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TRANSFER BEHAVIOR WITHIN THE FAMILY: RESULTS FROM THE ASSET AND HEALTH DYNAMICS SURVEY

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TRANSFER BEHAVIOR WITHIN THE FAMILY: RESULTS FROM THE ASSET AND HEALTH DYNAMICS SURVEY

ABSTRACT

If an individual falls on hard times, can he rely on his family for financial support? In view of proposed reductions in public assistance programs, it is important to understand the mechanisms through which families provide support for their members. In this paper we provide evidence that intra-family transfers are compensatory, directed disproportionally to less well-off members. These results hold both for the incidence of transfers and for the amounts. Within a given year, adult children in the lowest income category are 6 percentage points more likely to receive a financial transfer from their parents, and on average they receive over \$300 more than siblings in the highest income category. The data used in this study, the new Asset and Health Dynamics Survey (AHEAD), contain information on all children in the family. Thus we are able to estimate models which control for unobserved differences across families. Our results are robust to these specifications. Additionally, we do not find evidence that parents provide financial assistance to their children in exchange for caregiving.

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1 Introduction

Economists have recently begun to examine the pattern of financial transfers within families. Both the prevalence and magnitude of such transfers shed light on the motivation behind these and other economic behaviors. Recent papers have focused the discussion of transfers into a debate between altruism and exchange as motivations for the observed behavior (Cox, 1987; Cox and Rank, 1992; Altonji, Hayashi and Kotlikoff, 1994). In the context of transfers from parents to children, altruism assumes that a child's utility is an argument in his parent's utility function. Thus, parents transfer resources to children if the child's marginal utility of consumption (appropriately weighted) is greater than the parent's own marginal utility of consumption. One of the predictions of altruism is that the parent will reduce the amount of transfers given to his child if the child's consumption increases. Conversely, an exchange motive views transfers as a payment for services provided by the child to the parent. Unlike the prediction of the altruism model, the exchange model does not necessarily predict that the parent will reduce transfers to her child in response to an increase in the child's consumption. The motivation behind transfer behavior has important implications for the effectiveness of government programs.

Empirical evidence has been found to support each of the two hypotheses. Cox (1987) and Cox and Rank (1992) find that children with greater incomes receive greater financial transfers from their relatives, a result which is inconsistent with the predictions of the altruism model. However, more recent evidence based on richer data have found the reverse; those with greater incomes receive lower financial transfers (Dunn, 1994; McGarry and Schoeni, 1994). Thus, this new work does not allow altruism to be so easily discounted.

In this paper we provide new empirical evidence on the relationship between the income of the recipients and the likelihood and magnitude of cash transfers using the Asset and Health Dynamics Survey of the Oldest Old (AHEAD). Our findings are consistent with the more recent studies. That is, we are unable to discredit the altruism model.

This paper begins with a description of the data. Section 3 then examines whether parents give greater amounts of financial assistance to children with lower relative incomes, a key prediction of the altruism model. In Section 4 we utilize additional information on assistance in the form of time-help, expected future assistance, and expected inheritance to provide further evidence on the

motives for transfers. In Section 5 we offer some conclusions.

2 The Asset and Health Dynamics Survey

The Asset and Health Dynamics Survey (AHEAD) is a new panel survey of individuals born in 1923 or before, as well as their spouses or partners. When appropriately weighted, the sample is representative of the non-institutional population in this age group. This study is based on data available in an early release and contains a subset of 7911 of the eventual 8224 respondents. AHEAD contains comprehensive information on income, wealth, and health status of the respondents, and importantly for this study, a good deal of information on the children of the respondents. In addition to questions about the schooling, income, and family structure of each child's household, the family section of the survey also contains questions on financial transfers. In particular we focus on responses to the question

"In the past 12 months, did you [or your (husband/wife/partner)] given financial help or gifts of \$500 or more to any child (or grandchild)"?

Subsequent questions allow the reporting of the amount of the transfer for up to 5 children.²

For this study we limit our attention to children who are 18 years old or older and who do not reside with their parents. The number of coresident parent-child pairs is small. As shown in Table 1, only 997 out of a total of 14,620 adult children live with their parents. The incidence of transfers for the coresident and non-coresident children is however, similar. Twelve percent of those children with a shared living arrangement receive a transfer compared with 13.2 percent of without such an arrangement. The magnitude of transfers between the two groups are less similar with the mean transfers being \$3125 and \$4234.

¹The reader should note that because a significant fraction of individuals age 70 and over are in nursing homes, the surveyed population is somewhat biased towards healthier individuals.

²Respondents in AHEAD could answer that they gave the same amount to each child in which case the information on the amount of the transfer is available regardless of how many children the respondent has.

3 Empirical Results

In earlier work using the Health and Retirement Survey (HRS),³ substantial evidence was presented to show that recipients of transfers differed significantly from those who did not receive such assistance (McGarry and Schoeni, 1994). Most importantly, our results showed that less well off children were significantly more likely to receive a transfer and received larger amounts of cash assistance. Differences across income categories were apparent in simple comparisons of means, in within family correlations of income and transfer amounts, in ordinary least squares regressions, and in regressions controlling for unobserved family fixed effects. Here we carry out a similar investigation using AHEAD.

