

**BANCA D'ITALIA**

**Temi di discussione**

**del Servizio Studi**

**Do Intergenerational Transfers Offset Capital Market  
Imperfections? Evidence from a Cross-Section  
of Italian Households**

**by Luigi Guiso and Tullio Jappelli**



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### Abstract

We investigate whether a system of family finance exists and, if so, to what extent it is able to compensate for capital market imperfections. One of the implications of a simple model of intergenerational transfers is that the probability of a liquidity constrained consumer receiving a transfer is negatively correlated with his current endowment and positively correlated with his future resources. We test this proposition using a recent survey of Italian households in which both transfer recipients and liquidity constrained households are directly observable. The results indicate that private transfers help to ease the effect of capital market imperfections. However, we also find that a substantial number of liquidity constrained households remain even after transfers have been made.

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## 1. Introduction

It is a commonly held opinion that individuals are strongly motivated to develop non-market institutions to overcome, at least in part, market deficiencies. In a recent paper, Arnott and Stiglitz (1988) point out that where there is no insurance market, individuals are prompted to develop unambiguously beneficial informal markets. They conclude that such informal markets, as those provided by arrangements within the family, are more likely to exist and to improve welfare in economies with less developed financial markets. In this paper we explore the validity of this general principle, in connection with the smoothing of consumption by individuals over their lifetimes.

According to modern theories of consumption, efficient capital markets are needed if the consumer is to be able to borrow against future income to finance current consumption. However, as Stiglitz and Weiss (1981) have shown, adverse selection and/or moral hazard may prevent people from borrowing the desired amount. The existence of such liquidity constraints may have important implications, especially in the context of the debt neutrality proposition (Barro, 1974), the optimality of progressive taxation (Hubbard and Judd, 1986), and the effectiveness of transitory tax levies.

In principle, capital market imperfections could be offset by a chain of operative intergenerational transfers targeted towards liquidity constrained households. However, bequests are almost certain to be timed incorrectly: only chance can ensure that they occur precisely when liquidity constraints are binding. On the other hand, transfers between living people, whether in the form of intergenerational gifts or loans may compensate more effectively for financial market imperfections and relieve consumers from borrowing constraints.

In order to study the extent to which inter-vivos transfers overcome capital market imperfections, it is

necessary to develop a model able to describe the pattern of such transfers across generations. One way to model intergenerational transfers is to assume that transfers originate from middle-aged individuals and are directed towards both the younger and the older generations. Because of the illiquidity of human capital, the young are more likely to be liquidity constrained and to receive transfers in the form of loans or gifts, while gifts to the older generation arise from pure altruism. Loan repayment occurs when the consumer is in his middle age, and is directed towards the previous generation, which is now older. In Section 2, we provide a model to explain transfers directed towards the young as well as towards the elderly and derive comparative static results relating the transfer decision and the amount of transfer received to households' current and future endowments.

We test the main theoretical prediction of the model exploiting a data set in which both liquidity constrained households and transfer recipients are directly observable. This enables us to quantify the importance of inter-vivos transfers, to study the characteristics of transfer recipients, and to test whether transfers are targeted towards liquidity constrained households. The data set, described in Section 3, is drawn from a recent survey of Italian households. The Italian economy provides an ideal environment to study the connection between private transfer and capital market imperfections because there is a strong presumption that Italian households face tight borrowing constraints. Total liabilities of the household sector in Italy are extremely low when compared with those of other developed economies (see Table 1). As shown by Jappelli and Pagano (1989) these figures can be interpreted as evidence of widespread liquidity constraints in Italy, rather than arising from a low propensity to borrow by Italian households.

In Section 4 we comment on the results of a logit model

relating the probability of receiving a transfer to a proxy for liquidity constraints and to other variables that are observable in the cross-section. The results indicate that private transfers help to ease the effect of capital market imperfections. Indeed, we find that private transfers are mainly targeted towards households which do not have access to credit markets. The average size of such transfers is large enough to enable at least some consumers to move closer to the unconstrained optimal consumption path. However, we also find that many who are liquidity constrained receive no transfers. In 1987, out of a sample of 1,249 liquidity constrained households, only 106 received transfers. Thus a substantial number of liquidity constrained households remain even after transfers have been made. Section 5 summarizes our conclusions.

