Private Safety Nets through Inter-Household Transfers: The Case of Viet Nam

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1. *Introduction*

Viet Nam faces many problems in its transition from socialism to capitalism. Protection of workers terminated from state enterprises, encouragement of domestic savings for capital formation and the development of human capital are all leading policy issues confronting the country. Though much current policy debate is focused on government or markets, a third institution, the family, is also relevant for Viet Nam's economic transition. Private transfers of income between households might function like publicly provided safety nets, for example, in helping to protect displaced workers from the consequences of unemployment. Parental transfers could help finance children's human capital investment, a potentially key determinant of economic growth. And incentives for private saving, another channel for economic growth, can be affected by private, informal old-age support systems.

There are reasons to believe that private transfers play a greater role in Viet Nam than in the transition economies of Eastern Europe. Viet Nam's Confucian heritage and agrarian history has likely strengthened family ties. And the command economy has a much shorter history in Viet Nam compared to, say, Russia, so that reliance on state transfers might be less deeply ingrained. Despite their potential importance for policy, we currently know little about private transfer patterns in Viet Nam, because the requisite household survey data have been lacking. Recently, however, the Viet Nam Living Standards Survey (VNLSS) has become available and it contains information necessary for investigating patterns in private transfers.

This paper uses the VNLSS to provide a snapshot of private transfer activity. We investigate private transfer patterns along a variety of dimensions, such as age, household resources, demographic make-up of the household and characteristics of the region of residence. We find that private transfers are substantial and widespread in Viet Nam, and their patterns suggest that they sometimes function like means-tested public transfers. They are targeted to vulnerable groups such as low-income households or those stricken with illness, for example. But they are also disproportionately given to the well-educated. A substantial fraction of elderly households receive private transfers, suggesting that they function in part as old-age support.

Each of these patterns is related to the policy concerns listed above. Because private transfers function in part as social safety nets, the design of public transfer schemes should give attention to possible private transfer responses. Below we discuss how public transfers can "crowd out" private transfers, diluting the effectiveness of public income redistribution. The private old-age support system is also relevant for capital formation, because private transfers for the elderly could dilute incentives to save for retirement. Economic growth might be enhanced if the direction of private transfers were reversed, so that older households would save for retirement and also contribute more to the human capital formation of youth.

Before proceeding to the empirical work we discuss some theoretical considerations about private transfer behavior to facilitate the interpretation of our results.

2. *Theories of Private Transfer Behavior and Public Income Redistribution*

To place our empirical findings in perspective, we begin with a discussion of the purposes and underlying motivation for private inter-household transfers. Why would one household want to give cash or goods to another? Gary Becker's (1974) seminal analysis posits that altruistic feelings are what prompt households to give transfers. The main idea is that a benevolent person cares about the well-being of others. This altruism can cause the person to make transfers to others. Becker's analysis has gained wide acceptance and has several policy implications. His model has several implications about behavior:

a. *Private transfers can act like insurance.* Suppose that parents are transferring income to a child living away from home. Suddenly the child becomes unemployed. The parents respond by increasing their altruistic transfers to the child. Private transfers function like insurance--the child's consumption does not fall as much as earnings because private transfers fill part of the income shortfall caused by unemployment. Private transfers may therefore be supplementing existing networks of public transfers.

b. *Public transfers and crowding out.* Consider again the unemployment example, but now suppose an unemployment insurance system was in place when the child was laid off. Since the child's consumption is in part insured by this public program, the parents need not contribute as

much support to him. An expansion of public transfers can cause private transfer networks to diminish.

c. *"Crowding out" can create problems for the effective targeting of public safety nets and can occur with any public transfer program.* In the example above, the child's parents share in the benefits of the public transfer program because it lessens their burden of support. And the child does not reap the full benefits of the public transfer program, because it causes private transfers to fall. The private transfer response to the expansion of public transfers therefore creates a targeting problem. Part of the benefits of unemployment insurance accrue to the parents, who could be from upper income brackets. Of course, there may be many unemployed people who have no relatives to turn to for help. These people benefit fully from unemployment insurance.[1]

Crowding out can occur with other programs as well.[2] Suppose, for example, that a child provides private support for his retired parent, and a public pension program is created. The child's burden of private support is eased because his parents now receive public transfers and private transfers are again crowded out by public ones. Further, some programs may be less prone to crowding out than others. Cox and Jimenez (1995) estimate that if unemployment insurance system were introduced in the Philippines, private transfers would fall so much that the intended beneficiaries of the program would scarcely be any better off. In contrast, they find that the degree of crowding out associated with pensions is much less dramatic.

Proper targeting requires paying attention to whether households are part of a private transfer network. While easier said than done, one obvious example would be relatively more generous pension benefits for childless couples.

d. *Private transfer behavior depends on the stage of the life-cycle.* Private transfers can vary over the life-cycle, especially if capital market imperfections exist. For example, if children have

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[1]In addition, public transfer systems enable much larger numbers of households to pool risk.

[2]Private interhousehold transfers are not the only activity that can be affected by public transfers. Private savings and insurance purchases can also be crowded out by public transfers. For empirical evidence for the United States, for example, see Engen and Gruber (1995), for the case of unemployment insurance and private savings, and Cutler and Gruber (1996) for a study of public and private insurance. See Moffitt (1992) and, for example Sahn and Alderman (1995) for discussions of the connection between public transfers and labor supply.

difficulty financing their education or on-the-job training, parents may make private transfers to them. Later in life the children may take over the role as providers of old-age support to parents.

The life-cycle dimension of private transfers ties them to the issue of economic growth. The link is indirect and occurs through savings and investment in human capital. The more private transfers flow from old to young, as opposed to vice versa, the better for economic growth. There are a couple of reasons for this. The most obvious connection is that private transfers targeted toward students enhances the aggregate stock of human capital.

But there is a further and perhaps more subtle connection between private transfers and economic growth. A strong private old-age support system is likely to stifle incentives to save for retirement, since children provide. So finding that private transfers are targeted to the elderly might be interpreted as a symptom of weak incentives for private saving.

e. *Private transfers might be part of an exchange between households.* An alternative to the altruistic theory of private transfers is that they are part of a two-way exchange (Bernheim, Shleifer and Summers (1985), Cox (1987)). The exchange theory posits that financial transfers are used to purchase in-kind services. For example, parents might give money in exchange for help and companionship provided by their children. The key difference between the exchange and the altruistic theory of transfers is that, with exchange, public transfers need not crowd out private ones. In fact, exchange theory predicts a possible "crowding in" effect of public transfers. For example, consider the case in which a child receives money from his parent in exchange for periodic help with housework. A windfall increase in public transfers (or income from any other source) would enhance his bargaining position with his parent, possibly resulting in the child receiving even more money from the parent. Note that this result differs from the altruistic prediction, in which such windfalls are always met with reductions in private transfers. Further, though the example above is one in which children earn their private transfers by providing services to parents, it is possible, at least in theory, for these roles to be reversed. For example, children might provide financial support to their parents in exchange for in-kind help that their parents provide to them.