3.1 Comparison across families

Table 2 presents the means of the variables used in our study, for our child based sample. Each eligible child is treated as an independent observation so that a respondent with four children would contribute four observations to the sample. The means are presented for the entire sample, as well as separately by whether or not the child received a transfer. Beginning with our measures of the child's income, any correlation between the probability of a transfer and the child's income is weak: Recipient children are more likely to have incomes below \$20,000 or between \$20,000 and \$30,000, but they are also significantly more likely to have incomes above \$50,000. A possible explanation for this last observation is that parents with higher income and wealth have children who earn more and can afford to give more to their children. This possibility will be explored below in the multivariate analyses.

Children who receive a transfer are on average younger, less likely to be married, to have children, or to have completed 12 or fewer years of schooling, and are more likely to be white. Also, the parents of these children are better off both in terms of income and wealth, and the differences are large. The mean income of parents of children who receive transfers is \$42,620 compared to \$19,105 for those not receiving transfers. The corresponding average values for wealth are \$370,797 and \$145,970.

³The HRS is also a representative sample of the U.S. population, but consists of individuals born between 1931 and 1941 and their spouses. Thus the HRS sample is significantly younger than the AHEAD sample with the mean ages in the two surveys being 58 and 77.

3.2 Comparison within families

It is obvious from Table 1 and Table 2, that in a given year some children receive assistance while others do not. However, the theories of transfers are more concerned about transfer behavior within the family as opposed to across the population. In Table 3, we begin to examine the within family behavior. Families are grouped by the number of children they have, as shown at the head of each column. The final column reports the relevant figures for all families taken together. The first row reports the number of observations for each family size, and the second row reports the proportion of those families who make a cash transfer to at least one child. Moving from left to right, no obvious pattern is evident in the proportion making at least one transfer. Overall, the proportion of parents giving transfers is 25 percent.

The subsequent rows focus only on those families in which at least one transfer is made.⁴ Over all family sizes, 68 percent of children in a transferring family themselves receive a transfer. The proportion of children receiving decreases as the number of children in the family increases.

Wilhelm (1994) finds that over two-thirds of households with two or more children give equal bequests. The next row shows the corresponding figures calculated from our sample. In examining what proportion of families give the same amount to each child we find that on average only 25 percent of the families treat children equally with respect to intervivos transfers in a given year. Again, the proportion treated equally decreases with family size. A family with only two children has a probability of 0.33 of transferring the same to each child while a family of 4 has a probability of only 0.13. These numbers appear to be low relative to the equal giving found with respect to bequests.⁵ The mean transfer amount also decreases substantially as the number of children increases.

To begin to explore which children are benefiting most from the unequal distribution, we look at simple correlations between the income of each child relative to his siblings, and the amount of transfers received by each child, again relative to his siblings. Within each family in the sample, we assign children a ranking based on their relative income and a second ranking based on the

⁴It should be noted again that in AHEAD, transfers could only be reported for up to five children. Thus, for example, if a respondent had nine children and gave different amounts to six of them, the sixth transfer would not be measured in the data set. Fortunately, this omission is not likely to affect the results significantly because few households report transfers to five children.

⁵Note that one-child families are excluded from this final column as they were in Wilhelm's study.

relative magnitude of the transfer they received. For example, in a three child family a child who has the largest income and the smallest transfer would receive income and transfer rankings of one and three, respectively.⁶ The correlation between these two rankings is then computed. Over all families the correlation is -0.1500 and is significantly different from zero at a one percent level, indicating that on average children with higher relative incomes receive lower transfers even within families. If calculated separately, the correlations for two, three, and four child families are -0.2177, -0.1538 and -0.1409 (all significant at a 1 percent level). By this measure it appears that parents are indeed giving greater assistance to their least well-off children.

3.3 Regression Estimates

We next look to see whether this result holds when we control for other observable characteristics. Our list of covariates includes the child's age, sex, income, highest grade completed, whether or not he owns a home, is married, lives within 10 miles of the respondent, currently works, or has children. Also included are characteristics of the respondent's household: the head's (male in a couple) race, the household's income, wealth and marital status, whether anyone in the household is not working, or is in less than good (fair or poor) health. We also include a variable for the number of the respondent's parents (and in-laws) who are alive, the thought being that respondents may offer less help to children if they also have parents to assist, or they may offer less assistance to their children if the grandparents are also transferring resources to them. Finally, we include a variable for the number of potential child recipients (i.e. the number of non-coresident children age 18 and over). Additional siblings, like grandparents, provide competition for the parent's limited resources and, as shown in Table 3, may reduce the probability of a transfer.

We chose our independent variables to match those used in our previous study (McGarry and Schoeni, 1994) which uses the HRS. We also experimented with the addition of other variables not contained in HRS (e.g., whether the respondent gave to charity in the previous year – a measure of "generosity") and found that while some of these variables were significant predictors of transfer behavior, the estimates of the other coefficients were not materially altered.

Beginning with the question of whether or not a transfer was made, we estimate a logit model

⁶Those children who are classified in one of the broad overlapping income categories are considered to be in between the two groups. Thus, a child with reported income in the "less than \$30,000" range is considered to have income greater than someone in the "less than \$20,000" bracket, but less than someone in the "\$20,000 to \$30,000" bracket. Excluding these overlapping categories does not significantly affect the results.

with the dependent variable equal to one if the child is reported to have received assistance and zero otherwise. The results are very similar to our previous paper. Of special relevance we find that children in lower income categories are significantly more likely to receive a transfer. The coefficients on categories 1-3 are positive and significantly different from zero at a one percent level. The probability of receiving a transfer increases from 6 percent to 12 percent as one moves from the highest (\$50,000 +, omitted) category to the lowest (less than \$20,000).

