DO PARENTS HELP MORE THEIR LESS WELL-OFF CHILDREN?

EVIDENCE FROM A SAMPLE OF MIGRANTS TO FRANCE [#]

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Abstract

Through an investigation of parental motives, this paper examines how parents decide on the allocation of their resources within the family when there are several offspring. From a theoretical viewpoint, inter vivos transfers may be explained either by altruism or by an exchange motive. Though unequal sharing is expected under both hypotheses, under altruism parents should direct their assistance to less well off children. Analogously, under an exchange motive we expect support to be channeled to children who live nearby their parents. We assess the relevance of the two transfer motives using the PRI survey, conducted in 2003, on a sample of immigrants living in France. Unequal sharing is frequently observed, and children are more likely to receive financial transfers when they are in poor circumstance, but not necessarily when living in proximity to parents. This is the case even after controlling for unobserved heterogeneity with fixed effects models. We also emphasize the role of cultural factors, especially religion, as determinants of the parental allocation among children.

Keywords : altruism, exchange, inter vivos transfers, intrahousehold allocation, unequal sharing

JEL Classification : D62, J2

1. INTRODUCTION

This paper examines how family resources are redistributed across generations by investigating parental motives in the transfer process. Particular attention is given in the analysis to cultural factors, especially country of origin and religion, as determinants of the parental allocation among children. Understanding the details of the transmission of advantage has long been a matter of some concern among economists and sociologists as it may relate to the effectiveness of public transfer programs.

While investigations of the impact of "initial conditions" in family resources on the educational and occupational attainments of offspring have focused principally on parental education and occupational status, in recent years parental wealth holdings have also been accorded attention as essential determinants of well-being and living standards (e.g., Wolff, 1990, 1996, Oliver and Shapiro, 1995). Parental resources, encompassing education, income and the wealth stock, can influence the life chances and living standards of offspring in four distinct ways: i) via parental effects on children's interests and values; ii) through investments in the human capital and earnings potential of children; iii) via transfers of assets through bequests; and iv) by means of inter vivos transfers, made during parental lifetimes.

Early studies of the transmission of advantage largely focused on the first two pathways (e.g., Blau and Duncan, 1967; Bowles and Nelson, 1974). However, with the growing dispersion of household wealth in Western countries since the end of World War II, along with more recent trends toward a contraction in publicly funded assistance programs, which have made households increasingly dependent on private resources, there has developed an interest in assessing the consequences of parental wealth for the economic well-being of adult children; studies of this sort have examined the second two pathways. Parental transmissions of financial and material resources account for a substantial proportion of total household wealth, though the exact proportion is in dispute (Modigliani, 1988, Kotlikoff and Summers, 1988). There is also evidence of parental wealth effects on various outcome measures in children's lives, such as the waiting time to homeownership (Mayer and Engelhard, 1996, Mulder and Smits, 1999), the living standards of young couples (Spilerman, 2004), and the rate of entry into self-employment and entrepreneurship where the start-up costs can be considerable (Lindh and Ohlsson, 1998).

In part, these parental transmissions take the form of bequests or end-state transfers. While transmissions of this sort have consequences for living standards, the timing is unpredictable and they often come late in the life course of adult children. Thus, even though a bequest may be anticipated and taken into account by the prospective recipient in financial decision making, it is not quite money in hand. In contrast, inter vivos transfers, made during parental lifetimes, are often targeted to assist offspring at critical junctures when financial aid is vital: at the time of a home purchase, a business investment, or to support offspring during periods of illness or job loss. For this reason, because they respond to timely needs, inter vivos transfers likely have the greater impact on the attainments and living standards of adult children.

A relevant issue, then, is to better understand how parents make transfer decisions--how they decide the proportion of resources to transfer during their lifetimes, how the inter vivos transmissions are distributed over the life course, and how parents decide on allocations among children when there are several offspring. These are all consequential matters with respect to

comprehending parental effects on the well-being of offspring[1]. The last of the decisions, regarding the allocation of transfers, raises deep issues of parental objectives--what sorts of goals they seek to achieve for themselves and their children.

Do parents make allocation decisions, for example, with the intention of reducing inequality among offspring (favoring a needy child) or is more given to the child who can most productively use the additional resources? Under certain broad assumptions, the latter strategy would maximize the total financial resources of the sibship, though it takes no account of distributional outcomes. Alternatively, parents might make allocation decisions with their own welfare in mind, such as rewarding children in terms of services provided, or expected to be provided to the elders. Also, parents might follow cultural norms in their distributions, possibly transferring larger sums to male offspring or to a first born child. Injunctions fostering the latter sorts of allocations, especially in regard to bequests, are found in the biblical texts of many faiths and might well guide parental behavior in traditional settings[2].