While much of the logic of these behavioral models is appealing, the actual magnitude and patterns for private transfers are empirical questions. The next section describes the data set we use and provides simple descriptive results, and the one after that contains results from multivariate analysis.

3. *Data Set Description*

The Viet Nam Living Standards Survey (VNLSS) is well-suited for analyzing private transfer behavior because it contains information about money and goods transferred between households, as well as potential determinants of these transfers. Some private transfers are measured at the individual level and some at the household level. Since the household is our unit of analysis, we aggregate the individual transfers to arrive at a household figure. In the "Income" section of the household questionnaire the respondent is asked to report on income that the household receives from a variety of sources. In the first section of this module, the respondent is asked: "During the past 12 months, has any member of your household received money or goods from persons who are not members of your household?" If the respondent answered yes, he or she was asked the following: the names of all donors, which household member received the money, the relationship of the donor to the recipient, where the donor lives, whether part of the transfer is to be repaid, and amount. Respondents report both cash and in-kind amounts by answering the question, "How much money have household members received from this person in the past 12 months, including the value of all payments in kind?"

In the next section of this module, the respondent is asked a set of questions about income from miscellaneous sources: "What is the value of all income received by members of your household in cash and in kind from ..[income source]..during the past 12 months? Among the 14 sources listed was the categories "Gifts, including gifts related to wedding, funerals, birthday etc. (money and value in kind)" and "Dowry or Inheritance." The structure of the module makes clear that this item pertains to receipts from other households.

In the next module respondents are asked about loans: "Do you or members of your household owe money or goods to anyone? ...a relative, friend, etc." Respondents who answer

"yes," report the type of creditor (e.g. moneylender, government bank). Among the possible sources of credit are relatives and other private individuals. We count these loans as transfers. Respondents are asked about loan amounts ("How much money have the members of the household borrowed from..[source]..under this loan?") and timing ("In what month and year did the household member borrow this money or these goods...?"). Loans make up about 25 percent of the value of aggregate transfers.

Loan and Non Loan Transfers

	Percentage of Sample Receiving	Average (Thousand Dong[3])
Transfers Without Loans	35.32	597
Loan Transfers	20.09	172

Outflows of private transfers are reported in the final section of the expenditure module of the household questionnaire. After answering several questions concerning detailed expenditure components, the respondent is asked: "During the past 12 months, has any member of your household provided money or goods from persons who are not members of your household?" If the respondent answered yes, there were asked the name of all donors, which household member gave the money, the relationship of the recipient to the donor, where the recipient lives, whether part of the transfer is to be repaid, and amount ("How much money have members of the household sent to this person in the past 12 months, including the value of all payments in kind?")

Transfers received versus given are not strictly comparable, because there are more categories for receipts (e.g., dowries, loans). Transfers from abroad are another source of imbalance between receiving and giving. So we would expect reported receipts to exceed gifts.

The respondent is asked to report on his/her income and income received by others in the household. Income can come from four possible sources:

[3]10,000 Dong is approximately equal to one U.S. dollar.

1. *Wage Income.* Respondents report wage income from main and secondary jobs held in the 7 days prior to the survey, and income from other jobs, both main and secondary, that the respondent may have held in the 12 months prior to the survey.

2. *Agricultural Income.* A separate section of the VNLSS records information for calculating income from agriculture. We calculate profit from operation of the farm by subtracting total expenses from total revenues. The latter include: revenue from the sale of crops, crop by-products, livestock, and livestock products. Both cash and barter payments are included in the calculation of revenue. Also included are revenue from the rental of agricultural land and value of agricultural production consumed. Expenses include payments for agricultural labor, equipment rental and repairs, fuel, irrigation, fees for land use rights, and taxes.

3. *Business Activities.* Households report revenues and expenses associated with the three most important businesses the family owns. Revenue includes income from the sale of products in the last 12 months (cash and in-kind). Household consumption of business production is counted as revenues. Revenues and expenses are adjusted for partial ownership by multiplying each by the household's share of a jointly owned business. We did not count expenditures on buildings and land as expense flows, and instead calculated depreciation expenses for these. We assumed a service life of 30 years for buildings and land, and one of 10 years for other durables such as equipment, and used straight-line depreciation.

4. *Other Income.* Households are asked to report income from a variety of sources, such as interest income and social fund income. These questions are contained in a separate module which deals with miscellaneous income sources. Questions on private transfer receipts, discussed above, are also included in this module.

The survey contains several questions concerning employment status. Those not currently working are asked if they would like to find a job and those who are currently employed are asked if they experienced a spell of unemployment in the past year. The survey also contains questions dealing with the demographic composition of the household: the ages and education levels of

individuals, the number and ages of children and the location of the household and migration history.

The Sample. We deleted observations with zero or negative income or expenses, and households whose total resources, taking borrowing and saving into account, were far out of line with their consumption expenditures. For example, we deleted households whose total income plus borrowing was less than a third of total household expenditure, or those whose total resources were more than three times total consumption.[4]

4. *Descriptive Evidence*

Scope and Magnitude of Transfers

Private transfers in Viet Nam are both widespread and significant. One way to gauge the extent of transfers is to look at total gross transfers received and given. Almost half (44 percent) of the sample received private transfers, and about the same proportion gave them. Twenty-two percent did both and about 31 percent did neither. We refer to the latter as "others." The exact figures are presented below:

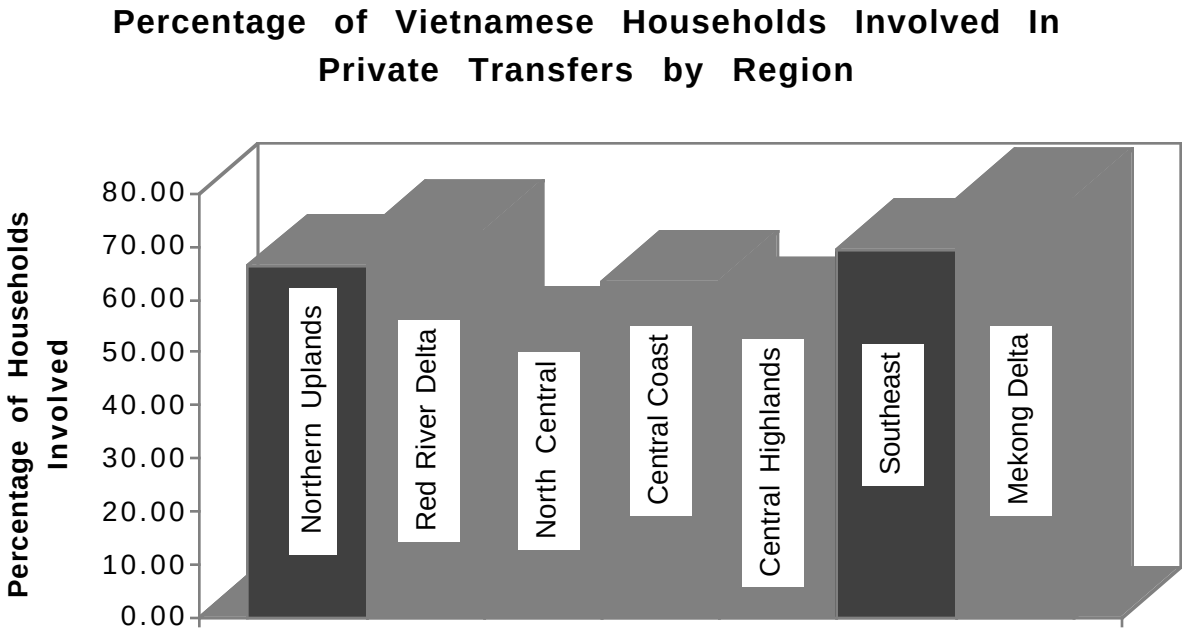
	Number	Percentage of Sample (N = 3,822)
Households Giving	1,774	46.42
Households Receiving	1,666	43.59
Households Both Giving and Receiving	821	21.48
Households Neither Giving nor Receiving	1,203	31.48