While income categories 1-4 (income less than \$20,000, \$20,000-\$30,000, \$30,000-\$50,000 and \$50,000+) are self explanatory, categories 5-7 deserve some explanation. Each of these categories spans a larger income range than categories 1-3. These broad groups are obtained when the respondent was capable, for example, of answering that her child's income was less than \$30,000 but did not know if his income was greater or less than \$20,000. Therefore, taken straightforwardly, the coefficient on the \$0-\$30,000 category should be a weighted average of the coefficients on the first two categories. However, the fact that the parent could not provide a more detailed accounting of the child's income is itself conveying additional information. In earlier work we found that if a parent were unable to report a child's income, the child was significantly less likely to receive a transfer; the amount of the transfer was also significantly less than if the parent could approximate the income. One explanation for this phenomenon is that those parents who do not care about their children, or who have not taken an interest in their children's financial situation, are less likely to know their children's income. Under this scenario, a child in the \$0-\$30,000 range ought to have a probability of receiving a transfer which is somewhat lower than a weighted average of the \$0-\$20,000 and \$20,000-\$30,000 estimates. This result is in fact what is found. In the extreme, children whose parents cannot provide any information (i.e., those for whom the child's income-missing dummy variable equals one), have the lowest probability of receiving a transfer.

The remaining estimates are as expected. Younger children are more likely to get transfers, as are children who live within 10 miles of their parents and those with children of their own. Children who own their own home are less likely to get a transfer as are children who are married.

Turning to the characteristics of the respondents, the parents of children who receive transfers are less likely to be black, they have higher levels of schooling and are better off in terms of either income or wealth. As was the case in Table 3, where the mean transfer was seen to decrease with the number of children in the family, the probability of a transfer decreases as the number of siblings

of the potential recipient increases.

The second two columns of Table 4 examine the relationship between the amount of the transfer and the observed characteristics of donor and recipient. Both the altruism and exchange models predict a negative relationship between the potential recipient's income and the probability of receiving a transfer. However, with regard to the amount of transfers received, the altruism model predicts a negative relationship while either a positive or negative correlation could be consistent with exchange. Using ordinary least squares a strong negative relationship was not found, though there is some slight evidence that the direction of the correlation is negative. The lower two income categories have positive coefficients, indicating that children with incomes below \$30,000 receive larger transfers than the omitted category of children with incomes about \$50,000. However the lowest category does not receive the largest amount and neither point estimate is not significantly different from zero. Children with income less than \$20,000 receive only \$2.16 more than those with incomes of \$50,000 while those with incomes in the \$20,000-\$30,000 range receive \$137 more on average. Furthermore, the estimate of the coefficient on the \$30,000-\$50,000 category is negative, indicating that those with incomes in this range receive less than their better off siblings. Those children falling into the remaining categories—those reflecting the partially reported information receive less generous transfers as a group, consistent with the story that parents who cannot report a child's income have a more distant relationship with that child and therefore help them less. The point estimates for these three categories are internally consistent with lower income children receiving more than their siblings. Transfers are the lowest in the completely missing category, averaging \$219 less than those in the highest income category and \$356 less than those in the \$20,000-\$30,000 range. However, other than the coefficient on the missing category, the coefficient estimates are not significantly different from zero.

The coefficient estimates for the remaining variables are consistent with previous studies. Children who own a home, who live near their parents, and who have some college education receive significantly larger transfers, while married children receive significantly less. However, as is the case for the relationship between education and the probability of receiving assistance, the positive correlation between the *amount* of assistance and education does not persist when we control family fixed effects.

Children whose parents are more schooled or who are in the upper income or wealth brackets

also receive greater transfers while those with a greater number of siblings receive fewer parental transfers. The coefficients on the head's age (male in a couple) are difficult to interpret; parents who are older than 79 or younger than 70 give significantly more than parents in their seventies.

Because transfers to children are, obviously, truncated at zero dollars,⁷ we also consider a tobit specification. The tobit model requires that the error terms be normally distributed. We test for the normality of the distribution of the transfer amounts and for the distribution of the error terms from the OLS regression. In each case we reject normality at the one percent level. Furthermore, it is likely that the error terms are heteroskedastic. If heteroskedasticity does exist then the estimates will be inconsistent (Maddala, 1983). Despite these facts we do estimate a tobit regression and compare the results. The income coefficients (not reported) exhibit an even stronger negative effect than is evident in the fixed effect model, discussed below. Less well off children receive significantly greater transfers than their more well off counterparts. Moving from the lowest income category, less than \$20,000, to the highest, greater than \$50,000, results in a decrease in expected transfer payments of \$343.8

The relationship of interest is the decision of parents to provide greater assistance to one child relative to another. To address this question correctly we need an unbiased estimate of the correlation between the child's income and the amount of the transfer. However, the ordinary least squares results presented above may be biased. It is likely that families have unobserved tastes for giving which affect the size of the transfers. If these unobserved variables are correlated with the explanatory variables currently included in the specification, the coefficient estimates will be biased. For example, a parent's affection for her children may be positively correlated with the provision of assistance to the children, and also positively correlated with the amount invested in their schooling and therefore correlated with their eventual success in the labor market as measured by income. In this case, the estimate of the effect of a child's income on transfers would be positively biased. To control for these unobservables we estimate a fixed effects version of the model. In doing so, variables which are constant within the family (i.e., those characteristics specific to the respondent) are not identified. Variables associated with characteristics of the children can,

⁷We do not consider the receipt of financial transfers by the AHEAD respondents from their children, but the incidence of such transfers is extremely low.

