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Dynamic aspects of family transfers ☆

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ABSTRACT

Parents transfer a great deal to their adult children, and we have rich theoretical models providing a framework for these transfers. However, both the models and existing empirical work typically examine behavior in the cross section. To date, we know little about the dynamic aspects of family transfers. Here I examine transfers over a span of 17 years and find substantial changes in recipiency over time and a strong negative correlation between transfers and transitory income. I also find that events such as job loss and divorce are strong predictors of parental transfers and, although rare, are typically associated with larger transfers than income alone might predict. Finally, transfers are distributed unequally across siblings, and perhaps surprisingly, the distribution of transfers becomes even more unequal when examined over an extended period of time than in any single year. The evidence presented here thus suggests that dynamic analyses can provide insights into behavior that are impossible to obtain in a static context.

1. Introduction

Intergenerational transfers between family members are an important economic phenomenon, particularly those transfers from parents to children. Gale and Scholz (1994) estimate yearly flows between parents and their non-coresident children of $65 billion in 2010 dollars. Such transfers are likely to have a substantial impact on the well-being of both donors and recipients and will have consequences for the distribution of wealth. Similarly, familial transfers may interact with public transfers, and in doing so could alter the effectiveness and eventual beneficiaries of government transfer programs.

While economists have developed important theoretical models of transfer behavior, as an empirical matter, we actually know very little. Recent work has begun to document some of the patterns but much remains to be learned. Most importantly, nearly all studies to date have been limited to cross sectional patterns of giving. While this static framework mimics the style of models underlying the analyses, it misses important features of the data. Capturing transfers at a single point in time makes it difficult to understand how parents respond to various events in a child's life or to understand the cumulative importance of transfers when aggregated over an extended period of time. Even simple questions such as the year-to-year variation in receipt of transfers have remained unanswered, so it is unclear whether the same children benefit year-in and year-out or whether transfers benefit a large number of children on a less regular basis. Similarly, an assessment of how transfers are allocated among siblings done at a single point in time is unlikely to convey conclusive information about the lifetime distribution of transfers.[1]

Looking beyond simple descriptive statistics to assess what factors are associated with transfers can be problematic in that there are many characteristics of a child that are well-known to parents but not observable to analysts. Attributes such as a child's industriousness or ability may affect transfers as might financial measures such as permanent income. Unfortunately, these variables are not typically observed in data.[2]

In this paper I address these issues by providing some of the first empirical evidence of transfers over a prolonged period of time. I draw on data from the Health and Retirement Study (HRS) covering the time period 1992–2008 to assess the time varying nature of

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[1] Indeed, it is often speculated that the degree of inequality in the distribution of transfers among siblings shown in earlier work would be mitigated greatly with a longer period of observation.

[2] Altonji et al. (1997) do an excellent job in constructing a measure of permanent income based on reported income in the PSID.

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transfers and to compare aggregate patterns of giving with cross-sectional results. Furthermore, by examining multiple observations within families and over time, I am able to control for unobserved family and child effects, such as parental generosity or a child's ability or industriousness, to obtain unbiased measures of the relationships between observable characteristics such as income and transfers.

Looking over a 17 year period, I find considerable variation in transfers over time. In each year approximately 14% of children receive a transfer from their parents, yet only 6% of the sample receives a transfer in any two consecutive survey periods. Furthermore, while 46% of children in my sample receive a transfer in at least one period, less than 1% receive a transfer in each of the nine waves of the survey. This result contrasts sharply with perceived wisdom that some children receive transfers year-in and year-out. These dynamic aspects of behavior are missed in cross sectional studies, yet from the analyses presented here they appear to be an important part of the story.[3] Transfers made in conjunction with specific events in the child's life appear to be common and suggest that parents frequently respond to negative shocks. Of particular importance is the loss of a job or a spouse. Perhaps most surprisingly, differences in the amounts received by siblings in any one year do not appear to "average out" over time. Rather, the amount given to siblings becomes less equal when examining a larger window of time than in a simple cross section.

Finally, in examining transfer behavior net of unobserved differences across children, I find that the effect of a child's current income on transfers is large and significantly different from zero, but is approximately one-third smaller than its effect in specifications that do not control for unobservable differences. These results indicate a strong negative correlation between transfers and the transitory income of the potential recipient as well as a negative relationship between transfers and unobserved characteristics of the child such as ability or permanent income. This latter insight demonstrates the necessity of adequate controls for permanent income and other fixed attributes in our models.

The remainder of the paper is organized as follows: In Section 2, I briefly outline the standard theoretical model and discuss the existing literature. Section 3 describes the data I use in the empirical work and provides interesting descriptive patterns. Section 4 discusses the estimated effects of current income and other observable characteristics on transfers in the context of regression models. A final section concludes and summarizes the results.