Since some households both gave and received, we characterize households as net donors, or net recipients, according to whether outflows of private transfers exceed or fall short of inflows. Thirty-nine percent of the households were net recipients and twenty-eight percent were net givers. Twelve percent of net recipients received transfers from abroad (table 1). The figures for net transfers are given below:

	Number	Percentage of Sample (N = 3,822)
Net Transfer Donors	1,109	29.02
Net Transfer Recipients	1,483	38.80
Net Transfer Equals Zero ('Others')	1,230	32.18

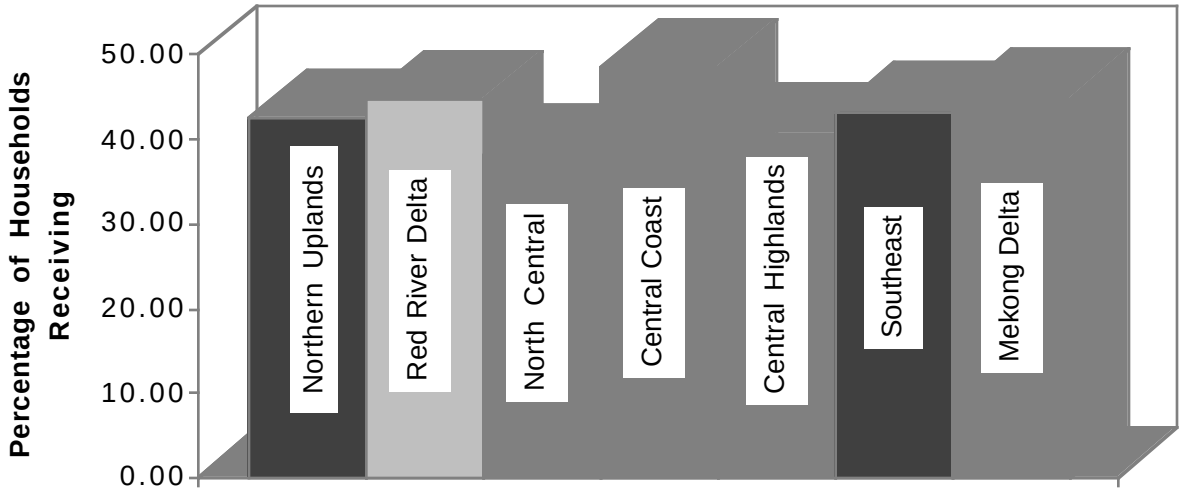
[4]See Appendix 1 for details.

The participation in transfer activity varies considerably among geographic regions. The figure below plots the percentage of households involved in private transfers, either as recipients, givers or both, by region. Participation ranges from a maximum of a little over three-fourths for Mekong Delta, to 53 percent for North Central.

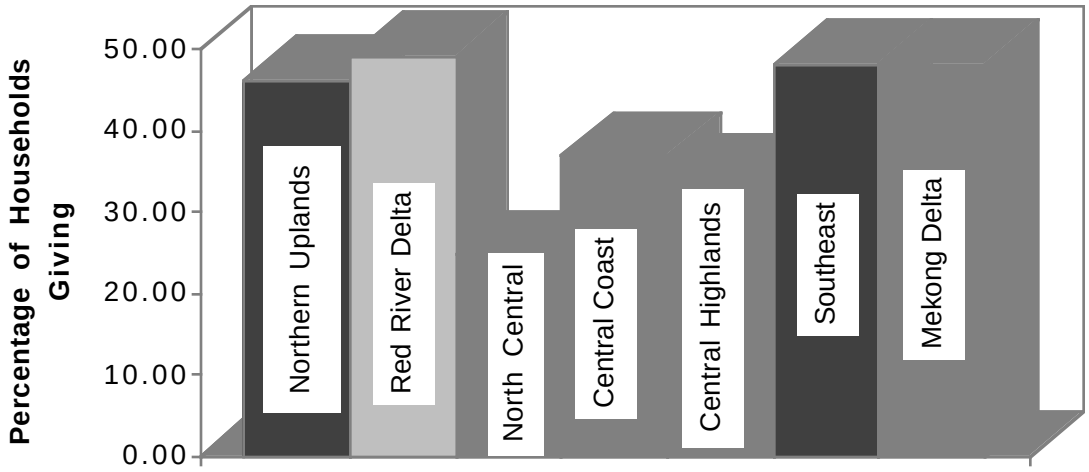


The Central Coast has the highest incidence of recipients, while the North Central region has the lowest. The Mekong Delta has the highest proportion of givers while the North Central is the lowest.

Percentage of Vietnamese Households Receiving Private Transfers by Region



Percentage of Vietnamese Households Giving Private Transfers by Region



Private transfers account for a significant fraction of total household income.[5] For the sample overall, gross transfer receipts comprise 12 percent of total household income (Table 1, column 1).[6] The corresponding figure for the sample of net recipients (Table 1, Column 2) is 27 percent. *Net* transfer receipts for this sample, as a fraction of total income, is 24.7 percent of total household income. Further, net donors give away 4.7 percent of their income (Table 1, column 3).

Gross transfers received for the whole sample, reported in the first column of Table 1, (768 thousand Dong) are an order of magnitude higher than transfers given (184 thousand Dong), but the two measures are not directly comparable. Transfers received contain two components not contained in transfers given: dowries (41 thousand Dong) and loans from relatives (172 thousand Dong). Further, households receive a large amount of transfers from abroad (284 thousand Dong). Those sub-categories are displayed at the bottom of Table 1.