The issue of allocations among children has received considerable attention by economists, especially from the point of view of parental "motives" (see Laferrère and Wolff, 2005). The parental motives literature has largely focused on altruism versus exchange as competing models, though some consideration has been given to other formulations such as the demonstration effect (Cox and Stark, 2005) or "warm glow" giving (Andreoni, 1989). Models of altruistic transfers assume that the utility function of the parent includes the welfare of the child as a component factor. In essence, the altruistic parent cares about his/her offspring and provides financial support to enhance their well-being. In contrast, under an exchange motive, the parent makes financial transfers in return for services provided by the child or to indebt the child to provide services at a later time point (Cox, 1987).

Exchange models are largely neutral in their consequences for the replication of inequality, while altruistic transmissions carry strong implications for both public welfare programs and for the transmission of inequality (Cox and Jakubson, 1995, McGarry and Schoeni, 1997). Altruistic motives can reduce the effectiveness of government transfer programs because of the potential for "crowding out" private family assistance (Laitner, 1997, Schoeni, 2002). If households are altruistically linked, then the claims of needy children can erode the impact of social security payments that are targeted to support the living standards of the elderly. More generally, the altruistic model predicts a reduction in the variance of living standards among offspring, in that parents would transmit greater resources to the less well-off child (Schoeni, 1997). An altruistic motive, consequently, has profound implications for the distributional role of government and for the shape of inequality in the receiving generation.

How then do parents make allocation decisions? In point of fact, the considerable empirical research on altruism versus exchange motives has yielded conflicting assessments. Dunn and Philipps (1997), Schoeni (1997), Laitner and Juster (1996) and Hochguertel and Ohlsson (2003), among others, find support for altruistic intents, though not necessarily for a "pure" altruism model. In contrast, Cox (1987) and Cox and Rank (1992) conclude that the evidence

[1] Decisions on how much to transfer during the parental lifetime depend, in part, on the availability of governmental support programs for the elderly (Attias-Donfut and Wolff, 2000). The timing of inter vivos transfers strongly reflects institutional arrangements in a country, especially the need for large purchases by children such as a residence, and the extent to which young households are credit constrained (see Spilerman, 2004).

[2] The rules of inheritance in the Old Testament are outlined in Numbers 27:1-11, and Deuteronomy 21:17. In particular, a daughter can inherit only if there is no male heir. Also, the eldest son receives a double share. Christian practice has been more diverse, in some places following the biblical rule while in other European lands primogeniture was the norm. Islamic law is more complex in regard to inheritances, with detailed prescriptions for different categories of inheritors; also, in practice, inheritance patterns often differ between Suni and Shi'i adherents. In a situation in which there is a daughter and son as survivors, the son inherits a 2/3 share, the daughter a 1/3 share (Radford, 2000).

supports an exchange motive. Much of this literature, however, is characterized by an assumption that one or the other of the presumed motives describes the decision making of all parents, though a few studies have sought to associate their conclusions with a particular country, recognizing the possible impact of cultural norms and local institutional arrangements (see Hayashi, 1995, Lucas and Stark 1985, Spilerman and Elmelech, 2003). None of the studies, however, has sought to ascertain whether multiple motives might be operative within a country, whether, perhaps, different parental designs should be associated with particular population groups in a society[3].

The intent of this paper is to compare the altruistic and exchange models using a unique data set from France that permits both a test of the applicability of one or the other of the motives to the full population under consideration, as well as an exploration of whether the transfer pattern differs by cultural group. The data set we use is the "Passage a la Retraite des Immigres" (PRI hereafter), collected in 2002-2003, which surveyed immigrants to France regarding their financial situation, family relationships, and transfer histories (both to relatives living in France and remittances to the origin countries).

The paper is organized in the following manner. In section 2, we summarize the parental motives literature. Section 3 provides a description of the data and an outline of our analytic strategy. We present the results of our econometric analysis in section 4, with an investigation of the parent's sample followed by an examination of the children's sample. One strength of these data is that we have information about transfers given to each offspring of a respondent, not only to a selected child. This permits an investigation, in section 5, of the determinants of unequal receipts by offspring, a critical consideration in selecting between the altruistic and exchange motives. Finally, in section 6, we undertake an examination of cultural effects, organized around considerations of country of origin and religion.

