in panel data. Data of this sort are rare, and to my knowledge, only the Health and Retirement Study (HRS) contains regular reports of transfers at each survey. The Health and Retirement Study is a panel survey of older Americans begun in 1992 with a sample of individuals born between 1931 and 1941 and their spouses or partners. In the first wave there were a total number of 12,652 observations in approximately 7,700 households. This sample was re-interviewed every two years since 1992 with the most recent available data coming from 2008.[2]

Over time, the initial HRS cohort has been merged with other cohorts to make the sample approximately representative of the population ages 50 or older.  A cohort of the "oldest old," those born in 1923 or earlier, was interviewed in 1993 and 1995 and then merged with the HRS cohort in 1998.  At that time, two additional cohorts, one born between the years 1924 and 1930 and another born between the years 1942 and 1947 were added.  A refresher sample of those

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[2] The data from the 2010 interview are available in preliminary form.

born between 1948 and 1953 (and their spouses or partners) was added in 2004, and a second refresher sample from the 1954-1959 cohort in 2010.

Here I draw on results in McGarry (2012) and new calculations based on the same data used in that paper. In order to have as long a time series as possible, the sample is based on data for the original 1992 cohort of the HRS. Currently nine waves of data are available for this cohort. In each of the nine survey waves respondents are asked to report about transfers made to each of their children since the previous interview—a span of approximately two years. Selecting only families with a non-coresident adult child, and who are observed in *each* of the nine interviews, leads to a sample of approximately 3,400 families and over 10,000 children.[3]

Perhaps surprisingly, the receipt of transfers by the children of this cohort is fairly constant over time. As I show in Figure 1a, approximately 13 percent of children receive a transfer in any given wave.[4] A similar pattern is observed for the conditional median amount. Despite the fact that these children are aging—from an average age of 31 in 1992 to age 47 in 2008, there is no noticeable decline in assistance from parents.

One might wonder how much variation there is over time for a specific child—whether the same 13 or so percent of children receive a transfer in each wave or whether it is a different set of children at each point in time. Table 1 shows the change in transfer status across any two adjacent waves. Among those who received a transfer in one year, only 55 percent or so reportedly received a transfer in the following wave. And only 6 percent of the sample of children was reported to have received a transfer in two adjacent surveys. Looking at the entire

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[3] Note that this selection procedure biases the sample towards the respondents who live the longest—the youngest, wealthiest, most highly educated and healthiest—but is necessary in order to examine behavior over the full 17 year period.

[4] Notice that 1994 differs substantially from the other years. In 1994 the question asked about transfers above $100 while other survey years asked only for transfers of over $500. This difference means that there are more transfers reported in 1994 but the average amount is lower. Transfers below $500 in 1994 are dropped in the remaining analyses.

nine waves of data, only 1 percent of children received a transfer in every wave but 46 percent received a transfer at least once (not shown).

Given the variability in transfers, one next would like to assess the extent to which transfers are associated with major events in a child's life. Parents might make gifts for particular reasons such as graduation from college, a marriage, or the birth of a child. Table 2 shows the probability and amount of transfers occurring coincident with these type of events, relative to those who do not enjoy one of these occasions.

As is apparent from the table, parents do make transfers for milestone events in a child's life. With regard to "happy" events, transfers are most commonly made when a child finishes college—20 percent of those children who finished 16 years of schooling received a cash transfer from their parents and the average amount was $4,716, somewhat above the $3,793 for children who had no major event (bottom row). In dollar terms, the largest average amount of a transfer accompanies the birth of a child; 14.5 percent of children who had a child (a grandchild to the potential donor) received a transfer, perhaps a lower percentage than one might expect, but the average amount was $5,758—higher than the amount transferred for any other milestone event.

With regard to unhappy events which likely represent a negative shock to the child's income, parents appear to respond generously here as well. These happenings, the loss of a job, a divorce, or the loss of a home, are all associated with a higher than average probability of receiving a transfer and with higher amounts. Notably, of all the milestone events listed here, a divorce is associated with the highest probability of a transfer—21 percent of those whose marriage ended between survey years were reported to have received a transfer and the amount, at $5,136 was also one of the largest on average.