## 2.1 A model of intergenerational transfers

We consider a simple overlapping generations model with altruistic consumers. The model accounts for transfers to the younger as well as to the older generation. A similar theoretical structure has been used by Altig and Davies (1987) to study the policy implications of the interaction between borrowing constraints and intergenerational transfers. Each individual (household) lives for three periods during which he is "young", "middle-aged" and "old" respectively. At the end of the third period he dies and is replaced by an identical new consumer.

Let  $c_{it}$  and  $e_{it}$  be the consumption and income of a member of generation  $t$  when he is age  $i$  ( $i = 1, 2, 3$ ). Income derives from inelastically supplying one unit of labor with a hump-shaped productivity profile: thus  $e_{1t} < e_{2t} > e_{3t}$  for all values of  $t$ . Consumption smoothing leads to desired optimal consumption by the young,  $c_1^*$ , exceeding current labour income  $e_1$ . We further assume that the younger gene-

ration cannot borrow against future labour income because of capital market imperfections<sup>1</sup>. It follows that first period consumption is constrained by disposable income,  $e_{1t} + \tau_{t-1}$ , where  $\tau_{t-1}$  is a transfer received from generation  $t-1$ . The transfer is in the form of a gift or a loan. Loans are payed back in the next period. During his remaining life the consumer can borrow or lend freely at the constant rate of interest  $r$ .

At age 2 the individual transfers  $\tau_t$  to the younger generation, spends  $R_{t-1}$  to pay back the loans received when young and makes gifts  $g_t$  to the old generation (generation  $t-1$ ). During the third period of life he consumes total available resources, i.e. savings from the previous period,  $s_{2t}$ , gifts received from the next generation,  $g_{t+1}$ , loan repayments,  $R_t$ , and his third period income,  $e_{3t}$ . The sequence of budget constraints facing the generation  $t$  household can be written as:

$$c_{1t} = e_{1t} + \tau_{t-1} \quad (1)$$

$$c_{2t} + g_t + \tau_t + R_{t-1} + s_{2t} = e_{2t} \quad (2)$$

$$c_{3t} = e_{3t} + (1+r) s_{2t} + g_{t+1} + R_t \quad (3)$$

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1. While other forms of liquidity constraints are possible, we assume that some individuals are rationed out from the credit market. On the one hand this assumption is analytically convenient; on the other, as will be seen in section 3, it appears that it is able to capture an important aspect of the actual working of the credit markets.

Combining the second and the third period budget constraints into a single equation we obtain:

$$c_{2t} + \frac{c_{3t}}{1+r} + \tau_t - \frac{R_t}{1+r} + R_{t-1} + g_t = \quad (2')$$

$$= e_{2t} + \frac{e_{3t}}{1+r} + \frac{g_{t+1}}{1+r}$$

A generation  $t$  household derives utility directly from life-time consumption according to the time separable utility function,  $u_t = u(c_{1t}) + \gamma u(c_{2t}) + \gamma^2 u(c_{3t})$ , where  $\gamma = 1/(1+\delta)$  and  $\delta$  is the subjective rate of time preference. We assume that  $u_t$  is twice-continuously differentiable, increasing and concave in each argument so that:

$$u_{it} = \frac{\partial u}{\partial c_{it}} > 0 \text{ and } \frac{\partial^2 u}{\partial c_{it}^2} < 0.$$

We further assume that  $\lim_{c_{it} \rightarrow 0} u_{it} = \infty$  and  $\lim_{c_{it} \rightarrow \infty} u_{it} = 0$

A member of generation  $t$  also derives utility from the well-being of his parents and that of his descendants according to the Buiter-Carmichael (1984) specification of the utility function with two-sided altruism:

$$V_t = (1-\alpha\beta) u_t + \alpha u_{t-1} + \beta V_{t+1} \quad (4)$$

where  $\alpha$  and  $\beta$  measure the concern of the current generation for the welfare of the previous and the next generation respectively<sup>2</sup>.

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2. As shown by Kimball (1987) and Abel (1987) there are restrictions on the value that the parameters  $\alpha$  and  $\beta$  can assume.