⁸While it is possible to estimate a fixed effects tobit model (Honoré, 1992), in view of the failure of our test for normality we prefer the fixed effect OLS specification.

however, be identified due to differences across siblings.

The fixed effect estimates produce a much more consistent story with regard to the relationship between a (potential) recipient's income and the magnitude of the transfer received. Lower income children consistently receive greater transfers with a "penalty" applied if the parent cannot precisely quantify the child's income. Children in the lowest income category receive \$316 more than those in the highest. For comparison, the difference in the OLS estimation was only \$2.

3.4 Alternative Specifications

We now address several potential problems with the above results and check the robustness of our findings using a series of alternative specifications. First, we allow for the differing error structure across families with varying numbers of children by estimating the model separately for family of different sizes. Next we do what we can with the available data to look at transfers over a longer period of time: those given in the past 10 years rather than those given in the previous year. And finally, we consider the possibility that transfers are based on a relative measure of income rather than on absolute income levels.

3.4.1 Analyses by Family Size

The preceding analyses combine families of various sizes. Here we repeat our analysis stratifying the sample by the number of children in the family. Table 5 reports the coefficients on the child's income variables for the logit, OLS, and fixed effect models, as reported in Table 4 as well as a fixed effect logit model. Though not reported, this specification also includes all covariates listed in Table 4.

The results are fairly similar to those for the entire sample. The logit and fixed effect logit show a strong relationship between the child's income and the probability of receiving a transfer. As was the case for the entire sample, in each of the three subsamples used here, the less well off a child is, the more likely he is to receive assistance.

The OLS results in Table 4 showed some evidence that more was given to less well-off children, but the pattern was not strong. When the sample is divided by the number of children, even this weak result disappears. The child's income category appears to have no effect.

Earlier we made the argument that unobserved differences across families may bias OLS esti-

mates. Here we see an even larger difference between the OLS and fixed effect results. While no relationship between a child's income and the amount of the transfer is apparent in the OLS specification, a consistently negative relationship is observed when the unobserved differences across families are controlled for.

3.4.2 The Timing of Transfers Over the Child's Life

Although the regressions control for important lifecycle events such as marriage and children, there are likely other events which are not observed in the data but which may affect the timing of transfers. While panel data will eventually allow the dynamic aspects to be examined, the first round of AHEAD can also provide additional evidence of life-time transfers. The survey asked respondents to identify those children to whom they gave at least \$5,000 in the past 10 years, a period covering a significant portion of the child's adult life. We estimate a logit model for the probability of transferring \$5,000 or more to a child in the past 10 years. The results presented in Table 6 agree well with the logit estimates for the probability of transferring \$500 or more in the past year. (We only report the coefficients for income of the child in Table 6). As was the case in Tables 4 and 5, parents are more likely to give assistance to their least well-off children. Similarly, younger children, those who live nearby and those with some college are more likely to have received a transfer, while those who are married or who have little education are less likely. Surprisingly, a child's owning a home is associated with a greater probability of having received a transfer of \$5000 or more—perhaps indicating the receipt of help to purchase that home.

3.4.3 Measurement of the Economic Status of Children

The income measures of the children are current annual measures. However it may be that in making transfers, parents respond to longer-term differences in income among their individual children and between their children and themselves, thus basing assistance on permanent income. As a result, annual income may not be the appropriate income measure. In addition to reporting the child's income, the AHEAD respondents are asked to report each child's financial situation relative to their own. They report whether the child is better off, the same, or worse off than they

⁹However, they did not ask respondents to report the amount transferred in the past 10 years, a figure which would likely be extremely difficult to report accurately.

themselves are. This measure may contain some comparison of more permanent relative economic situations. If so, then this measure provides another test of whether parents redistribute resources to their more needy children.

In Table 7 we report the fixed effect coefficients of the relative financial status variable instead of the child's income; also included in the regressions (though not reported) are all other covariates included in the regressions in Table 4. The first column replicates the original regression though on a somewhat smaller sample after allowing for missing values for the relative financial status variables. We continue to find strong evidence of redistribution; parents are more likely to give assistance to their children who are worse off financially relative to themselves.

As an additional check on the robustness of our results, we restrict the sample of children to those who were 25 to 61 years old; this selection reduces the probability that the correlation between income and transfers is an artifact of children who have retired or are still in school. We find that while the coefficients are estimated somewhat more precisely, the point estimates are similar and the conclusions are unchanged.

4 Additional Evidence on Transfer Motives

While a negative correlation between transfers and the recipient's income is consistent with the altruism model, it is also consistent with exchange. As a result, we look for additional information that may reveal the underlying motivation for transfers.