Despite this targeted giving, it is also apparent that parents make transfers when nothing significant changes in the child's life. Of those who experienced one of these events, 15.6

received a transfer but for those who did not experience any such outcome, a sizable fraction, 13.4 percent still received a transfer.

Because these events are uncommon, one would expect transfers to differ across siblings. In the first work examining the distribution of transfers within a family, McGarry and Schoeni (1995) show that parents rarely, if ever, make equal transfers to their children at a particular point in time. Their results, reproduced in table 3 show that while approximately 30 percent of parents made a transfer to at least one of their children (first row), almost never were the amounts transferred equal across children (third row). Among families with two children, 69 percent of children received a transfer but only 14 percent of the time did children receive equal transfers. For large families the percent receiving equal transfers is nearly zero. Even among those families in which all children receive something, the amounts are almost never equal, ranging from 37 percent for two children families in which both children receive a transfer to 10 percent for families with 5 children (final row).

While it may not be surprising that transfers at a point in time are unequal, one might expect that when using a larger window of observation, transfers would be substantially more likely to be equal—with shocks to the income of children averaging out over time. Table 4 explores this idea. It is similar in structure to Table 3 but is limited to those families who are observed in all nine survey waves. Across families of all sizes, approximately 70 percent made a transfer to at least one child in at least one of the nine waves.

The next panel looks at how often transfers are equal across children in a particular wave. As with table 3, equality is rare. However, what is noteworthy is that even when relaxing the definition of equality to consider transfers within 20 percent of the mean to be equal, families with 3 or more children make equal transfers only just over 5 percent of the time. For two child

families the percent is somewhat larger, with 20 percent making approximately equal transfers, but such transfers are far from commonplace.

The next panel response to the hypothesis that while transfers at a particular point in time might not be equal, when aggregated over a period of many years, some of the differences may average out. However, even when looking at transfers over a 17 year period, there is no convergence across siblings in the amounts. In fact, aggregate transfers are *more* unequal than those in any particular period. Thus, there appears to be no evidence that parents are endeavoring to treat children equally with respect to cash transfers. Rather, as has been shown in multivariate analyses, transfers are strongly correlated with current period income. As a consequence, if a child with low income in one period, is more likely to have low income in following periods, parents are likely to continue to make transfers to that particular child—giving to enhance well-being a result consistent with the altruism model.


## 5. Bequests

This analysis of inter vivos giving is missing a potentially important component of transfers, the bequest a parent might leave to her children. It is possible that bequests are sufficiently large and allocated in such a way that they can offset differences in inter vivos giving over a lifetime. The research on the distribution of bequests goes back further than much of the newer work on inter vivos transfers. Early work by Menchik (1980) used a sample of probate records for a specific geographic area to investigate how estates were divided among heirs. More recent work by Wilhelm (1996) based on estate tax records found a similar pattern with 88 percent of parents making approximately equal transfers to children.

Data from the HRS echoes these findings. Respondents who reported having wills were asked whether the will named any of their children and if so, whether their will divided the estate

equally across children. Eighty-three percent of respondents said yes, their children were treated equally (McGarry 1999). Recall that in contrast less than 10 percent of respondents made equal inter vivos transfers to their children regardless of whether transfers are measured at a point in time or aggregated over an extended period.

Similar results regarding the division of an estate were found using a sample from the National Longitudinal Surveys of Young Women and Mature Women (NLS). Light and McGarry (2004) found that among mothers who had wills 92 percent of the wills called for equal division of the estate across children. Using a logistic regression to identify the factors associated with unequal division, the authors find results consistent with several of the existing theoretical models of behavior. Those mothers who chose unequal division were more likely to be in poor health, to have step-children or adopted children, to have children who had large differences in income, or children differed in whether or not they had children of their own. Mothers in poor health may be using differences in bequests to compensate a child who provides care to her as would be expected were she motivated by the exchange model. The significance of the difference in the incomes of children could support the altruism model if larger bequests were given to lower income children, or could be consistent with differences in the price of purchasing care in the exchange model. Differences observed in blended families (families with step children) or in adopted families are consistent the evolutionary perspective.