The problem for the generation  $t$  household is to choose consumption in the three periods, transfers  $g_t$  and  $\tau_t$  and loan repayment  $R_t$  so as to maximize (4) subject to the budget constraints (1) and (2') and the following non-negativity constraints:

$$\tau_t \geq 0 \quad (5)$$

$$g_t \geq 0 \quad (6)$$

$$\tau_t - \frac{R_t}{1+r} \geq 0 \quad (7)$$

Conditions (5) and (6) preclude the possibility that the current generation imposes negative transfers on the younger and older generations. Condition (7) states that the present value of loan repayment cannot exceed the amount of the loan (if  $R_t \geq 0$ ). If transfers are operative, i.e. if  $\tau_t > 0$  and (7) is binding, then the age 2 household acts as a bank for the age 1 household which has no access to the credit market. Note that if  $\tau_t = 0$  there are no inter-vivos transfers from parents to children. Further if  $-\frac{R_t}{1+r} > 0$  younger generation. Thus the structure of the model is flexible enough to accommodate inter-vivos gifts and loans, as well as bequests. Recalling that period 1 consumption is constrained by current disposable income, the first order conditions for the maximization problem are:

$$u_{2t} = \gamma(1+r) u_{3t} \quad (8)$$

$$u_{3t} \geq \frac{\alpha}{1+r} u_{3t-1} \quad (\text{with equality if } g > 0) \quad (9)$$

$$u_{1t+1} \leq \gamma(1+r) u_{2t+1} \quad (\text{with equality if } \tau_t > 0) \quad (10)$$

$$u_{3t} \geq \frac{\beta}{\gamma} u_{2t+1} \quad (\text{with equality if } \tau_t - \frac{R_t}{1+r} > 0) \quad (11)$$

The Euler condition (8) states that along the optimal consumption path the household is indifferent between one additional unit of consumption at age 2 and the present value of  $1+r$  additional units at age 3. Conditions (9) and (10) determine whether gifts and transfers are operative. If at the optimum  $g_t > 0$  and  $\tau_t > 0$ , then (9) and (10) hold with equality. Condition (9) then implies that the value of  $g_t$  is determined by the requirement that, at the optimum, the consumer is indifferent between consuming one additional unit himself, or deriving utility from the consumption of one additional unit by the parents. If  $\tau_t > 0$ , it follows from (10) that the consumption of generation  $t+1$  at age 1 is the same as would obtain in the absence of borrowing constraints.

Finally, condition (11) determines whether transfers  $\tau_t$  are mainly altruistic, ( $\tau - \frac{R_t}{1+r} > 0$ ), or rather take the form of a loan ( $\tau - \frac{R_t}{1+r} = 0$ ). In the latter case a parent with free access to credit markets acts as a bank for his children. In the former case (11) holds with equality and net transfers are such that a member of generation  $t$  is indifferent between consuming an additional unit when old or enjoying the indirect utility provided by an additional unit of consumption by his children.

## 2.2 Are transfers operative?

The main purpose of this paper is to determine whether the probability of receiving a transfer can be linked to observable characteristics of the population and to test whether transfers are targeted towards liquidity constrained individuals. We thus need to study the conditions under which transfers and gifts are operative. Conditions (8), (9) and (10) imply that  $g_t > 0$  and  $\tau_t > 0$  respectively if the following inequalities hold:

$$Z_g = u_{2t}(c_{2t}) - \alpha \gamma u_{3t-1}(c_{3t-1}) < 0$$

and

$$Z_\tau = u_{1t+1}(c_{1t+1}) - \gamma(1+r)u_{2t+1}(c_{2t+1}) > 0$$

The latent variable  $Z_g$ , evaluated at  $g_t = 0$ , measures the generation  $t$  net marginal gain in utility of making a gift to the older generation. Similarly, the latent variable  $Z_\tau$  evaluated at  $\tau_t = 0$ , represents the net marginal gain for the young generation of receiving a transfer.

Consider first a gift to the older generation. This takes place if the loss in utility suffered by the age 2 consumer is less than the gain obtained from transferring one unit of consumption to his parents. An increase in the donor's income, like an increase in concern for the old generation ( $\alpha$ ), lowers the value of  $Z_g$  and widens the gap between the loss and the gain of giving. The opposite holds for an increase in the recipient's income. Thus:

$$\frac{\partial Z_g}{\partial e_{2t}} < 0 \quad \text{and} \quad \frac{\partial Z_g}{\partial e_{3t-1}} > 0$$

On the other hand a transfer to the young takes place if the marginal utility of consumption in the first period, evaluated at  $\tau = 0$ , exceeds the value of an additional unit of consumption in the second period. Obviously this will be always true for a liquidity constrained consumer. Thus in our model transfers will be always operative when the consumer is rationed in the credit market; it follows that the Euler condition  $u_{1t+1} = \gamma(1+r)u_{2t+1}$  holds for the young generation

as well <sup>3</sup>.