To begin with, we look at the correlation between time-help provided by the children to their elderly parents and the amount of the financial transfer the child receives. ¹⁰ The correlation coefficient is -0.007 and is not significantly different from zero at conventional levels. Looking then at a simpler comparison, we examine the relationship between dummy variables of whether or not the child provides time-help at all, and whether or not he receives a financial transfer. Here the correlation coefficient is still negative, -0.025, and it is significant at a one percent level. Thus, broadly speaking, children who provide assistance to an aging parent are less likely to receive a transfer. Of course an obvious explanation is that sickly parents who need help are also likely to be poor and unable to provide contemporaneous financial reimbursement to their children. If we

¹⁰Time-help is the number of hours of assistance with instrumental activities of daily living that are received in the past month. This amount (which is included on the data file released by the AHEAD officials) was imputed based on reports of number of weeks per month, days per week, and hours per day that children helped the respondent.

condition on the respondent having made a transfer to at least one child, which suggests that the parent can afford to make a financial transfer, the correlation is positive, 0.043, and significant at a one percent level. However, even here the correlation between the amounts of time and money exchanged is negative and insignificantly different from zero, suggesting perhaps that the correlation between the two dummy variables is simply picking up a measure of family closeness.

A second explanation is that current help is provided in exchange for past financial assistance. However, the correlation between whether or not a child is currently providing help to the parent and whether or not the child received financial assistance in the last 10 years is also negative and statistically significantly different from zero, -0.026. Interestingly though, a positive relationship is found between the amount of cash transfers received by the child currently, and a variable indicating whether or not the parent thinks the child will provide help at some future date; the correlation coefficient is 0.05. Thus, it may be that current financial transfers are investments which parents hope will be paid off by the child taking care of the parent when she becomes infirmed.

In a multivariate context, the lack of a relationship between current financial assistance by parents to children and current time help from children to parents continues to hold. When a dummy variable indicating whether or not the child provided time-help is included in the fixed effects transfer equation, its coefficient is negative and insignificant. Similarly, a variable measuring the amount of time-help provided is also negative and insignificantly different from zero. The same results hold in an OLS regression.

5 Summary and Conclusion

The Asset and Health Dynamics Survey and the Health and Retirement Survey will without a doubt be used in many studies of aging as well as more general studies of economic behavior. As we have shown here, the potential for studying intra-family transfers is great. Over time, as additional observations on the same families become available, even more can be learned about the relationship between transfers and the incomes of the donor and recipient.

This paper offers strong evidence that respondents are more likely to make transfers and more likely to transfer larger amounts to their less well off children. Contrary to earlier studies, we do not contradict an altruistic model of behavior. Furthermore, we present descriptive statistics which cast some doubt on the exchange model and find little if any evidence of an exchange of services for

financial compensation. On these issues, much remains to be learned. Future work with both the HRS and AHEAD, will allow for even more detailed analyses, especially as individuals are followed over time.

References

- [1] Altonji, Joseph G., Fumio Hayashi and Laurance Kotlikoff (1994), "Parental Altruism and Inter Vivos Transfers: Theory and Evidence," mimeo, February.
- [2] Barro, Robert J. (1974). "Are Government Bonds Net Wealth?," Journal of Political Economy, 82(6):1095-1117.
- [3] Becker, Gary (1974), "A Theory of Social Interactions," Journal of Political Economy 82(6): 1063-1093.
- [4] Bernheim, B. Douglas, Andrei Schleifer, and Lawarence H. Summers (1985). "The Strategic Bequest Motive," *Journal of Political Economy*, 93(6): 1045-1076.
- [5] Chamberlain, Gary (1980). "Analysis of Covariance with Qualitative Data," Review of Economic Studies, 47:225-238.
- [6] Cox, Donald (1987), "Motives for Private Income Transfers," Journal of Political Economy 95(3):509-546.
- [7] Cox, Donald and Mark Rank (1992), "Inter-vivos Transfers and Intergenerational Exchange,"

 Review of Economics and Statistics 74(2):305-314.
- [8] Dunn, Tom (1994). "The Distribution of Intergenerational Income Transfers Across and Within Families," mimeo.
- [9] Honoré, Bo E. (1992) "Trimmed LAD and Least Squares Estimation of Truncated and Censored Regression Models with Fixed Effects" Econometric.
- [10] Maddala, G.S. (1993), Limited-Dependent and Qualitative Variables in Econometrics, New York: Cambridge University Press.
- [11] McGarry, Kathleen and Robert F. Schoeni (1994). "Transfer Behavior: Measurement, and the Redistribution of Resources Within the Family," forthcoming, Journal of Human Resources.
- [12] Menchik, Paul L. (1988). "Unequal Estate Division: Is it Altruism, Reverse Bequests, or Simply Noise?," in Denis Kessler and Andre Mason, ed., Modelling the Accumulation and Distribution of Wealth, p.105-116.

- [13] Smith. James P. (1994) "Racial and Ethnic Differences in Wealth Using the HRS," RAND working paper number 94-02.
- [14] Wilhelm, M.O. (1994). "Bequest Behavior and the Effect of Heirs' Earnings: Testing the Altruistic Model of Bequests," mimeo, Penn State University, Department of Economics.