2. MOTIVES FOR PRIVATE TRANSFERS

Economists have suggested two main hypotheses to explain the motives behind intergenerational transfers (see Laitner, 1997, Laferrère and Wolff, 2005). According to the altruistic hypothesis, made famous by Becker (1974, 1991), parents take into account the level of well-being of their children when making transfer decisions. Conversely, in the exchange model, transfers are made by parents to their children in return for services or financial help rendered to parents when they are in need. In the following presentation we attempt to explain the behavioral implications of the two theoretical formulations.

First consider the case of a benevolent parent. The central assumption of the altruistic model is that parents care about their child's situation. For this presentation we begin with the elementary case of one parent and two children but note that this setting can be easily extended to larger family sizes[4]. We denote the parent and the two children respectively by the subscripts p, k1 and k2. We suppose that the children are endowed with a fixed amount of income, Y_{k1} and Y_{k2}, which can differ, and which may be the result of labor supply decisions. Each child may be helped or not by the parents. Assuming that the parent's level of income Y_p is sufficiently high to transfer financial resources, the parent is expected to maximize a weighted sum of his (or her) own level of satisfaction $U_p(.)$, which depends on personal consumption C_p, and on the children's

[3] Laitner (1997, p. 234), in a theoretical analysis, does note that "in practice, the two [motives] may often accompany one another - with altruism reducing enforcement difficulties in interfamily exchanges". See also the discussion in Light and McGarry (2005) who focus on the planned division of estates.

[4] For an extensive and more formalized presentation of the altruistic model, see Laferrère and Wolff (2005).

levels of satisfaction $V_{k1}(.)$ and $V_{k2}(.)$. A child's utility, in turn, is specified as an increasing function of his (or her) personal consumption, C_{k1} or C_{k2}, which is the sum of the child's income and private transfers received from the parent, T_{k1} or T_{k2}. Parents, of course, may have specific preferences with respect to each child, which would be reflected in T_{k1} and T_{k2}. The budget constraints are then $C_p=Y_p-T_{k1}-T_{k2}$, $C_{k1}=Y_{k1}+T_{k1}$ and $C_{k2}=Y_{k2}+T_{k2}$.

Transfers are then a means to redistribute money across generations and among siblings. We now describe the impact of family transfers in this simple setting. An important result is that when parents help their children, individual levels of consumption (either of the parent or the children) do not depend on the distribution among the various family members. By summing the different budget constraints, we deduce that the sum of individual consumptions is equal to the sum of individual incomes, i.e. $C_p+C_{k1}+C_{k2}=Y_p+Y_{k1}+Y_{k2}$. Hence, each level of consumption may be defined as a function of total family income[5].

The parent seeks to maximize the augmented utility function $U_p(C_p,V_{k1}(C_{k1}),V_{k2}(C_{k2}))$ subject to the previous budget constraints. From the corresponding first-order condition, one expects the parent to increase his transfers as his own income increases ($\partial T_p/\partial Y_p>0$). This occurs because despite the loss in his private consumption, the parent will be more than compensated by the rise in the children's well-being. Conversely, for a given child, the amount of transfer received is lower when the child is richer, i.e. $\partial T_{k1}/\partial Y_{k1}<0$ and $\partial T_{k2}/\partial Y_{k2}<0$. Another effect deals with the weight devoted by the parent to the child's satisfaction. Imagine that the parent does not really care about the child's situation. In that case, the transfer would be rather insensitive to variations in the child's income. But suppose that the parent is extremely attached to the child. In this case, more money would be given as the expected benefit derived by the parent will be higher.

Interestingly, one also expects the parent to favor those children who are in a poor situation with respect to their siblings. Consider, for example, a sibship with two children, a rich one and a poor one. If the rich child receives extra revenue, the parent should decrease the gift value made to the rich child. As a consequence, this additional amount of "saved" resources may be transferred to the other, poorer child. This implies $\partial T_{k1}/\partial Y_{k2}>0$ and $\partial T_{k2}/\partial Y_{k1}>0$. Thus, when considering an altruistic model of transfers, there is not only redistribution across generations, but also among siblings, and the shape of parental transfers fully depends on the distribution of incomes between the various family members.