An increase in the prospective recipient's current income reduces the probability of receiving a transfer, while an increase in his future income has the opposite effect, other things being equal. The reason is that an increase in current income relaxes the borrowing constraint, while higher future income raises desired consumption and the stringency of the constraint.

An increase in donor's income has no effect on the transfer decision if  $\tau_t - \frac{R_t}{(1+r)} = 0$ . However, if the transfer is motivated by altruism, an increase in  $e_{2t}$  raises  $Z_\tau$ . To summarize, the partial derivatives are:

$$\frac{\partial Z_\tau}{\partial e_{1t+1}} < 0 \quad \frac{\partial Z_\tau}{\partial e_{2t+1}} > 0 \quad \frac{\partial Z_\tau}{\partial e_{2t}} > 0$$

If there are no intergenerational loans, transfers to the young are independent of future income but still negatively correlated with current income. Even in this case, being liquidity constrained increases the probability of receiving a transfer.

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3. This is simply the implication of the assumptions that middle-aged consumers are not liquidity constrained and that there are no "imperfections", such as transaction costs or informational asymmetries, in the market for intergenerational loans.

### 3. Identifying transfer recipients and liquidity constrained households

In order to test the main implications of the model we require data on transfer recipients, current resources and proxies for future resources. Since the probability of receiving a transfer also depends on whether desired consumption exceeds currently observed consumption, we also need a proxy to identify liquidity constrained households. The data set is a large survey carried out in the Spring of 1988 by the Research Department of the Bank of Italy and described by Bollino, Cannari and D'Alessio (1989). Since the interviews were conducted at the beginning of 1988, the data refer to the year 1987. The survey contains fairly accurate data on consumption, income, wealth and several demographic characteristics for a total of 8,027 families.

Transfer recipients are defined as households in which at least one member received a gift from a relative or a friend during the year 1987<sup>4</sup>. Our definition implies that the household rather than the individual is the decision unit. The total number of transfer recipients in the data set is 213, or 2.7% of the sample. Unfortunately the number of transfer recipients underestimates the true number of total inter-vivos transfers for the following reasons:

- i) the definition of transfers does not include loans granted by relatives or friends;
- ii) the variable does not include transfers made within the family; these may be important if extended families are widespread - for example, elderly

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4. Another survey by the Italian Central Statistical Office shows that gifts between parents and children account for more than 70% of total gifts. The remaining 30% is accounted for by gifts between siblings and other relatives.

persons moving in with their children;

- iii) as with other surveys, there is the problem of misreporting income and therefore private transfers.

Even if it is taken for granted that the number of transfer recipients is somewhat underestimated, the proportion of recipients is fairly small<sup>5</sup>. We interpret the magnitude of this number as prima facie evidence that in Italy families do not play a prominent role in overcoming the market imperfections that lead to liquidity constraints.

The proportion of people receiving transfers is also small in comparison to other countries. For example, Cox (1987) found that in the United States about 10% of households received transfers in 1983. However, the figure for the United States includes gifts, loans and bequests. While in any given year the proportion of individuals receiving a bequest is small (about 0.5% in the survey), the number of loans could be potentially large.

Since our main purpose is to study the connection between the probability of receiving a transfer and borrowing constraints, we need an operational definition to identify liquidity constrained households. There are two possible approaches to this problem. One solution, adopted by Zeldes (1989) and Hayashi (1985), is to rely on ad hoc sample splitting techniques, i.e. to define a household to be liquidity constrained if either its current savings (as in Hayashi) or its liquid assets (as in Zeldes) are below a predetermined ceiling. As both authors point out, the major drawback of this solution is that one ends up including among

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5. The number we obtain in this survey is similar to that produced by other surveys of Italian households. For example, the 1986 and 1984 surveys carried out by the Bank of Italy report that the proportion of households receiving gifts was 3% and 2.5% respectively, while the survey conducted by the Italian Central Statistical Office reports that 3.8% of the sample received a gift in 1985.

the group of low saving or low wealth households, many that are not in fact liquidity constrained, thus substantially overestimating the proportion of liquidity constrained households in the population.