To investigate these differences in more detail, Light and McGarry go further and examine the responses to questions asking parents who did chose unequal division, why they chose to do so. The responses were recorded verbatim by the survey takers so are not prompted by a set of multiple choice responses. As with the regression analysis, the verbatim responses offer support for the three models—altruism, exchange, and evolutionary. Answers consistent with the altruism model were along the lines of, "oldest son has more assets than youngest son."

Those supporting exchange were along the lines of "_____ takes care of me." or "leaving more to son who helped maintain the property." Finally, the evolutionary model is evident in comments such as, "Because _____ is not really our child" or "it will be divided between biological children." From these results one ought to conclude that different motives are operational for different families, but that the vast majority of estates will be divided equally.

Taking as given the empirical regularity that estates are divided equally, it is useful to consider why this might be the case. The most often advanced hypothesis is that bequests, unlike inter vivos transfers, are public. Parents may be reluctant to leave a will that calls for unequal treatment of children and which may therefore lead to arguments / unhappiness among siblings, particularly when the parent is no longer alive to address concerns among her children. Wilhelm (1996) and Bernheim and Severinov (2003) develop models wherein there is a cost to treating children unequally and the cost is sufficiently large that only in rare cases do parents make unequal bequests.

However, despite the intuitive nature of these arguments it is not clear that this motivation is the driving force behind the behavior. Parents can avoid the public aspect of a will and "hide" the distribution of the estate through the use of trusts. Moreover, anecdotal evidence indicates that children themselves may redistribute the estate due to the needs or assistance provided by one of their siblings (Sussman et al. 1970).

Alternatively, parents may make equal bequests if they are altruistic and wish to respond to the negative income shocks felt by children. Absent other information, parents might well conclude that the probability of needing assistance at some point after the parent's death is roughly equal across siblings (McGarry, 1999). Consistent with this notion, parents do appear to make unequal bequests when one child is likely to have significantly lower earnings than others (Light and McGarry, 2004).

Finally, parents may be influenced by what they perceive to be social norms. Financial planners or attorneys may suggest equal division as a way of avoiding any legal challenges to the will. Similarly, in the United State and in many developed countries, if a parent dies without a will, state laws dictate how it is distributed. All of the individuals states in the United States call for equal division across children. This practice, having society dictate equal division, may influence how individuals themselves behave or what they view as appropriate.

Regardless of the motivation for equal division, because equal division is overwhelmingly the most likely outcome, is nearly impossible to conclude that inheritances are offsetting unequal giving with respect to inter vivos transfers.


## 6. Investments in education

In examining both inter vivos transfers and bequests, the distribution of parental gifts to children remains unequal. However, still omitted from the discussion are transfers made for schooling. Parents give a substantial amount to their children through the payment of college tuition. How this relates to cash transfers is not known but economic theory makes strong predictions about the relationship.

Classic work by Becker (1976) and Becker and Tomes (1976) argues that investment in schooling will take place until the rate of return to additional years of schooling is equal to the market rate of return. If the parent desires to invest more in the child, additional transfers are made as cash transfers. This model has important predictions for understanding inter vivos transfers. First, we would expect that any child who is observed to receive a cash transfer has already received the optimal level of schooling. Second, if children differ in the rate of return they receive from a year of schooling, perhaps because of differences in ability or differences in

the market evaluation of their abilities, then parents should invest differentially in the schooling of their children.

Although researchers often assume that returns to schooling are positively related to ability, implying that more able children will receive larger investments, one could readily imagine a scenario in which additional years of schooling were more valuable to low-ability children.  However, keeping with the standard assumptions,  wherein highly able children would get more schooling and thus have higher lifetime income, one would expect cash transfers to be greater for low ability / low income children, and thus to be negatively related to schooling investments.