Still another way to gauge the importance of private transfers is to look at their impact on the distribution of household income. We subtracted both private and public transfers from household income, then ranked households by quintile, according to pre-transfer income (where "transfers" include both private and public ones). Public transfers include family-related and unemployment benefits, special in-kind subsidies provided by firms and local authorities and for, *inter alia*, medical and housing expenses and retirement income. Before transfers, the lowest quintile has 4.1 percent of total income (Table 2). After private transfers, the lowest quintile's income share rises to 5.6 percent--an increase of 38.1 percent. The effect of public transfers is smaller: after adding them to pre-transfer income, the lowest quintile's share of income rises by only 15 percent.[7]

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[5]Income and transfer figures are adjusted for price differences across regions.

[6]Private transfer figures from other countries would not be strictly comparable because of discrepancies in survey methods. With this caveat in mind, note that the corresponding aggregates for private transfers in other countries are as follows: urban Peru--4 percent (Cox and Jimenez [1992]); urban Philippines--12 percent (Cox and Jimenez [1995]); Poland--4 percent (Cox, Okrasa and Jimenez [1995]); United States--3.9 percent (Cox, Okrasa and Jimenez [1993]).

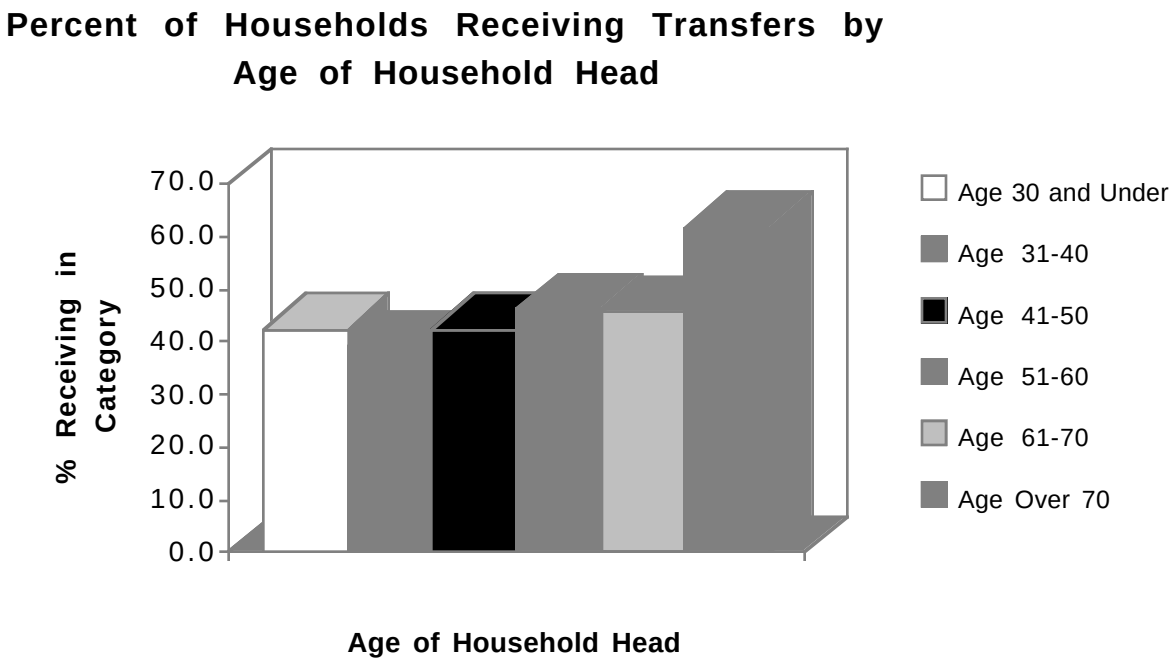
[7]If we focus on the poorest of the poor by looking at the bottom 5% the same qualitative results are obtained. Private transfers boost income more than public ones do. Private transfers raise this group's share from 0.352 to 1.138. Public transfers raise it from 0.352 to 0.514.

Transfer Patterns

What patterns do private transfers display? Do they act like publicly provided transfers in equalizing the distribution of income and providing assistance to households that are especially vulnerable? How do they vary by age? Below we describe the salient patterns for private transfers. We start by defining pre-private-transfer income as income before any private transfers occur. We subtract transfers received from total household income and add transfers given. Pre-private-transfer income for net recipients is 5,409 thousand Dong per year (Table 1, column 2). The corresponding figure for net givers is much higher--8,010 thousand Dong per year (Table 1, column 3). The income of those not involved with private transfers is much less than that of both givers and recipients--4,489 thousand Dong per year.

In most ways recipients appear much more vulnerable than donors (Table 1). They are more frequently headed by someone who was ill, for example, and retired heads are far more prevalent among net recipients than net donors. Private transfers also tend to flow from young to old. The incidence and amount of transfers received by age category is presented below:

Age of Household Head	Percentage Receiving	Average Amount (TDong)	Average Amount Among Recipients (TDong)
15-30	42.4	507	1,195
31-40	39.0	612	1,570
41-50	42.4	784	1,851
51-60	46.1	1,085	2,354
61-70	45.5	768	1,688
71 and over	61.6	1,322	2,144



Transfer receipts are by far most frequent among the very elderly (aged 71 and over). Well over half of them receive transfers and the amounts received are relatively large. This pattern suggests that private transfers provide old-age security, as is the case in Peru (Cox and Jimenez [1992]). The fraction of private transfers allocated to the young in Viet Nam is a good deal smaller than in developed countries. The age pattern suggests that private transfers are not concentrated as much on facilitating human capital investment as in richer countries.[8]

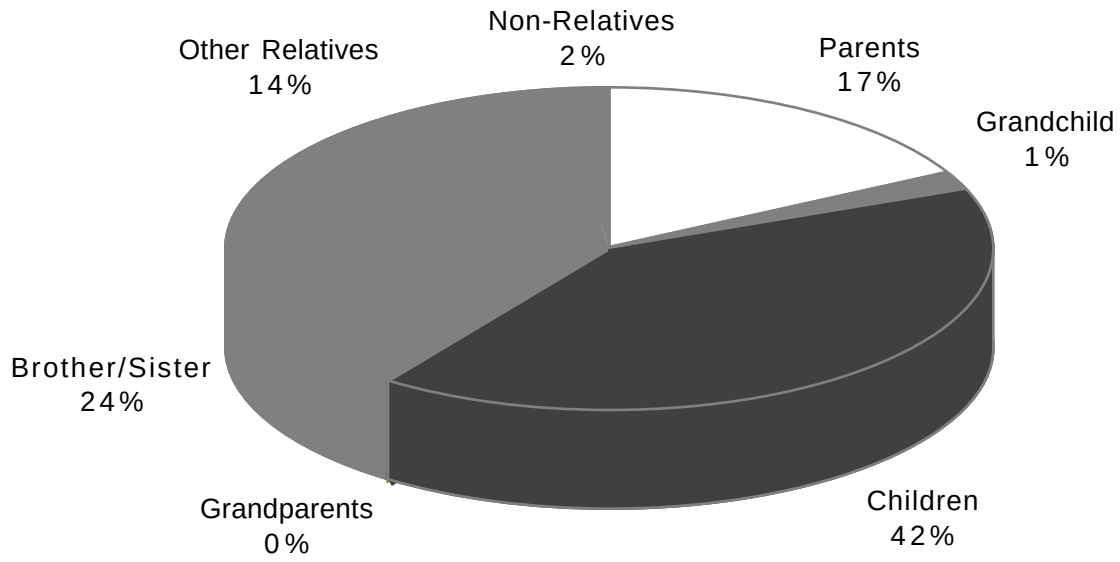
The generational patterns are similar for urban and rural subsamples. Though the pattern is slightly more pronounced among rural households, in each case transfers from young to old predominate. For example, among rural households, 41 percent of transfers flow from children to parents; 18 percent of transfers flow in the opposite direction. The corresponding figures for urban households are 42 and 17 percent respectively.