Table 1
Cash Transfers to Children 18 and over

| | Number | Percent Receiving | Mean Amount | Std error of the Mean |
|-------------------------|--------|----------------------|----------------|--------------------------|
| living with parents | 997 | 12.0 | 3125 | 461 |
| not living with parents | 13623 | 13.2 | 4234 | 213 |

Table 2
Comparison of Means in the AHEAD sample

| Compa | | leans in th | _ | | _ | | |
|------------------------------|--------|-------------|--------|----------|-------------------|---------|--|
| | 1 | hildren | Receiv | ed Cash | Did not Rec. Cash | | |
| | n= | 12947 | n= | 1386 | n=1 | 11561 | |
| | Mean | Std Dev | Mean | Std Dev | Mean | Std Dev | |
| Child's Characteristics: | | | | | | | |
| Total Income | | | | | | | |
| Less than \$20,000 | 0.115 | 0.290 | 0.126 | 0.312 | 0.114 | 0.287 | |
| 20,000-30,000 | 0.117 | 0.291 | 0.155 | 0.340 | 0.112 | 0.285 | |
| 30.000-50.000 | 0.229 | 0.382 | 0.225 | 0.392 | 0.230 | 0.380 | |
| 50,000+ | 0.234 | 0.385 | 0.325 | 0.440 | 0.223 | 0.376 | |
| Less than 30,000 | 0.021 | 0.130 | 0.019 | 0.128 | 0.021 | 0.131 | |
| 30.000+ | 0.056 | 0.210 | 0.046 | 0.197 | 0.058 | 0.211 | |
| Less than 50.000 | 0.039 | 0.176 | 0.030 | 0.160 | 0.040 | 0.178 | |
| Income missing | 0.188 | 0.355 | 0.074 | 0.246 | 0.203 | 0.382 | |
| Age | 47.13 | 8.106 | 45.72 | 7.817 | 47.32 | 8.126 | |
| Male | 0.492 | 0.454 | 0.495 | 0.328 | 0.491 | 0.452 | |
| Own their own home | 0.757 | 0.390 | 0.745 | 0.469 | 0.758 | 0.387 | |
| Currently married | 0.746 | 0.395 | 0.709 | 0.409 | 0.751 | 0.391 | |
| Live within 10 miles | 0.346 | 0.432 | 0.356 | 0.450 | 0.344 | 0.430 | |
| Completed schooling | | | | | | | |
| Less than high school | 0.112 | 0.287 | 0.046 | 0.196 | 0.121 | 0.295 | |
| High school | 0.396 | 0.444 | 0.268 | 0.416 | 0.413 | 0.445 | |
| More than high school | 0.492 | 0.454 | 0.686 | 0.436 | 0.467 | 0.451 | |
| Working full time | 0.691 | 0.420 | 0.737 | 0.413 | 0.695 | 0.421 | |
| Not working/missing | 0.214 | 0.372 | 0.158 | 0.343 | 0.221 | 0.375 | |
| Has at least one child | 0.835 | 0.337 | 0.809 | 0.369 | 0.838 | 0.333 | |
| Respondents' characteristics | | | | | | | |
| Age of head | 77.15 | 5.46 | 76.87 | 5.36 | 77.18 | 5.47 | |
| Race: | | | | | | | |
| White | 0.825 | 0.345 | 0.939 | 0.225 | 0.810 | 0.355 | |
| Black | 0.104 | 0.278 | 0.036 | 0.175 | 0.113 | 0.286 | |
| Other | 0.071 | 0.233 | 0.025 | 0.148 | 0.077 | 0.241 | |
| Highest grade completed | 10.48 | 3.53 | 12.77 | 2.92 | 10.19 | 3.51 | |
| Total household income | 21799 | 25279 | 42620 | 52888 | 19105 | 18105 | |
| Wealth | 171682 | 450874 | 370797 | 813148 | 145970 | 379093 | |
| Head or spouse not employed | 0.938 | 0.219 | 0.925 | 0.248 | 0.939 | 0.216 | |
| Poor health | 0.428 | 0.449 | 0.341 | 0.445 | 0.440 | 0.449 | |
| Married | 0.439 | 0.451 | 0.531 | 0.469 | 0.427 | 0.447 | |
| Number of living parents | 0.062 | 0.235 | 0.073 | 0.261 | 0.060 | 0.232 | |
| Number of living children | 4.33 | 2.21 | 3.22 | 1.76 | 4.47 | 2.23 | |
| | | | | <u>_</u> | | | |

Table 3 Characteristics of Interhousehold Transfers By Number of Non-Coresident Adult Chilren

| | Number of Non-coresident Children 18+ | | | | | | |
|------------------------------------------|---------------------------------------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6+ | Total |
| Number of families | 1064 | 1373 | 954 | 554 | 342 | 495 | 4782 |
| Proportion giving to children | 0.24 | 0.28 | 0.24 | 0.25 | 0.25 | 0.16 | 0.25 |
| Of those families giving to at least one | e child. | | | | | | |
| Proportion of children receiving | 1.00 | 0.73 | 0.61 | 0.43 | 0.41 | 0.33 | 0.68 |
| Prop. giving the same to each child | 1.00 | 0.33 | 0.29 | 0.13 | 0.14 | 0.12 | 0.25 |
| Mean amount to each child | 4029 | 3105 | 2121 | 1126 | 965 | 1947 | 2596 |
| Of those children receiving, proportion | 1 | | | | | | |
| receiving same amount | 1.00 | 0.78 | 0.73 | 0.53 | 0.52 | 0.40 | 0.65 |