In a similar vein, Behrman, Pollak and Taubman (1982) suggest that parents may have, "an aversion to inequality" and prefer to make equal transfers to their children. As we have seen, parents simply do not make equal *inter vivos* transfer so one must then speculate that equal transfers would have to come in the form of the sum of schooling investments and later cash transfers.  Alternatively, the suggestion that bequests are equal because they are public and parents wish to protect their children again any unhappiness if one child is favored, could carry over to the education spectrum.  It would be difficult to imagine that children would not have a good idea of how much parents invested in the schooling of a sibling as the relative prices of college tuitions are well known in the United States. In this case, tuition investments might be equal across children simply because, as with bequests, siblings know how much the parents is giving to each child in the family.

Haider and McGarry (2012) examine this question using a special data collection effort attached to the Health and Retirement Study.  That supplement, the Human Capital and Expenditure Mail Survey (HUMS) asked respondents to report a great deal of information about the college attendance of each of their children. Respondents were asked to report the name of

the college the child attended, the years he attended, whether he was an in-state or out-of-state student, and the fraction of tuition and the fraction of room and board paid by the parent. Although the name of the college is confidential, the staff at the HRS used the name of the institution to match to a federal data base on college tuitions and provided that tuition information in the public data file. This inclusion allows the user to calculate the dollar amount the parent paid. Because this information is available for every child (as long as they attended college) one can determine the distribution of spending within the family and furthermore, the correlation of this educational spending with later cash transfers.

Figure 2 illustrates the distribution of the fraction parents reportedly contributed to the college education of their children. The largest fractions are 100 and 0 percent. There is also a large cluster at 50 percent. While round numbers dominate, there is a surprising amount of variation in the fraction reported.

Using the tuition data, years of schooling for each child, and the fraction paid, the total amounts contributed to tuition, room and board are readily calculated. Table 5 shows the average amounts given to children to cover college tuition and room and board, along with inter vivos transfers for the same sample of children. College-based transfers are clearly larger than transfers reported at any interview, with an average of 6,700 per child (including zeros for those children who did not attend college) while inter vivos transfers reported in the 2000 survey (that nearest in time to when the HUMS data were collected) were just $1,250. Furthermore, inter vivos transfers were received by only 15 percent of children in this single year compared to the 35 percent who at some point received a college-based transfer. However, when these biennial transfers are aggregated across time, they eventually become far larger and more common than schooling transfers. Forty-six percent of children received at least one transfer in the period from 1992 to 2008 and the average amount was over $10,000. Combining schooling and longitudinal

cash transfers reveals that 60 percent of adult children benefited at some point from parental transfers and the amounts are large. Conditional on a transfer being made the average amount was close to $30,000. (And note that this amount excludes any eventual bequests at the end of the parent's life.)

Table 6 returns to the issue of equality across siblings, analyzing how college transfers are divided relative to cash transfers. Because children attend college in different years and face different tuition rates, one would not expect exact equality. I therefore report statistics examining the percent of families in which the transfers to children are all within plus or minus 10 percent of the mean for that family. The rows labeled "all families" include families in which no transfers were made as well as those in which assistance was giving. In the "no transfer" families all children received $0 and thus all received an identical amount—inflating our measure of equality. The next row shows the distribution conditional on at least one child receiving something. The percentage making equal transfers are substantially lower when the zeros are omitted. As is apparent from comparing the second row in each panel of the table, equal giving is not the norm for tuition transfers any more than it is for cash transfers. The patterns for both modes of giving differ sharply from the pattern discussed earlier for the division of estates. Even with just two children, among parents who made a schooling transfer only 16 percent made transfers to children that were within 10 percent of the mean. The fraction making approximately equal aggregate cash transfers, at 17 percent, is nearly the same. Finally, foreshadowing the results on the correlation between schooling and non-schooling transfers, the sum of schooling and cash transfers shows no greater likelihood of equal giving than does either alone. This result suggests that cash transfers do not offset schooling transfers.