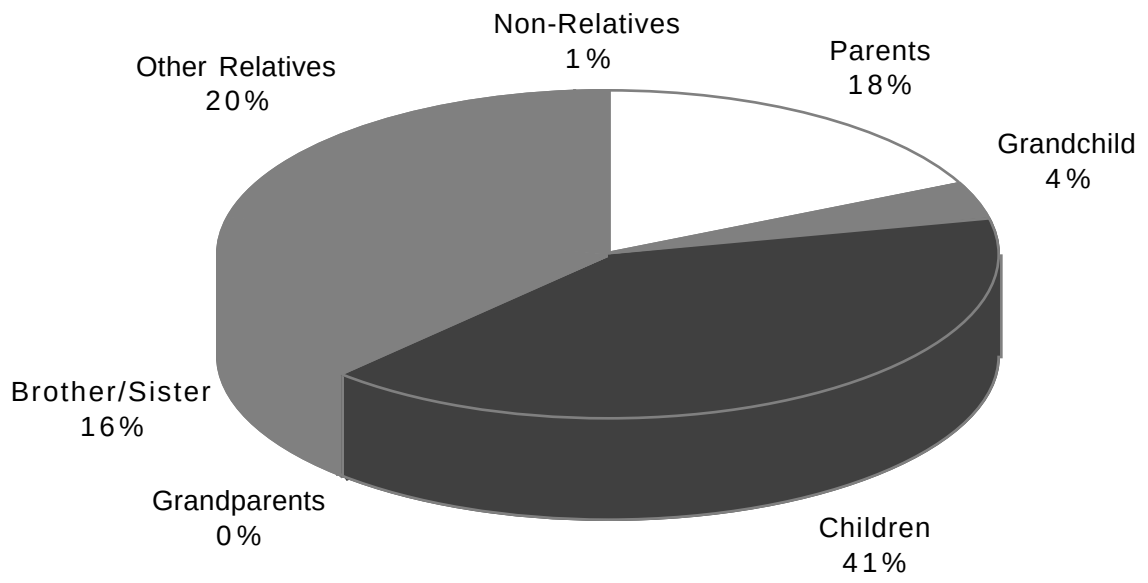
[8]Since most Vietnamese finish formal education by age 18, and most universities in Viet Nam are public, few inter-household transfers would be expected to go to students. But private transfers to students are not the only way to enhance human capital. Transfers enabling young workers to invest in on-the-job training are another form of human-capital enhancing transfer.

Receiving private transfers is more frequent among urban households than rural ones, and urban households receive two and half times more on average. The urban-rural breakdown for receipts is presented below:

	Number	Percentage Receiving	Average Amount(TDong)	Average Amount Among Recipients(TDong)
Urban	755	54.7	1,974	3,608
Rural	3,067	40.9	472	1,155

Sources of Private Transfers Received in Urban Vietnamese Households (Percent)





5. *Multivariate Analysis*

While the unconditional means reported above are a good way to get acquainted with private transfer patterns, they are inadequate for analyzing partial effects of determinants of private transfers. For this reason we turn to a multivariate analysis of transfer behavior.

Specification of Transfer Functions

We estimate the incidence of transfers received, and, conditional on receipt, the amount received. In each equation, the following household characteristics are included in the specification:

a. *Household Resources*

Household resources are measured by total (pre-private transfer) income, including income from agricultural activities, businesses, wage income, and income from non-labor sources such as

interest and rent. Also entered separately are net income from the Social Fund and from the Security Fund. Social Fund income is mostly comprised of pensions, especially for war veterans, and disability payments, while the Security Fund is generally for social relief (poverty programs).

In addition to these measures we enter several other variables correlated with household resources. We include the level of education of the household head to proxy household permanent income. We also include dummies indicating the employment status of the household head as well as those of other household members, and the amount of land owned.

b. *Age*

The simple descriptive evidence presented above suggests that age matters for transfer behavior. We enter a quadratic in the age of the household head and interact age with income. One reason why the timing of transfers over the life-cycle is likely to be important has to do with liquidity constraints (Cox [1990]). If households are subject to binding borrowing constraints, for example, the transfer receipts would be concentrated early in life, when current resources are low. In contrast, if transfers serve mainly as old-age support, as the descriptive evidence above indicates, they would occur later in life. Impediments to the acquisition of financial and durable assets, such as the threat of inflation, theft or natural disasters, could contribute to the formation of private old-age support systems (Nugent [1985]). Also, loss in confidence in the banking sector due to the collapse of the rural banking system in the early 1990's probably encouraged the formation of private transfer networks. In contrast, if transfers serve mainly as old-age support, as the descriptive evidence above indicates, they would occur later in life.

c. *Demographic Characteristics*

We enter a vector of household demographic characteristics in addition to age: gender of the household head, marital status, family size and the number of children by age. Many studies indicate that transfers are targeted to female-headed households (for a review of the evidence, see Cox and Jimenez [1990]). Marital status has also been found to be an important determinant of transfers (Cox [1987]). And, holding household resources constant, we might expect more

transfers to be targeted to larger families, since there would be more mouths to feed. We also include the number of young children living outside the household as a regressor.[9]

d. *Health Variables*

To see if private transfers respond to economic distress caused by health problems, we include two health indicators in the transfer function. The first is the number of days the household members were sick in the past 12 months. The second is the number of days of work missed by household members because of sickness in the past 12 months.

Regional Variables

In light of the descriptive evidence indicating regional differences in transfer participation, we enter a set of regional dummies in the transfer functions. Further, we calculated three region-specific economic indicators: average regional income, the average unemployment rate and the variance of log-income. The first two proxy the economic condition of the region, and the expected signs of these variables, *a priori*, are ambiguous. On the one hand, economic distress could galvanize households and increase transfer activity. On the other hand, such distress could weaken networks if, for example, concerns about future earning potential cause private-transfer donors to retrench. The log-variance variable is included because, *ceteris paribus*, the more unequal is pre-transfer income the more participation in transfer activity. Of course, this interpretation of the regional variables makes the implicit assumption that transfers do not cross regional boundaries, which need not be true.