Because of the income pooling property, it is possible to prove that a redistribution of resources between the parent and one child leads to a perfect adjustment in the transfer value, family income being held constant (see the discussion in Altonji et. al., 1997). Imagine that a euro is taken from the parent and given to one child. The parent is then expected to reduce his transfer value to this child by exactly one euro under altruism, i.e. $\partial T_{k1}/\partial Y_p-\partial T_{k1}/\partial Y_{k1}=1$ and $\partial T_{k2}/\partial Y_p-\partial T_{k2}/\partial Y_{k2}=1$. This occurs because levels of private consumption are not affected by the distribution of income between family members under altruism. The same result holds between siblings (Laferrère and Wolff, 2005). For a fixed income, when a euro is taken from one child and given to the other, the child who is now poorer should receive an additional euro from the parent, i.e. $\partial T_{k1}/\partial Y_{k1}-\partial T_{k1}/\partial Y_{k2}=-1$ and $\partial T_{k2}/\partial Y_{k2}-\partial T_{k2}/\partial Y_{k1}=-1$. Hence, there is both inter and intragenerational neutrality when parents care for the well-being of their children. As a consequence, a shift of resources between the parent and one child should not modify the transfer made to the other child.

Clearly, unequal transfers between siblings is expected under altruism. This will happen, for instance, if children have different levels of income and parents care equally for all the children. Nevertheless, equal sharing could be observed in the particular case where children are

[5] This income pooling property is the basis of the well-known Rotten Kid theorem (see Becker, 1974).

characterized by differentiated revenues, but parents are more altruistic towards the child who performs better. Other explanations may be invoked for equal sharing within the family. Thus, Wilhelm (1996) in an examination of bequest motives argues that parents may suffer a psychic cost if they deviate from an equal allocation of resources[6]. In the same vein, Stark (1998) suggests that a child who receives less than his/her siblings may feel underappreciated. Clearly, parents would be tempted to make equal transfers if they perceive emotional costs to treating their children differently.

Drawing on a similar setting with one parent and two children, Stark and Zhang (2002) suggest that a variety of intervivos gift patterns that are not explicitly compensatory can be compatible with the altruistic hypothesis. They show that parents who care equally for their children may transfer more to the child whose earnings are higher. To prove that result the authors account both for altruism between siblings and for the fact that children may express their gratitude to parents by directing some reverse transfers to them. Since a more able child may invest the private resources received from parents more efficiently, he will pay back to the parents a higher amount. In turn, this allows the parent to give more to the less endowed child. Although counter-compensating transfers emanate from parental altruism, it seems important to note that the underlying mechanism involves some kind of formal exchange within the family, so that it cannot be considered a pure altruism model.

The other main model suggested to explain private transfers from parents, the exchange motive, involves some reciprocity between generations. Cox (1987) and Cox and Rank (1992) claim that financial gifts made by parents constitute payment for services and visits provided by children. Another exchange mechanism is the familial loan model, where parents lend money for consumption, to be repaid in the future with a presumably above-market interest rate (Cox, 1990). In contrast with the altruistic model, the relationship between the amount of transfer received and the child's income cannot be given a positive or negative sign in the exchange formulation. In the general case, the effect is undetermined and depends on the elasticities of supply and demand for time-related resources. As a child becomes richer, parents have to pay a higher price if they want to obtain the same amount of services from that child, but they may also purchase a lower level of attention.

It could be that there exist very poor substitutes for the child's attention (see Cox, 1996). Under that assumption, which implies an inelastic demand for services by the parents, the relationship between the child's level of resources and the amount transferred by the parent should be positive, i.e. $\partial T_{k1}/\partial Y_{k1}>0$ and $\partial T_{k2}/\partial Y_{k2}>0$. Nevertheless, this prediction is rather controversial and several studies have stressed the irrelevance of discriminating between altruism and exchange by looking at the impact of the recipient's income on the gift value. Stark and Falk (1998) note that both transfer motives may give rise to equivalent behaviors. Also, Altonji et. al. (1997) demonstrate that such a positive relationship is consistent with altruism once heterogeneity in preferences is taken into account.

Although the relationship between the gift value and the recipient's income is not very informative about the relevance of exchange motives, the exchange model leads to some interesting consequences. On the one hand, money-service exchanges are likely to generate unequal division of transfers within the family. As pointed out in Cox (1996, p. 84), this should occur under realistic scenarios for child services, namely some children may have a comparative advantage to specialize in the provision of time-related resources. This would be the case, for instance, for children who do not have a paid job, or who live in shared residence arrangements or nearby their parents. On the other hand, under exchange, one expects a positive relationship

[6] Several authors have suggested that there could exist some differences between inter vivos transfers and bequests, the latter being more likely to be equally divided. On this issue, see for instance Lundholm and Ohlsson (2000) or Bernheim and Severinov (2003).

between the measure of services and the financial transfer (Cox and Rank, 1992). Nonetheless, such a pattern may also be consistent with altruism. Becker and Murphy (1988) suggest that the pattern of family altruism is endogenously determined by the magnitude of contact between parents and children, and a positive relationship between money and services may simply be due to reciprocal altruism.