2. Background and theory

2.1. Standard altruism model

The primary theoretical framework for understanding parental transfers has been an altruism model. In the standard altruism model parents care about the well-being of their children; parents receive utility from their own consumption and from the utility of their children. Following the specification used in Cox (1987), the utility function of a parent is written as $U_p = U_p(c_p, V(c_k))$ where c_p and c_k are the consumption of the parent and child, respectively. The consumption of the child is determined by his own income y_k and transfers from the parent T. Thus, $c_k = y_k + T$.

The central prediction of this model is that the change in transfers for a change in a child's income is negative ($\frac{\partial T}{\partial y_k} < 0$); as the child's income increases, the marginal utility of an additional dollar of consumption decreases, and the parent transfers less. This result implies that in families with more than one child, parents will make greater transfers to lower income children, in effect compensating the lower income children for their lack of resources and endeavoring to equalize the marginal utility of consumption across children.[4]

In this strict interpretation of altruism, the comparative statics also predict that if transfers are positive, an increase of one dollar in the child's income along with a decrease of one dollar in the parent's income, will result in a decrease of one dollar in transfers to the child.[5] That is, $\frac{\partial T}{\partial y_k} - \frac{\partial T}{\partial w_p} = -1$ where w_p is the income of the parent.

Given the predictions, empirical tests of the model have centered on the estimates of $\frac{\partial T}{\partial y_k}$ and $\frac{\partial T}{\partial w_p}$. While early work found a *positive* relationship between a child's income and the amount of a transfer (Cox, 1987, Cox and Rank, 1992), a contradiction of the negative relationship predicted by the altruism model, more recent efforts with higher quality data have found a strong negative relationship (e.g. Cox and Jappelli, 1990, McGarry and Schoeni, 1995, 1997), a result consistent with the altruism model, but with alternative models as well.[6] Although the sign of $\frac{\partial T}{\partial y_k}$ found by these studies is consistent with the altruism model, the magnitudes of $\frac{\partial T}{\partial y_k}$ and $\frac{\partial T}{\partial w_p}$ (where estimated) fail to satisfy the derivative restriction, with estimates of $\frac{\partial T}{\partial y_k} - \frac{\partial T}{\partial w_p}$ that are closer to 0 than to −1.

2.2. Static versus dynamic outcomes

The model outlined above is presented in a static framework. In the context of a single period, parents know the lifetime earnings of their children and as noted, the consumption of a child is the sum of earnings and transfers. Parents make greater transfers to children with lower lifetime incomes and the timing of earnings and transfers is not an issue. However, in a multi-period framework, the timing of transfers becomes an important matter.

As highlighted by Altonji et al. (1997), absent additional constraints, if the child's permanent income is uncertain a parent will delay transfers in order to obtain additional information and more efficiently allocate resources. Similarly, a parent who is uncertain of her own date of death or future needs will be reluctant to part with resources she herself might need some day and will prefer to postpone transfers (Davies, 1981). Acting against the desire to postpone transfers is the possibility that children are liquidity constrained and unable to smooth consumption optimally across time. Even children with high *lifetime* incomes may be the recipients of inter vivos transfers if they are temporarily liquidity constrained and unable to attain the level of consumption predicted by their permanent incomes (Cox, 1990). Thus one would expect a negative relationship between transfers and current income and a positive relationship between

[3] Dunn (1997), and Rosenzweig and Wolpin (1994) are exceptions, both using multiple waves of the NLS surveys. However, information is not available on all siblings of the (potential) recipients, so a complete understanding of the allocation within families is not possible. More recently, Hochguertel and Ohlsson (2009) use multiple waves of the HRS to examine family transfers in regressions with a rich error structure and find that gifts are strongly compensatory.

[4] This simple model treats income as exogenous, but expanded models allow that individuals behave strategically, for instance reducing income in order to receive larger transfers (e.g. Bergstrom, 1989, Bruce and Waldman, 1990). In the context of the family, such shirking may well be observed by parents. In the empirical work that follows, I do not model a behavioral response from the child but control for child fixed effects which could include factors such as industriousness.

[5] See Cox (1987) for a derivation. Numerous variants of the altruism model have been developed which do not share this prediction. (See for example, Alger and Weibull, 2010;Karlan et al., 2009.) I note the prediction here as it has been the focus of several classic papers on this topic.

[6] The most frequently cited alternative to the altruism model is an exchange model wherein observed transfers represent payment for services provided by the child. In the exchange model parents care about their own utility and the services (s) provided by the child. Formally, $U_p = U(c_p, s)$. In an exchange regime the sign of the relationship between income and the magnitude of a transfer is indeterminate. As a child's income increases, the price of his time increases and the quantity of time purchased therefore declines. However, the net amount spent by the parent to purchase services (price × quantity) can either increase or decrease depending on the elasticities of supply and demand for services.