To test this prediction formally, Haider and McGarry (2012) regress cash transfers on schooling transfers with and without additional controls. The results are reproduced in Table 7.

As is apparent, in simple OLS, there is a positive relationship between cash transfers and schooling transfers. However, once family fixed effects (for example, parental generosity, dynastic wealth) are controlled for, the correlation disappears. Children who receive greater investments in schooling receive no greater or lesser cash transfers thereafter. There is thus no evidence that parents offset one form of giving with another.

## 7. Other Forms of Transfers

While this paper focuses on financial transfers, families undoubtedly support each other in numerous ways. Furthermore, the currency of support likely varies with characteristics of the family. Low income families may make in-kind transfers such as providing time help (for example, home health care or child care) or shared residence rather than giving cash. Furthermore, there will be an interaction between family transfers and government transfer programs.

Haider and McGarry (2005) showed that during the period when there were cut-backs in welfare programs in the United States, low income individuals were not only more likely to rely on support from individuals outside the nuclear family, but they were also more likely to co-reside with family or friends. These transfers both of cash and co-residence indicate a responsiveness of a private support network to a negative income shock. Furthermore, the authors show that this assistance helps many to avoid poverty.

These results are echoed in earlier work by McGarry and Schoeni (2000) that found that as the Social Security Program in the United States expanded, the fraction of elderly widows living with adult children declined markedly. Figure 3 illustrates the trend. It is difficult to argue that the precipitous drop in co-residence is due to anything other than income.

McGarry and Schoeni (1995) also examined the prevalence of financial assistance and time help to elderly parents. They found a stark difference in the prevalence of the two types of transfers across income categories. Lower income children were far more likely to transfer time to their parents while higher income children tended to transfer cash. Among adult children in the lowest income category, 6 percent gave only time help and 4.5 percent gave only cash (a negligible amount gave both). For those in the higher income categories the differences were even more dramatic. Among those children in the 3$^{rd}$ income quartile, 5.5 percent gave only time and 11 percent gave cash (1.2 percent gave both), and for those in the highest quartile, 7 percent gave time only, and 12 percent gave cash only (1.3 percent gave both). An accurate understanding of the role of the family in providing assistance thus requires an examination of multiple currencies.

## 8. Discussion and Conclusion

This paper has attempted to explore and summarize our understanding of family transfers. The evidence presented here indicates that parents give generously to their children, and suggests that family support is an important mechanism for dealing with negative shocks to income. Furthermore, rather than endeavoring to equalizing giving across children, parents appear to respond to differences in the needs of their children and to transfer accordingly. In light of these results, the puzzle remains as to why bequests are overwhelmingly equal. However, the strong association between giving and need suggests the uncertainly of the future needs of children may play a role. Alternatively, it is quite plausible to think of bequests not as assistance to a child, but as a symbolic gesture from parents at the end of their life, and as such are made equally.

The work in this area would benefit from the availability of gift-giving behavior over the life course and of the ability to examine gifts in various forms. Models such as the altruism

model depend on lifetime income, lifetime transfers, and liquidity constraints. Similarly, in an exchange regime, transfers may be exchanged in different currencies—a parent investing in a child's education and later receiving home health care when the parent is old. Our data to date are incomplete and allow only a snapshot of behavior.

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Table 1: Number (and Percent) of Children Receiving Transfers in Each Wave

| Year 1 Status | Year 2 Status | | |
|---|---|---|---|
| | Received Transfer | No Transfer | Total |
| Transfer | 4,950 **(6.2)** | 5,968 **(7.5)** | 10,918 **(13.7)** |
| No Transfer | 5,667 **(7.1)** | 62,950 **(79.2)** | 68,617 **(86.3)** |
| Total | 10,617 **(13.4)** | 68,918 **(86.7)** | 69,952 **(100.0)** |

Source: McGarry (2012)