Multivariate Results

We consider private transfer behavior in two stages: the transfer decision and, conditional on a transfer occurring, the amount. The first stage is analyzed with probit and the second with ordinary least squares performed on the non-limit observations.[10] The probit results are presented in the first column of table 3 and the OLS results in the second.

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[9]The VNLSS only records the number of children under age 30 living outside the household.

[10]An alternative specification would be to model transfer amounts using Heckman's (1979) generalized Tobit. However, this specification poses difficult identification problems in the context of private transfer behavior. In particular, to identify the generalized Tobit, we need one or more variables that are contained in the probit but not in the equation for transfer amounts. Since theories of private transfers provide little guidance for such a specification, we opt for the simpler framework, while recognizing that our estimates could be subject to sample-selection bias as a result.

a. *Household Resources*

The probit results indicate that transfers are targeted toward low-income households (table 3, column 1). For example, increasing pre-transfer income from 3,000 to 9,000 thousand Dong would reduce the probability of transfer receipt by almost 8 percentage points for a household headed by a 35-year-old. But the OLS results indicate that, conditional on receiving a transfer, the same boost in income would actually raise the amount of private transfers received by 569 thousand Dong. One possible explanation for the positive income effect has to do with the exchange motivation for private transfers. An increase in pre-transfer income enhances the bargaining power of someone involved in exchange, which in turn may lead to larger private transfers (Cox [1987]).

We also entered two measures of public transfers, social fund and security fund income. Having the mean value of social fund income reduces the probability of transfer incidence slightly (the effect is only on the margin of statistical significance). The OLS point estimates for social fund and security fund income are large enough to suggest the possibility of "crowding out," but the coefficient estimates are extremely imprecise.

If the household head is employed, the probability of transfer receipt is reduced by 3.8 percentage points, and if the household has multiple earners the probability of receipt is reduced by 6.5 percentage points. These variables are inversely related to transfer amounts as well, and the coefficients are large, though neither one is significant. (The next section provides a better sense of the magnitudes of these coefficients because we use them to simulate the transfer effect of job loss of the household head.)

Evidence of the connection between private transfers and human capital accumulation is provided by the schooling variables. Having a secondary education or better increases the probability of transfer receipt by about 7 percentage points compared to the reference category, which is 5 or fewer years of education. And having a university education has a large, positive and statistically significant effect on private transfer amounts.

There are several possible interpretations for the education effects. The first has to do with liquidity constraints. Holding current income constant, more education means higher permanent income and hence higher desired consumption. If households are liquidity constrained they may not be able to borrow enough to fill the gap between optimal consumption and income, so that private transfers are more likely to fill some of the gap.

But other interpretations for the positive education effects exist. A well-educated household is likely to have received private transfers for education in the past. If private transfer receipts are positively correlated over time, well-educated households would still be more likely to be receiving private transfers during the sample period. And being well-educated could be proxying connections to well-heeled relatives.

b. *Age*

Age patterns for private transfers are important because they are related to economic growth. The more transfers are targeted to the young, the better the conditions for growth. The empirical estimates indicate that private transfers are targeted toward both the very young and the very old, while the probability of receipt is lowest for the middle-aged. These findings suggest that private transfers are used both to finance human capital investment and to provide old-age support.

The age profile for the probability of transfer receipts is rather pronounced. Holding other right-hand-side variables at their sample means, the predicted probability of transfer receipt for an 18-year-old is 0.48. The predicted probability falls to a trough at age 47 (0.349) then rises. The predicted probability of transfer receipt for a household headed by a 70-year-old, for example, is 0.43. The estimated interaction between income and age is positive and statistically significant, and the age profile is more pronounced for low-income households, suggesting that capital market imperfections are more severe for this group. (An illustration of the profile is given in figure 1.)

c. *Demographic Characteristics*

Consistent with nearly all other studies of private transfer behavior, we find that transfers tend to be targeted toward female-headed households. The probit results indicate that female status

raises the probability of transfer receipt by over 8 percentage points, and increases transfer amounts received by nearly 1000 thousand Dong.

There are a couple of possible explanations for the strong effect of female status on private transfers. One is that, even controlling for household resources, female status could be picking up household resource effects. For example, women might have experienced career interruptions which reduced income in the past. So the female effect could be consistent with the altruistic motivation for private transfers. But an alternative explanation could have to do with involvement in the provision of services exchanged between households. For example, if women are more likely to provide care for children or elderly persons from other households, and they are being compensated for these services, they would be more likely to receive transfers.[11]

Families with many adults living under one roof are more likely to receive a transfer, and these effects of household size in the probit are substantial. Adding an additional dependent (i.e., non-earning) adult to the household increases the probability of transfer receipt by over 2 percentage points. The effect of household size on transfer amounts is also positive, though not statistically significant.

Having additional children has little effect on transfers, however, because the negative coefficients for the child variables roughly offset the positive household size coefficient. But having an additional child under 30 living outside the household increases the probability of transfer receipt by about 4 percentage points.

d. *Health Variables*

We find that an increase in the number of days household members were sick increases the probability of transfer receipt. This effect is consistent with findings for Peru (Cox and Jimenez [1992]) and suggests that private transfers respond to some household emergencies. However, the number of days of work missed due to illness do not appear to elicit much in the way of private transfer responses.

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[11]For further discussion of the connection between female status and exchange-related private transfers in the United States, see Cox (1987).

e. *Regional Variables*

Each of the 3 region-specific measures of resources has a large impact on transfers. (Recall that each region-specific value is calculated separately for urban versus rural--regional income, for example, takes on 14 different values corresponding to urban versus rural values for the 7 regions.) Increasing regional income from the 25th percentile to the 75th percentile increases the probability of transfer receipt by 10 percentage points. And raising the average employment rate from 70 to 90 percent decreases the probability of receipt by 3.3 percentage points. Doubling the log-variance of income increases the probability of receipt by over 8 percentage points.

Two regions in the probit equation stand out as being significantly different from the others: the North Central and the Northern Uplands. All else equal, the probability of transfer receipt is 17.5 percentage points lower in the North Central, for example. Note that these conditional region effects contrast with the unconditional ones discussed above.

6. *Simulation of the Private Transfer Effects of Employment Loss*

This section uses the empirical results to address the question, "How might private transfers respond to income shortfalls? The example we consider is one in which the household head, currently earning 3,000 thousand Dong and living in a household where someone else also earns 3,000 thousand Dong, loses his employment and earnings. Suppose further that this household is average in every respect, except that it is not currently receiving any private transfers. We use the estimated probit and OLS equations to gauge the private transfer response.

The OLS regression results in the second column of Table 3 indicate that the predicted transfer amount for this hypothetical household would be 1,734 thousand Dong, which is not far from the sample average among recipients of 1,773 thousand Dong, and over half of the hypothetical shortfall in earnings. These calculations suggest that the potential for private transfers to cushion the effects of dis-employment is conceivably quite large.