Table 4
Logit, OLS and Fixed Effect Analysis of Financial Transfers to Children

| | Logit | | 0 | LS | Fixed Effect | |
|-------------------------------------|--------|-------|---------|---------|--------------|------------------|
| | Coeff | | | Std Err | Coeff | Std Err |
| Child's Characteristics: | | | | | | 314 1311 |
| Total Income | | | | | | |
| Less than \$20,000 | 0.721 | 0.130 | 2.16 | 112.75 | 316.24 | 60.40 |
| 20,000-30,000 | 0.591 | 0.106 | | 99.67 | 284.91 | 52.10 |
| 30.000-50,000 | 0.019 | 0.087 | -117.60 | 79.65 | 144.69 | 41.30 |
| 50,000+ (omitted) | | | | | | |
| Less than 30,000 | 0.312 | 0.234 | -157.43 | 188.50 | 245.00 | 95.54 |
| 30.000+ | -0.252 | 0.150 | -187.44 | 125.14 | 189.10 | 67.96 |
| Less than 50,000 | 0.116 | 0.187 | -111.30 | 144.75 | 289.88 | 78.58 |
| Income missing | -0.572 | 0.122 | -219.37 | 87.33 | 91.12 | 61.58 |
| Age | | | | | | |
| Less than 40 | 0.113 | 0.077 | 82.46 | 66.25 | 14.61 | 31.99 |
| 40-55 (omitted) | - | | - | | | |
| Older than 55 | -0.214 | 0.103 | -43.75 | 78.71 | -35.71 | 42.41 |
| Male | -0.001 | 0.064 | 30.58 | 53.66 | -32.59 | 24.77 |
| Own their own home | -0.221 | 0.085 | 181.43 | 70.80 | 2.22 | 34.36 |
| Currently married | -0.114 | 0.085 | -266.72 | 70.25 | -36.77 | 33.31 |
| Live within 10 miles | 0.262 | 0.066 | 90.38 | 55.59 | -17.86 | 27.99 |
| Completed schooling | | 3.000 | | 99.90 | 11.00 | 21.07 |
| Less than high school | 0.083 | 0.148 | 98.93 | 90.42 | -2.82 | 47.96 |
| High school (omitted) | | | | | | |
| More than high school | 0.247 | 0.075 | 138.98 | 61.60 | -8.12 | 33.20 |
| Working full time | -0.096 | 0.109 | 6.53 | 91.91 | 42.22 | 43.24 |
| Not working/missing | -0.304 | 0.125 | 30.96 | 100.65 | -12.06 | 47.35 |
| Has at least one child | 0.368 | 0.089 | 78.37 | 76.52 | 150.60 | 36.72 |
| Respondents' characteristics Age | | | | | | |
| Less than 70 | 0.028 | 0.106 | 246.09 | 92.04 | | |
| 70-80 (omitted) | | | | - | | |
| Older than 80 | 0.333 | 0.079 | 314.92 | 66.03 | | |
| Race: | | | | | | |
| White (omitted) | | | | | | |
| Black | -0.438 | 0.138 | 02.62 | 85.28 | | |
| Other | -0.186 | 0.178 | 162.03 | 104.06 | | |
| Highest grade completed | 0.093 | 0.011 | 43.96 | 8.73 | | |
| Income Quartile | | | | | | |
| 1st-lowest (omitted) | | | | | | |
| 2nd | 0.370 | 0.145 | -68.44 | 84.13 | | |
| 3rd | 0.679 | 0.131 | -21.08 | 80.40 | | |
| 4th | 1.383 | 0.137 | 592.94 | 96.19 | | |
| Wealth Quartile | | | | | | |
| 1st-lowest (omitted) | | | | | | |
| 2nd | 0.102 | 0.126 | -59.14 | 75.21 | | |
| 3rd | 0.341 | 0.123 | -52.03 | 83.57 | | |
| 4th | 0.800 | 0.125 | 374.53 | 94.87 | | |
| Head or spouse not employed | -0.115 | 0.119 | -488.20 | 111.55 | | |
| Head or spouse in poor health | -0.039 | 0.068 | 38.10 | 55.32 | | |
| Married | -0.200 | 0.071 | -10.17 | 61.67 | | |
| Number of living parents | -0.142 | 0.114 | -325.54 | 102.71 | | |
| Number of living children | -0.254 | 0.018 | -47.24 | 11.48 | | |
| Constant | -3.533 | 0.292 | 235.50 | 230.80 | 0.971 | 9.71 |
| Number of Observations | 12. | | 19 12,9 | | | $\overline{245}$ |
| | L | | | | | |