An alternative is to rely upon the direct information readily available in our data set. Let's define a consumer to be liquidity constrained whenever current desired consumption exceeds current available resources. Desired consumption is not observable, though we can observe consumers who, while needing credit to finance expenditures on durable and non durable goods,

- i) have not applied for a loan because they expect to be refused credit (1,194 households), or
- ii) have actually applied for a loan and were refused credit (55 households).

We infer from this information that for at least 1,249 households, or 15.6% of the sample, desired consumption exceeds available resources. The proportion of liquidity constrained households we obtain is very reasonable, especially if one takes into account that we are missing all borrowing constraints arising in the mortgage market. The high number of consumers who do not have access to capital markets explain why in Italy the liabilities of the household sector are low in absolute terms, as a percentage of consumption expenditure, as a percentage of net worth and in comparison to international standards (see Table 1) <sup>6</sup>.

It is interesting to note that, according to our definition, the characteristics of liquidity constrained households accord well with intuition. Among the young (less

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6. An alternative explanation for the figures provided in Table 1 is that Italian households do not have a high desire to borrow. Jappelli and Pagano (1989), after examining the earnings profile and age structure of Italian households and the tax-incentives to borrow, dismiss this explanation.

than 30 years old) the proportion of liquidity constrained is much higher (20.8%) than among the elderly (11.6% of those with over 65-years olds). Disposable income of liquidity constrained households is less than that of households with access to capital markets (26,483 against 34,133 thousand lire), while the average propensity to consume is considerably higher (83% against 73%).

In Table 2 we report sample means of the variables that will be used in the estimation for the group of transfer recipients (column 1) for those who did not receive transfers (column 2) and for the whole sample (column 3). It appears that transfer recipients are on average younger and have less income and wealth than households who did not receive transfers. This pattern supports some of the predictions of the model developed in the previous section. It also appears that transfer recipients are more likely to be excluded from credit markets than the rest of the population: almost 50% of transfer recipient are liquidity constrained, while this proportion is 14.6% among those who did not receive transfers.

#### 4. Estimation

Our approach is to infer from the characteristics of the recipients the behaviour of the donor. The theoretical model developed in Section 2 allows us to define a general reduced form for the latent variables  $Z$ , relating the transfer decision of the donor to the current and future income of the recipient, and possibly to other variables such as demographic characteristics and dummies for liquidity constraints. Assuming that the reduced form for  $Z$  is linear, one can write:

$$Z = X'\beta + \varepsilon$$

where  $X$  is a  $k \times n$  matrix of explanatory variables,  $\beta$  a  $k \times 1$  vector of coefficients and  $\epsilon$  an error term with zero mean and variance  $\sigma^2$ . If  $Z > 0$  a transfer takes place. Thus the probability that a transfer takes place is given by:

$$\text{Prob}(Z > 0) = \text{Prob}(-\epsilon < X'\beta) = F(X'\beta)$$

If  $F(\cdot)$  is the logistic distribution function, the previous equation reduces to:

$$F(X'\beta) = \frac{1}{1 + \exp(-X'\beta)}$$

which can be estimated by maximum likelihood. The results of the logit estimation are given in column 1 of Table 3. The sign of the estimated coefficients accords with the predictions of the model. Current disposable income, net of transfers, has a negative and highly significant effect on the probability of receiving a transfer. At sample means a 10% increase in current disposable income lowers the estimated probability by 1.5 percentage points <sup>7</sup>.

We proxy expected future income with a set of demographic variables, such as age, sex, education,

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7. The coefficients reported in Table 3 show the effect of the explanatory variables on the odds of the logarithm of the probability, rather than on the probability itself. We evaluate the partial derivate

$$\frac{\partial F(x'\beta)}{\partial x_k} = \frac{\hat{\beta}_k \exp'(X'\beta)}{[1 + \exp(X'\beta)]^2}, \quad \text{at sample means.}$$

occupational and regional dummies.

The most important variable that proxies for expected future income is age. If earnings increase with age over the early part of the working-life, being younger implies higher expected future income and higher desired consumption. Thus, given the model developed in Section 2, there should be a negative correlation between age and the probability of receiving a transfer. Indeed, we find that this probability decreases rapidly until the consumer is 40 years old and more slowly thereafter. Similarly the coefficient of education is positive and significant: more education implies higher future income, other things being equal.