Table 2:  Relationship between Transfers and Life course Events

| Event | Experienced Event | | Did not Experience Event | |
|---|---|---|---|---|
| | % received transfer | Mean>0 | % received transfer | Mean>0 |
| Attained 16 yrs school | 20.2 | 4,714 | 13.3 | 4,217 |
| Married | 16.8 | 4,247 | 12.8 | 4,231 |
| Bought a home | 16.5 | 4,692 | 13.7 | 3,995 |
| Had a child | 14.5 | 5,758 | 13.4 | 4,236 |
| Had a first child | 14.4 | 4,823 | 12.9 | 4,061 |
| | | | | |
| Lost job | 17.5 | 5,257 | 13.9 | 4,151 |
| Marriage ended | 21.0 | 5,136 | 13.1 | 4,180 |
| Lost home | 15.2 | 4,653 | 13.9 | 4,032 |
| | | | | |
| Any event (n=32,299) | 15.6 | 5,384 | 13.4 | 3,793 |

Source: McGarry (2012)

Table 3: Equality of transfers by the number of children

| Measure of parental transfer | Number of Children in family | | | |
| --- | --- | --- | --- | --- |
| | 2 (n=1,309) | 3 (n=976) | 4 (n=611) | 5 (n=472) |
| % Giving to at least one child | 31 | 32 | 31 | 28 |
| *Over those giving…* | | | | |
| Percent children receiving | 69 | 50 | 39 | 29 |
| Percent giving the same to all | 14 | 5 | 4 | 0 |
| *Of those receiving* | | | | |
| Percent receiving the same | 37 | 29 | 27 | 20 |
| Source: McGarry and Schoeni (1995) | | | | |

Table 4: Equality of Transfers over time by the Number of Children

| Measure of parental transfer | Number of Children in sample | | | |
|---|---|---|---|---|
| | 2 (n=1000) | 3 (n=714) | 4 (n=488) | 5 + (n=254) |
| % of families making at least one | 74.7 | 78.2 | 70.1 | 65.1 |
| Single year transfers (stacking nine survey reports) | | | | |
| *Exactly equal* | 15.9 | 4.4 | 1.7 | 4.9 |
| *Within 10 percent of mean* | 17.0 | 6.0 | 5.4 | 4.9 |
| *Within 20 percent of mean* | 19.7 | 6.2 | 5.6 | 5.0 |
| Aggregated 1992-2008 transfers | | | | |
| *Exactly equal* | 5.0 | 1.1 | 1.2 | 1.7 |
| *Within 10 percent of mean* | 14.2 | 2.3 | 1.5 | 1.7 |
| *Within 20 percent of mean* | 22.9 | 4.3 | 2.3 | 2.3 |

Source: McGarry (2012)

Table 5: Transfers Received by Children

| Transfer | % > 0 | Mean Amount | Mean Amt >0 | Median Amt >0 |
|---|---|---|---|---|
| *Observed 2000-2008 (N=5,990):* | | | | |
| Schooling | 35 | 6,746 | 19,008 | 11,873 |
| Cash transferred 2000 | 15 | 1,249 | 8,585 | 3,644 |
| Cash transferred 1992-2008 | 46 | 10,210 | 22,288 | 8,133 |
| Cash transferred 1992-2008 + schooling | 60 | 16,956 | 28,368 | 12,873 |

Source: Haider and McGarry (2012)

Table 6: Fraction of Parents making Equal Transfers by Type of Transfer and Family Size

|  | Number Children in sample | | | |
|---|---|---|---|---|
|  | 2 | 3 | 4 | 5+ |
| *Total tuition + Room and Board :* | | | | |
| +/- 10 percent all families | 0.46 | 0.40 | 0.42 | 0.55 |
| +/- 10 percent at least one transfer | 0.16 | 0.05 | 0.00 | 0.01 |
| *Cash transfers 2000-2008:* | | | | |
| +/- 10 percent all families | 0.50 | 0.47 | 0.51 | 0.50 |
| +/- 10 percent at least one transfer | 0.17 | 0.08 | 0.06 | 0.03 |
| *Cash transfers 2000-2008 + Schooling Transfers:* | | | | |
| +/- 10 percent all families | 0.40 | 0.33 | 0.37 | 0.45 |
| +/- 10 percent at least one transfer | 0.15 | 0.05 | 0.00 | 0.01 |