Testing the relevance of the altruistic and exchange models should then be conducted at an intrahousehold level, with an emphasis on the allocation of private financial transfers among siblings. Surprisingly, many empirical analyses investigate transfers received by only one focal child in a family. This approach is certainly less data demanding, but it conveys much less information about the parental intent. A few papers, however, have examined how parents divide their resources among children. These studies all reach a similar conclusion for inter vivos transfers, namely that poor children are more likely to be helped by their parents (see the discussion in Laferrère and Wolff, 2005).

Drawing on the HRS survey, McGarry and Schoeni (1995) find that respondents give greater financial assistance to less well off children than to offspring with higher incomes. These results still hold after controlling for unobserved differences across families using fixed effect models. That transfers mainly benefit poorer children within a family is also observed by McGarry and Schoeni (1997), moreover, they find no evidence that parents provide financial help to children in exchange for caregiving. Hochguertel and Ohlsson (2003) report that only 5% of parents in the US who give money to their children divided their gifts equally among the offspring. There is also evidence that parents use intervivos gifts to smooth the income of their children, providing assistance at times when a child's resources are below his or her permanent income (Dunn, 1997). When applying a fixed effects Logit model to examine how differences in the children's income determine which of them will be transfer recipients, Dunn and Phillips (1997) find that siblings with lower incomes are significantly more likely to receive money[7].

Because these results mainly relate to transfer behavior in the United States, it is important to ascertain whether a similar pattern holds in other developed countries. For instance, in France, several studies have shown that a child can be expected to receive a larger transfer from parents when he or she is better off financially, even controlling for parental income (Arrondel and Laferrère, 2001, Wolff, 2000). Unfortunately, this finding stems from data that involves only one child per family, so the distribution of transfers among siblings in France really remains unknown. In the present study we attempt to fill in this gap by examining a new survey on migrants living in France, which contains detailed information on inter vivos transfers between parents and offspring.

While our results are not representative of the full French population, an analysis of migrants relates to the behaviors of a growing segment of the population in France, as well as in much of Western Europe. Further, because of the diverse backgrounds of the respondents we are able to inquire about the residual impact of origin country and culture, which may well influence their intra-household transfer decisions.

3. DATA AND DESCRIPTIVE STATISTICS

The 'Passage à la Retraite des Immigrés', used in the empirical analysis, is a cross-sectional data set collected in France between December 2002 and March 2003 by the Caisse Nationale d'Assurance Vieillesse, in collaboration with the Institut National de la Statistique et des Etudes

[7] In fact, differences in inter vivos transfers primarily arise from differences in the children's current income, while differences in bequests are more likely to be sensitive to differences in the children's permanent income (see McGarry, 1999).

Economiques. The primary focus of this survey was to provide an accurate description of the way-of-life of migrants currently living in France, especially with respect to migration history and their retirement and location expectations.

As the migrants age, it is of importance to know whether they intend to stay in France or return to their origin countries. As the aim of the survey is to better understand their retirement decisions, the sample consists of 6211 individuals between 45 and 70 years of age. Each respondent was asked not only about his or her own situation, but also about the characteristics of other family members. The survey is well-suited for the present study; it contains information on transfers given to all children and, hence, permits a examination of the intra-household distribution of financial assistance. Given the life-cycle stage of the migrants, most of their children are adults, with many at points in which they have substantial financial needs, such as for the purchase of housing or to start a family.

There are some significant differences in cultural background among respondents. Approximately, 51% of the sample originated in Europe, 38% from Africa, and 11% from other countries. These continent groupings are also concentrated at the country level since six nationalities represent some 70% of respondents--Portugal, Italy and Spain among the European countries, and Algeria, Morocco and Tunisia from Africa. Many of the migrants have children and other relatives who reside in the origin country as well as in France. As a consequence, part of the intergenerational monetary flow remains in France, thought much of it is returned to the origin land. In this respect, the latter transfers are closely related to remittances. From an empirical viewpoint, this means that one should account for heterogeneity between and within families, owing to both cultural and location effects. Fortunately, the quality of the data permits controls for these effects.