Finally, the coefficient of the liquidity constraint variable is positive and very precisely estimated. At sample means, the probability of receiving a transfer is 1.7% higher for a consumer who is liquidity constrained: this is remarkable, given that the binomial, or unconditional estimate, is only 2.7%.

Since there may be errors of measurement in our proxy for liquidity constraints, we checked the robustness of our results by distinguishing between discouraged borrowers and rejected applicants. The results, reported in column 2 of Table 3, confirm the finding of a strong correlation between liquidity constraints and transfer decisions. In addition, we find that those who have been explicitly denied a loan - who are unambiguously liquidity constrained - are also those with the highest probability of receiving a transfer <sup>8</sup>.

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8. It is also worth noting that our results are robust with respect to the definition of the proxy for liquidity constraints. The same pattern of results obtains if we follow Hayashi's (1985) or Zeldes' (1989) sample splitting technique to construct dummies for liquidity constrained families.

## 5. Conclusions

Informal markets may provide the means for households to overcome capital market imperfections and to smooth consumption over their life-cycle. In this paper we have investigated, using a cross-section of Italian households, whether a system of family finance exists, and to what extent it is able to compensate for financial markets imperfections. We have provided convincing evidence that private transfers help to remedy capital market deficiencies. Private transfers are in fact mainly targeted towards households which face binding credit constraints. The average size of such transfers is large enough to enable at least some consumers to move closer to the unconstrained optimal consumption path. We have also found that many liquidity constrained households received no gifts: of 1,249 only 106 received transfers in 1987. Thus, a substantial number of liquidity constrained households remains after gifts have been made.

The data set that we employed does not contain detailed information regarding private loans. As both theory and casual observation suggest, private loans should be even more closely linked to liquidity constraints than altruistic gifts. If such loans are widespread, the number of consumers with no access to the credit market would be reduced.

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Table 1

**Household Liabilities  
for Selected Countries in 1986**

	Liabilities ----- Financial Assets	Liabilities ----- Consumption
United States	24.8	98.0
France	38.0	79.0
Germany	8.6	19.0
United Kingdom	32.2	101.0
Sweden	63.1	116.0
Norway	73.3	93.0
Italy	6.1	12.2

Sources: Financial Accounts of OECD Countries and OECD National Accounts, 1987. For Italy the source is: Bank of Italy, Economic Bulletin, n. 6, 1986, p. 53.

Table 2  
 1988 Survey of Italian Household:  
 Sample Means for Selected Variables

<u>Variable</u>	Transfer recipients (1)	Non recipients (2)	All consumers (3)
Proportion receiving transfers	1.000	0.000	0.027
Transfer amount	7,176.900	0.000	190.439
Income (net of transfers)	18,588.000	33,139.000	32,754.000
Consumption	20,288.000	24,356.000	24,249.000
Age	49.455	51.815	51.753
Education	8.455	9.146	9.128
Males	0.718	0.855	0.851
Homeowners	0.390	0.599	0.593
Living in the North	0.451	0.624	0.620
Employed in the industrial sector	0.150	0.227	0.225
Employed in the service sector	0.178	0.219	0.218
Employed in the public sector	0.197	0.207	0.207
Liquidity constrained	0.498	0.146	0.158
Denied credit	0.042	0.006	0.007
Discouraged borrower	0.455	0.140	0.149
Number of cases	213	7,814	8,027

Note: current income, transfers and consumption are in 1987 thousands lire.

Table 3

Logit Estimates  
 Dependent Variable: Transfer Receipt  
 (Asymptotic t-Values in Parentheses)

	(1)	(2)
Income (net of transfers)	-0.382E-04	-0.380E-04
Age <sup>2</sup>	-0.087	-0.088
Age	0.602E-03	0.613E-03
Education	0.038	0.038
Males	-0.445	-0.443
Homeowners	-0.246	-0.239
Living in the North	-0.149	-0.144
Employed in the industrial sector	-0.965	-0.983
Employed in the service sector	-0.558	-0.579
Employed in the public sector	-0.555	-0.583
Liquidity constrained	1.418	2.100
Denied credit		1.376
Discouraged borrowers		
Recipients	213	213
Observations	8,026	8,026
Likelihood at binomial	-983.16	-983.16
Final likelihood	-847.94	-846.46
	270.44	273.40

Note: Transfer receipt =1 if transfer received, 0 otherwise.  
 \* Significant at the 5% level.  
 \*\* Significant at the 1% level.

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