Source: Haider and McGarry (2012)

Table 7: Correlation between Transfer Types

| Variable | OLS | F.E. | OLS | F.E. |
|---|---|---|---|---|
| *Schooling $* | *469**** | *8.54* | *293* | *9.16* |
| Male | | | -1273 | 126 |
| Age | | | -43 | -110** |
| Num siblings | | | -595*** | |
| Married | | | -4701*** | -2580*** |
| Num own kids | | | 871** | -766*** |
| Mean dep var | 6,793 | | 6,881 | |
| Num obs | 5,915 | | 5,857 | |

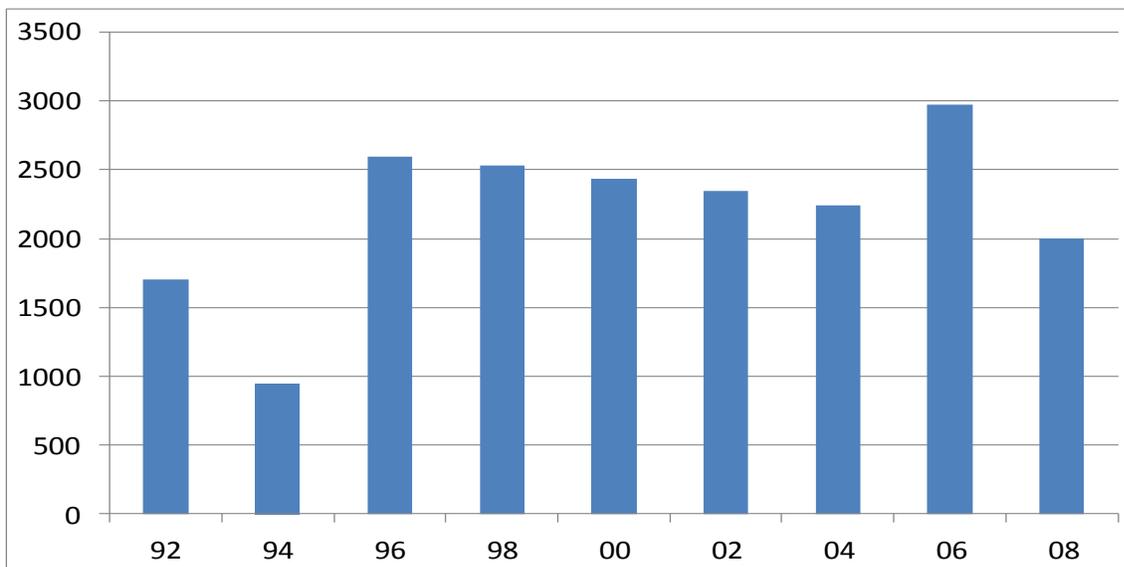Also included are parental variables: age, education race, and Hispanic ethnicity of the head, income and wealth.

Source: Haider and McGarry (2012)