In this paper we restrict our attention to financial transfers given by parents to their children. Our primary focus is not one of understanding how intergenerational transfers flow within the family, whether upwards or downwards, but one of investigating the intra-household allocation of parental assistance. The parent is the respondent in the survey. For each respondent, information was collected on gender, age, matrimonial status (living as a couple or not), numbers of children at home and elsewhere, years of education, self-reported health status, occupational situation, household income, and religion. The survey also includes a description of the migration history: origin country, duration in France, and whether or not French citizenship is held.

Concerning the children's characteristics, information was collected from the parent about each child, whether living in the parental home or elsewhere. This is an important feature of our data, since it permits some insight into parental preferences. For each child we have information on gender, age, citizenship, distance from the parental home, and contacts and visits with parents. In addition, for offspring older than 16, there are questions about the child's economic situation. Although we lack data about the child's income, the survey provides several variables by which we can proxy household income and material need[8].

In particular, in addition to educational attainment, we know whether the child is currently a student, unemployed, otherwise not in the labor force, or employed. For the last category, we have information about whether the job is performed in the private sector, in the public sector, or as self-employment. There is also a subjective question concerning the child's level of financial well-being--an ordinal scale with six levels (ranging from 'very poor' to 'financially very comfortable'). Since the information about children is provided by the parent it could be argued that there is a potential for bias and measurement error, as each child is, presumably, better informed about his or her own position. However, since the parent is the

[8] Because of the absence of income data we are unable to estimate the relevance of the 'neutrality property' of the altruistic model as in Altonji et al. (1997) or Wolff (2000).

source of information about all the children, much of this bias would be removed in a fixed effects formulation.

Measurement of intergenerational transfers. The exact question in the survey is the following: "During the past five years, have you provided money, either regularly or occasionally, to family members or friends?". If yes, the respondent is asked to provide detailed information about each transfer. Specifically, when money is given to children, we know which child received the assistance and the gift value; the latter was coded in eleven categories and is approximated in the analysis by the category midpoints. Finally, for each gift, there is information about the parental motive. The respondent (parent) had to choose between several alternatives--helping the child because of financial problems, buying a dwelling, because of a family event (e.g., marriage, birth, communion), etc. This information can be helpful in discriminating between altruism and exchange[9].

With respect to the PRI survey, the following comments are in order. First, transfer information was collected only for the last five years. This may be problematic since the transfer probability is clearly a function of the time interval referenced in the question. A longer period would certainly produce evidence of more transfers; thus the available data do not permit a comprehensive description of transfers over the full life course[10]. Offsetting this loss is the ability to better link the provision of transfers to the current situation of the recipient. Transfers that were made many years earlier cannot be easily associated with the current financial circumstance of the child. Past gifts may also have influenced the child's current financial status, which can lead to a causality issue.

Another problem relates to the fact that at most four recipients are recorded in the survey. This could produce an overestimate of the frequency of equal transfers--were an omitted sibling to not have received a transfer. Fortunately, there were very few families who reported as many as four gifts over the five year period--the frequency is around 0.5 percent. In summary, the PRI survey, with a detailed description of the parent and each potential recipient, seems quite appropriate for investigating the matter of the intra-family allocation of transfers.

In the empirical analysis, we restrict attention to adult children who, at the time of the survey, were at least 20 years old and resided either in France or in the origin country. We undertake two kinds of analyses. First, we use information provided by respondents about their various gifts to children; this parent sample comprises 4999 observations and provides information on how parental characteristics influence the decision to assist adult offspring. Second, using the children's file, consisting of 13,762 child-parent pairs, we investigate the allocation decision; that is, the possible tendency by parents to provide more assistance to a particular child. In this file, the children from the same parental household are not independent observations and an appropriate correction method using panel data techniques is employed.

The magnitude of inter vivos transfers. Using the parent sample, we find that 16% of the respondents claim that they have helped at least one of their adult children during the past five years. Such a transfer rate may appear low, but one has to keep in mind that the time interval referenced in the questionnaire, five years, is not very long. Interestingly, the transfer amounts are also quite small since the mean value is equal to 4350 euros per parental family. Several explanations come to mind. This may be an indication that migrants living in France have too little in the way of financial resources with which to help their progeny. Also, the migrants may

[9] However, such data must be used with caution. A parent who decides to help a needy child is certainly motivated by altruistic feelings, but a transfer related to housing or school expenditures conveys little information about an altruistic or exchange intent.

[10] Because of recall problems, the tendency to inquire about transfers during a limited time interval is common to many large scale surveys. For example, the National Survey of Families and Households inquires about transfers during the prior five years; the Health and Retirement Study asks about transfers in the preceding 12 months.

have other family members, besides children, residing in the origin country and part of their resources is transmitted to them in the form of remittances.