But what are the chances of this happening? To answer this question we turn to the probit results, which imply that becoming unemployed and losing 3,000 thousand Dong of earnings increases the probability of receiving a private transfer by about 6 percentage points. Given that

the household was originally in the 61 percent of the sample not receiving a transfer (and assuming there are no fixed effects in the probability of receiving private transfers), the chances that the household would now receive a transfer is 6/61 = 9.8 percent, or about 1 out of 10.

So private transfers are potentially important for alleviating the effects of job loss, but because not every household will receive them, their impact in expected value terms is not very large.

7. *Conclusion*

We find that private transfers follow patterns that suggest that they are responsive to household resources, age, education and a variety of other characteristics. Private transfers tend to be targeted toward vulnerable households: the young, the old, low-income households and those stricken with illness. Private transfers help equalize the distribution of income. They are also sensitive to regional indicators of living standards.

The finding that private transfer patterns are often similar to those of means-tested public transfers raises the possibility that the two are substitutes, and that increases in the former could crowd out the latter. The potential scope for crowding out in Vietnam appears particularly large, since private transfers are quite widespread. The specter of crowding out presents policymakers with difficult targeting problems, since not all of a public transfer program's benefits would accrue to its intended beneficiaries. One obvious solution to crowding out would be to means test on all forms of income, including private transfers, but implementing such a screen would likely prove a formidable challenge. Another avenue for better targeting of public transfers would be to focus on those which are less prone to crowding out. Measuring differential crowd-out rates of various public programs is a difficult but potentially valuable avenue for future research.

Another finding which could prove important from a policy perspective is the role of private transfers in old-age support. Households headed by someone over age 70 for example, rely on private transfers for over a quarter of their income, on average. Part of the pattern is surely related to the filial piety inculcated by Confucian teachings. One consequence of the pattern of old-age support might be to discourage life-cycle saving, which in turn could impede capital

formation. Further investigation of the connection between private old-age support and savings incentives is an important priority for future research.

Appendix One : Sample-Selection Criteria

Observations with unrealistic values for income are deleted from the sample. A value for income is considered unrealistic if it differs greatly from total expenditure. First a measure of the total amount of money brought in by the household, "net inflow," is measured. Net inflow is composed of real income, the amount received from land sold, other income not already included in income, and the amount the household received from borrowing, all net of transfers given. Net inflow should not be much greater than total expenditure, except possibly for wealthy households. Also, net inflow should not be much smaller than total expenditure, except possibly for poor households. Also households with negative levels of income are excluded since the variance of the log of income can not be calculated. The following criteria were used to select this sample.

Selection Criteria		Number of Observations Deleted
Total number of records: 4,800		
1. Zero nominal income		162
2. Duplicate income numbers		2
3. No data except for income		1
4. Discrepancies between net inflow and total expenditures		759
a. Total expenditure is less than the 75th percentile and net inflow is three times as much as total expenditure	*52*	
b. Total expenditure is above the 10th percentile and net inflow is less than 1/3 of total expenditure.	*669*	
c. Real Income is negative	*308*	
d. Net inflow net of savings is more than four times total expenditure	*42*	
5. Non-negative pre-transfer income		54

Remaining Sample: 3,822 observations.

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Variable Name	[1] All Households	[2] Net Recipients	[3] Net Donors	[4] Others
Income Variables				
Income	6,452	7,182	7,654	4,489
Income Before Public Transfers	6,265	6,987	7,400	4,371
Income Before Private Transfers	5,868	5,409	8,010	4,489
Income Before Public and Private Transfers	5,680	5,214	7,755	4,371
Income from Public Transfers	188	196	254	118
Net Income from the Social Fund	172	178	238	107
Receives Positive Net Income from Social Fund	0.156	0.164	0.192	0.113
Net Income from the Security Fund	18	22	19	14
Receives Positive Net Income from Security Fund	0.105	0.117	0.098	0.096
Area of Land	915.40	813.45	1351.63	645.01
Employment Variables				
Head is Employed	0.824	0.775	0.843	0.867
Spouse is Employed	0.638	0.560	0.713	0.663
Head Was Unemployed in Past Year	0.015	0.011	0.013	0.021
Number of Employed Household Members	2.725	2.564	2.992	2.680
Head Engages in Individual Economic Activity	0.138	0.144	0.133	0.135
Head Engages in Entrepreneurial Activity	0.062	0.063	0.073	0.051
Education				
Head Completed 0-5 Years of High School	0.474	0.471	0.453	0.495
Head Completed 6-8 Years of High School	0.145	0.132	0.144	0.161
Head Completed 9-13 Years of High School	0.381	0.396	0.403	0.344
Head has University Education	0.053	0.061	0.069	0.029
Head Has Technical School Education	0.116	0.131	0.131	0.085
Other Characteristics				
Age of Household Head	45.333	46.617	45.960	43.219
Age Less Than 30	0.136	0.143	0.087	0.172
Age Greater Than 60	0.189	0.223	0.175	0.161
Female Head	0.268	0.322	0.213	0.254
Married Household	0.817	0.777	0.875	0.813
Married Female Head	0.117	0.138	0.112	0.098
Household Size	5.027	4.919	5.326	4.888
Number of Children Under 1 yr	0.107	0.117	0.091	0.108
Number of Children 1-7 yrs.	0.852	0.777	0.797	0.990
Number of Children 8-15 yrs.	1.008	0.912	1.161	0.987
Urban Household	0.198	0.249	0.181	0.150
Head Ill in Past Year	0.729	0.766	0.693	0.718
Number of Days Ill in Past Year	10.898	12.249	10.198	9.900
Number of Work Days Missed Because of Illness	6.770	7.575	5.937	6.551
Number of Children Under 30 Away From Home	0.532	0.596	0.578	0.412
Head is Retired	0.075	0.104	0.066	0.049
Head is Attending School	0.002	0.003	0.001	0.001
Head is Chinese	0.020	0.031	0.014	0.013
Northern Uplands	0.167	0.158	0.161	0.181
Red River Delta	0.272	0.278	0.306	0.235
North Central	0.138	0.127	0.081	0.202
Central Coast	0.099	0.109	0.070	0.115
Central Highlands	0.027	0.027	0.018	0.035
Southeast	0.106	0.111	0.105	0.100
Mekong Delta	0.191	0.189	0.259	0.133
Transfers				
Proportion Giving Net Transfers	0.290	0.000	1.000	0.000
Net Transfer Given (amount)	103	0	356	0
Proportion Receiving Net Transfers	0.388	1.000	0.000	0.000
Net Transfer Received (amount)	688	1,773	0	0
Proportion Giving Gross Transfers	0.464	0.430	1.000	0.022
Gross Transfers Given (amount)	184	166	406	5
Proportion Receiving Gross Transfers	0.436	1.000	0.141	0.022
Proportion Receiving Gross Transfers From Abroad	0.048	0.119	0.006	0.000
Gross Transfers Received (amount)	768	1,939	50	5
Domestic Transfers Received (amount)	272	674	33	3