Figure 1a:  Percent of Children Receiving a Transfer by Year
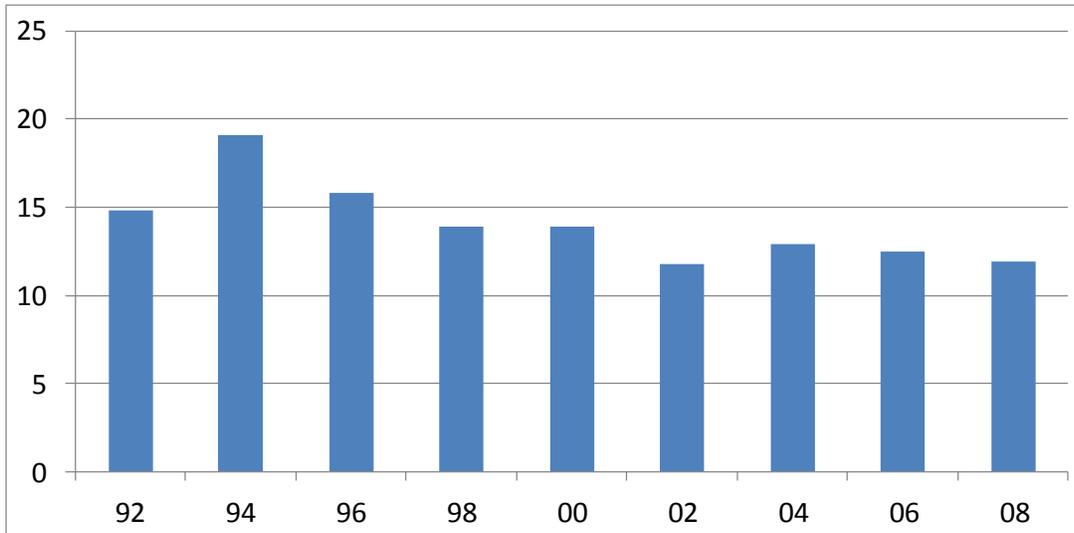
Figure 1b: Median Amount of Transfer (conditional on receipt)

Figure 2: Parental Contribution to College Tuition

Table 3

## Fraction of elderly widows living alone
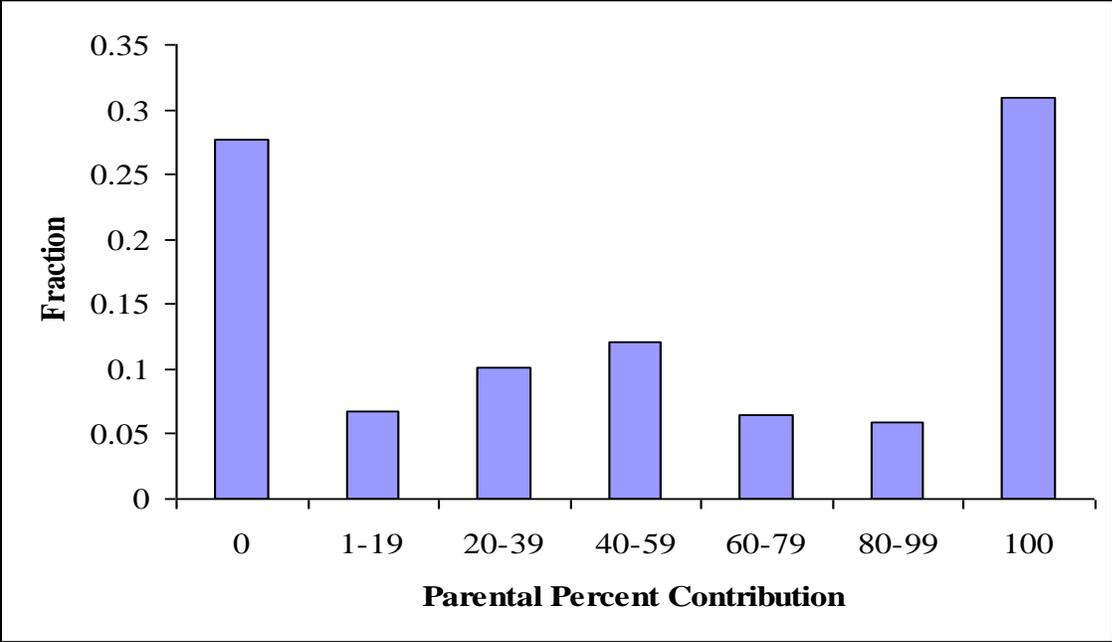
A line graph titled "Fraction of elderly widows living alone". The vertical axis ranges from 0 to 70 in increments of 10. The horizontal axis shows years: 1880, 1910, 1940, 1960, 1980. The line rises from about 9 in 1880, to about 11 in 1910, to about 18 in 1940, to about 36 in 1960, to about 59 in 1980.