Nevertheless, there are huge disparities in the transfer amounts since the median value is equal to only 1180 euros and the mean exceeds the third quartile value, which is equal to 4250 euros. Clearly, most of the transfers are minor sums of money, though a few are large enough to be viewed as transmission of parental wealth.[11] Similar conclusions are reached with the child sample, though the rate of transfer is now reduced to 9.2% (Table 1). This confirms the finding that the prevalence of inter vivos transfers is not widespread among migrants in France. As might be expected, the mean value per recipient is also lower, equal to 2735 euros, and the median is equal to 570 euros. Again, the standard deviation for these gifts is very high, equal to 5845 euros.

Table 1. The receipt of financial transfers, by parent's origin country and religion

Variables	Number of children	Number of families	Frequency of receipt by a child (%)	Mean value of child's receipt (euros)
ORIGIN COUNTRY :				
Europe	5881	2559	13.6	3215
Northern Europe	723	318	26.7	3055
Southern Europe	4720	2025	11.4	3395
Italy	1468	604	12.4	5080
Spain	1231	531	11.5	3520
Portugal	2005	882	10.4	1890
Eastern Europe	438	216	15.5	2250
Africa	6500	1939	5.3	1895
Northern Africa	5884	1681	5.3	1950
Morroco	1994	623	5.0	2220
Algeria	3155	799	5.2	1525
Tunisia	735	259	6.3	2870
Central and Southern Africa	616	258	5.7	1410
America	152	69	21.1	2040
Middle-East	638	197	7.4	1720
Turkey	540	157	5.9	1255
Asia	591	235	8.3	2230
RELIGION :				
Catholic	5505	2364	12.8	3220
Muslim	5910	1640	4.3	1155
Protestant	386	160	20.5	2970
Other Christian	437	212	13.3	2240
Other	847	351	11.9	2815
No religion	677	272	10.6	3580
Total	13762	4999	9.2	2735

Source : Survey PRI 2003.

The data suggest the presence of country of origin and religion effects. The frequency of giving is much higher for migrants originating in Europe. The probability for a child to be helped is equal to 13.6% for European origin families, but only 5.3% for families from Africa. Even within Europe there exists a gap between Northern and Southern countries; the transfer rate is more than double in the former. In part, origin country is a proxy for the level of household resources. Migration from Southern countries is linked to job intentions, especially for low-skilled

[11] For instance these transfers greater than 22000 euros, which is the value of the 95th percentile of the distribution.

workers, while migration from Northern countries is more often associated with reasonably well-off households seeking a better location for retirement. Another consideration in accounting for the differential transfer rates relates to family size, which tends to be larger for North African migrants and which may reduce the likelihood of a transfer receipt by any one child.

Similar results are found with respect to the religion categories. We created six dummies--for Catholic, Muslim, Protestant (including Evangeliste and Anglican), other Christian (Orthodox, Gregorian, Maronite, other Christian Armenian), no religion, and a residual "other" category which includes respondents who did not report a religious affiliation. Again, we find sizeable disparities, which can be associated with Northern and Southern countries. The probability for a child to be helped is 12.8% when the parent is Catholic, but only 4.3% when the parent is Muslim. These differences possibly reflect income disparities (Muslims immigrants come predominantly from North Africa and tend to be poorer) or family norms regarding intergenerational support, which could be more oriented toward assisting elders in Muslim countries. Among the non-Muslim denominations, Protestant migrants (who come mainly from Northern Europe) are notable with the highest rate of transfer receipt.

A consideration of the reasons conveyed by the parent for making a transfer, reported in column (1) of Table 2, may be helpful in determining the transfer motive, although the responses must be examined with caution. It is possible that parents declare themselves as more altruistic than they are in daily life. When examining the primary reason stated by the donor, we find 42.9% of the gifts are directed to help children because of financial problems. As noted, this is not surprising since most of the children receive transfers of limited value. The fact that parents help children when they are needy is consistent with some altruistic motives. Yet, a benevolent motive is insufficient for explaining what happens in the full migrant sample. Indeed, the data suggest that several motives may be operative. On the one hand, 13.8% of parents helped their children to buy a dwelling and 6.9% are concerned with non-housing expenditures. On the other hand, 8.6% of the gifts have been made in response to 'happy' family events and 15.9% of the parents simply state a desire to make a gift. Clearly, the latter sorts of transfers are not associated with poor financial circumstance on the part of children. Beyond this account, there are also differences in motive by religion (columns (2) and (3)), a theme that we turn to later in the paper.