Table 5
Effects of Child's Income on Family Transfers by Family Size

| | 1 | | | Effect Logit | (| OLS | Fixe | l Effect | |
|---------------------|--------------|-----------|-------|--------------|-----------------|-----------|---------|-----------|--|
| | Coeff | Std Error | Coeff | Std Error | Coeff | Std Error | Coeff | Std Error | |
| Number of Children: | =2 (n=26) | 02) | | | | | | | |
| Less than \$20,000 | 0.786 | (0.244) | 2.35 | (0.71) | 140.6 | (340.1) | 743.63 | (286.5) | |
| 20,000-30,000 | 0.336 | (0.205) | 2.01 | (0.61) | -26.1 | (296.2) | 750.19 | (246.5) | |
| 30,000-50.000 | 0.049 | (0.161) | 1.20 | (0.44) | 24.9 | (231.0) | 441.62 | (192.8) | |
| 50,000+ (omitted) | | - | | | | | | | |
| 0-30,000 | 0.018 | (0.522) | 2.13 | (1.81) | -137.7 | (642.6) | 760.03 | (512.8) | |
| 30.000+ | -0.169 | (0.265) | 1.33 | (0.78) | -84.3 | (354.3) | 393.61 | (301.1) | |
| Less than 50,000 | -0.032 | (0.345) | 1.07 | (1.26) | -76.4 | (420.1) | 658.70 | (364.3) | |
| Income missing | -0.620 | (0.221) | -0.01 | (0.73) | - 25 9.4 | (252.0) | 314.56 | (285/3) | |
| Number of Children= | z3 /n=97. | 03) | | | | | | | |
| Less than \$20,000 | 0.753 | (0.271) | 2.51 | (0.64) | -184.6 | (194.5) | 299.88 | (200.5) | |
| 20.000-30.000 | 0.468 | (0.214) | 2.12 | (0.50) | -230.3 | (169.8) | 240.01 | (170.3) | |
| 30,000-50,000 | -0.633 | (0.187) | -0.25 | (0.41) | -484.0 | (132.2) | 178.10 | (133.0) | |
| 50.000+ (omitted) | 3 , 3 | (0.10.7) | 0.20 | (0,11) | | (102.2) | | , | |
| 0-30,000 | -0.965 | (0.760) | -0.72 | (1.30) | -501.2 | (335.4) | 64.71 | (320.8) | |
| 30.000+ | -0.367 | (0.323) | 1.67 | (0.79) | -513.1 | (214.1) | 86.79 | (224.5) | |
| Less than 50,000 | 0.343 | (0.361) | 1.06 | (0.70) | -15.9 | (257.9) | 538.62 | (264.9) | |
| Income missing | -0.849 | (0.252) | 0.59 | (0.61) | -432.8 | (145.7) | -101.12 | (195.5) | |
| Number of Children= | =4 (n=21. | 40) | | | | | | | |
| Less than \$20,000 | 1.057 | (0.378) | 1.571 | (0.645) | 33.15 | (162.5) | 204.92 | (187.2) | |
| 20,000-30,000 | 0.882 | (0.294) | 0.969 | (0.481) | -15.35 | (137.9) | 142.41 | (153.4) | |
| 30,000-50,000 | 0.362 | (0229) | 0.316 | (0.395) | -119.27 | (108.8) | -8.07 | (116.6) | |
| 50.000+ (omitted) | | - | | | | | | | |
| 0-30,000 | 0.792 | (0.604) | 0.940 | (0.988) | -83.44 | (247.3) | 181.13 | (272.9) | |
| 30.000+ | 0.069 | (0.395) | 1.318 | (0.685) | 161.26 | (171.0) | 426.36 | (204.6) | |
| Less than $50,000$ | -0.190 | (0.567) | 1.269 | (0.930) | 205.58 | (194.2) | 123.42 | (226.0) | |
| Income missing | -0.367 | (0.366) | 1.015 | (0.804) | -203.26 | (124.1) | 21.20 | (190.2) | |

Note: all covariates from Table 4a also included.

Table 6
Income Coefficients for Logistic Estimation
Of Assistance over the Past Ten Years

| Income Category | Coeff. Est | Std Error |
|--------------------|------------|-----------|
| | 0.001 | 2.2 |
| Less than \$20,000 | 0.281 | 0.074 |
| 20.000-30,000 | 0.180 | 0.061 |
| 30,000-50.000 | 0.107 | 0.046 |
| 50.000+ (omitted) | - | |
| 0-30.000 | 0.106 | 0.135 |
| 30.000+ | -0.118 | 0.080 |
| Less than 50,000 | -0.028 | 0.106 |
| Income missing | -0.142 | 0.060 |

Note: all covariates from Table 4a also included.

Table 7
Fixed Effect Coefficient Estimates
for Income and Relative Income Measures

| | Inco | ome only | Relati | ve income | | Both | |
|------------------------|-------|----------|--------|-----------|--------|-----------|--|
| Income/Relative Income | | | Coeff. | Std Error | Coeff. | Std Error | |
| Income | | | | | | | |
| Less than \$20,000 | 327.5 | (61.2) | | | 176.5 | (67.8) | |
| 20,000-30,000 | 285.9 | (52.5) | | | 198.6 | (55.6) | |
| 30,000-50,000 | 150.1 | (41.6) | | | 112.0 | (42.4) | |
| 50.000+ (omitted) | | | | | | | |
| 0-30,000 | 264.8 | (97.8) | | | 152.1 | (100.3) | |
| 30,000+ | 190.4 | (69.6) | | | 175.6 | (69.6) | |
| Less than 50.000 | 306.0 | (80.5) | | | 232.3 | (81.9) | |
| Income missing | 119.6 | (63.4) | | | 68.9 | (64.5) | |
| Relative Income | | | | | | | |
| Better than parents | | | -88.9 | (36.6) | -55.0 | (38.4) | |
| Same as parents | | | - | | | - | |
| Worse than parents | | | 230.6 | (43.8) | 208.5 | (45.1) | |
| F-statistic | _ | 3.95 | | 5.16 | 6.47 | | |
| Number of Observations | 1 | 2,476 | 1 | 2,476 | 1 | 12,476 | |

Note: all covariates from Table 4a also included.