Transfers Received From Abroad (amount)	284	729	4	0
Dowries Received (amount)	41	103	1	0
Loans Recieved (amount)	172	433	12	1
Sample Size	3,822	1,483	1,109	1,230

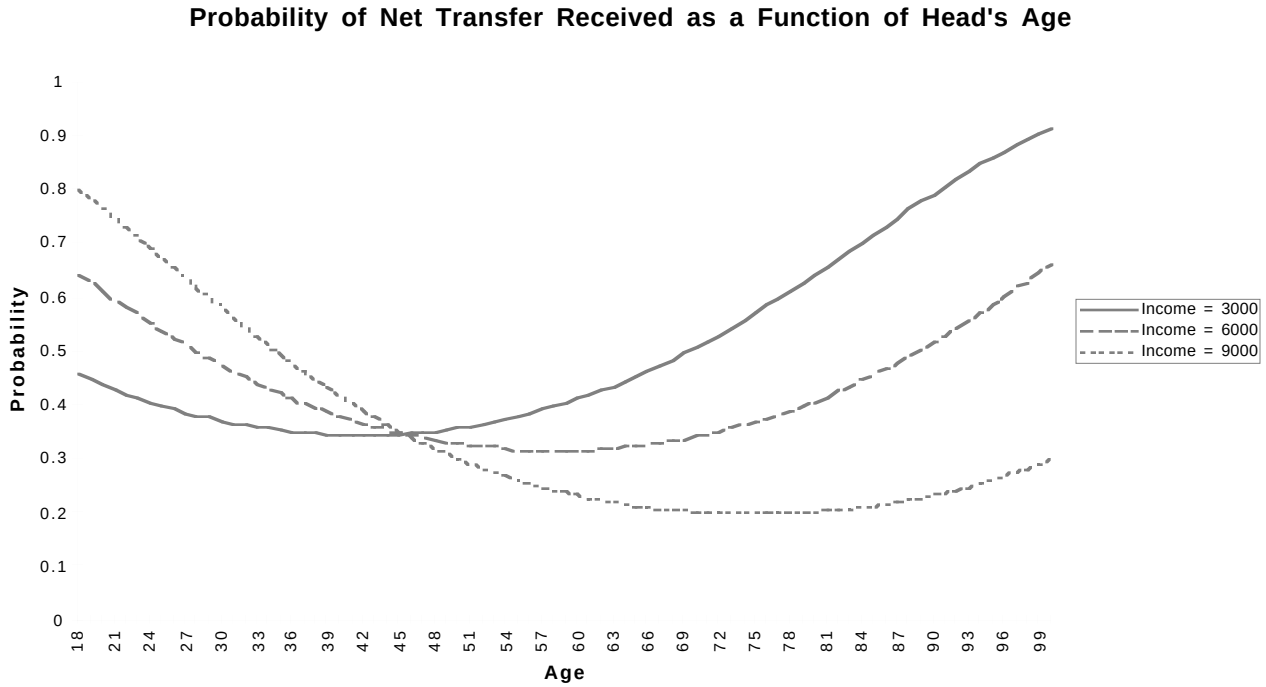
Table 2

Effects of Public and Private Transfers on the Distribution of Income

[1] Income Quintile	[2] Before Transfers	[3] After Private Transfers	[4] Percentage Change from (2)	[5] After Public Transfers	[6] Percentage Change from (2)	[7] Private & Public Transfers	[8] After both Percentage Change from (2)
Lowest (below 1,915)	4.057	5.602	0.381	4.667	0.150	6.111	0.506
Second (1,915-3,118)	8.836	8.937	0.011	9.071	0.027	9.147	0.035
Third (3,118-4,716)	13.537	13.425	-0.008	13.712	0.013	13.588	0.004
Fourth (4,716-7,566)	20.975	20.546	-0.020	20.945	-0.001	20.531	-0.021
Highest (7,566 & above)	52.595	51.490	-0.021	51.605	-0.019	50.622	-0.038
	100.000	100.000		100.000		100.000	

Variable Name	Coefficient	[Probit] T-Ratio	Mean of Variable
Income Variables			
Income Before Public and Private Transfers	-4.34E-05	-3.32	5680.070
Receives Positive Net Income From Social Fund	7.37E-02	0.81	0.156
Net Income From Social Fund	-1.14E-04	-1.81	172.271
Recieves Positive Net Income From Security Fund	4.19E-02	0.53	0.104
Net Income From Security Fund	1.40E-04	0.65	15.247
Area of Land	7.12E-07	0.10	915.400
Income*Head's Age	4.95E-07	2.07	261203.000
Employment Variables			
Head is Employed	-0.100	-1.32	0.824
Multiple Earners in Household	-0.176	-2.73	0.820
Education			
Head Completed 6-8 Years of High School	0.042	0.61	0.145
Head Completed 9-13 Years of High School	0.183	3.00	0.381
Head has Technical School Education	0.129	1.33	0.053
Head has University Education	0.143	1.95	0.116
Other Characteristics			
Age of Household Head	-0.041	-3.53	45.333
Head's Age Squared	4.00E-04	3.48	2270.650

Female Head	0.141	1.09	0.268
Married Head	-0.103	-0.85	0.817
Married Female Head	0.090	0.62	0.117
Household Size	0.031	1.77	5.027
Number of Children Under 1 yr	0.058	0.79	0.107
Number of Children 1-7 yrs.	-0.054	-1.81	0.852
Number of Children 8-15 yrs.	-0.031	-1.15	1.008
Number of Children Under 30 Away From Home	0.104	4.23	0.532
Number of Days Ill in Past Year	0.005	2.31	10.898
Number of Work Days Missed Because of Illness	0.000	0.00	6.770
Head is Retired	0.051	0.46	0.075
Head is Attending School	0.681	1.25	0.002
Head is Chinese	0.359	2.22	0.020
Regional Variables			
Mean Income of Region/Urban-Rural	6.67E-05	1.21	5680.070
Employment Rate of Region/Urban-Rural	-0.432	-0.21	0.824
Variance of Log Income of Region/Urban-Rural	0.181	3.01	1.185
Urban Household	-0.005	-0.05	0.198
Northern Uplands	0.023	0.16	0.167
Red River Delta	-0.070	-0.42	0.272
North Central	-0.568	-2.22	0.138
Central Coast	-0.100	-0.64	0.099
Southeast	-0.494	-2.48	0.106
Mekong Delta	-0.183	-1.29	0.191
Constant	0.661	0.33	_._


Probability of Net Transfer Received as a Function of Head's Age
Probability
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66 69 72 75 78 81 84 87 90 93 96 99
Age
Income = 3000
Income = 6000
Income = 9000