Table 2. Parental motives for financial transfers

Motive	(1) All (N=1269)		(2) Muslim (N=253)		(3) Non-muslim (N=1016)	
	% giving	Amount	% giving	Amount	% giving	Amount
Help because of financial need	42.9	1555	73.1	905	35.4	1890
Help to buy a dwelling	13.8	7575	6.3	2865	15.6	8050
Help for other non-housing expenditures	6.9	2145	2.4	1540	8.0	2190
"Happy" family event	8.6	1135	3.6	770	9.8	1170
Help for schooling expenditures	6.9	3080	4.0	2420	7.6	3165
To make a gift	15.9	1180	7.5	1205	18.0	1175
Other	5.0	7510	3.2	1980	5.5	8300
Total	100.0	2735	100.0	1155	100.0	3130

Source : Survey PRI 2003.
The sample is restricted to positive transfers.

4. ECONOMETRIC ANALYSIS OF THE DETERMINANTS OF TRANSFERS

The parent sample. To better understand transfer decisions made by the migrant population, we undertake, initially, an econometric analysis using the parent sample. In this

analysis the dependent variable is a dummy term, equal to one when some money is provided to at least one child; the specification employed is a Probit model. The regressors are the usual human capital and demographic characteristics of the parent plus terms for health status, household income, homeownership, and three variables that relate to the migration trajectory of the respondent--duration in France, whether or not French citizenship is held, and whether the migrant experiences problems in reading French. To capture possible cultural effects, we also introduce dummy terms for country of origin and religion. However, because of the rather substantial covariation between these variables, separate equations are estimated with origin country and with religion.

The results are reported in Table 3. Consider, first, the probability of a transfer, reported in equations (1) and (3). Since the results are very similar in these two equations, we summarize only the first. The probability of making a transfer is an increasing function of parental age until 58 years, and then reverses, possibly a consequence of the greater parental need for funds as retirement is approached and the decreasing necessity for assistance by adult children once they reach midlife and peak earnings capacity. The consequence of number of children depends on their residence status. Parents are less likely to provide assistance when many offspring reside in the parental home, possibly because resources are needed for these younger children. Conversely, the probability of a gift increases with the number who live in their own residence and, hence, are eligible for a transfer. Not surprisingly, the gift rate is a positive function of education, income, and homeownership,[12] as each of these terms taps the financial status of the parent. As noted earlier, these findings are consistent with <u>both</u> the altruistic and exchange models.

Interestingly, the evidence does not suggest that migration history influences the provision of inter vivos transfers. Neither duration since migration nor French citizenship--both indicators of acculturation--are statistically significant. However, reported difficulties in reading French significantly reduces the tendency to help the children. Controlling for the acculturation terms, country of origin has a residual effect. We find that the probability of assisting children is significantly lower when the respondent comes from Southern or Eastern Europe, Africa, or Asia, in comparison with Northern Europe or America. Since this finding is in the presence of controls for human capital, income, and assets (namely homeownership), it provides a suggestion of a cultural effect. The replacement of these terms by the religion dummies, however, does not provide a supporting assessment, though the term for "Protestant" (which overlaps with Northern Europe) is in the predicted direction.

We have also examined the determinants of gift value. As discussed in Laferrère and Wolff (2005), several specifications have been used when estimating the determinants of transfer amount, and knowing which specification to use remains an unsettled question. A disadvantage of the Tobit model is that a variable which increases the probability of an observation having a non-limit value also increases the mean of the dependent variable. Hence, an explanatory variable always has the same sign on both the probability of transfer and transfer amount for non-limit observations. We therefore employ a Heckman-type selection model. To secure identification we argue that duration of migration, French citizenship, and problems in reading French directly affect the probability of making a transfer, but not the transfer amount. The presumption is that respondents arrive from their origin countries with different notions of parental responsibility but, with duration in France, the home country norms are eroded. Similarly, learning the French language and acquiring citizenship are indicators of acculturation. In short, the over-time process should lead to a reduction in the <u>variance</u> of the origin-country tendencies to assist children.

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[12] The turning point for the income effect is around 338500 euros, which is more than the 99 percent value of the income distribution. This means that the effect of parental income is positive for almost all families.

Table 3. Probit and Heckman selection estimates for transfers given by parents

Variables	(1) Probability		(2) Gift value (log) [1]		(3) Probability		(4) Gift value (log) [1]	
	coef	t-test	coef	t-test	coef	t-test	coef	t-test
Constant	-8.581***	-5.28	8.200*	1.80	-9.106***	-5.61	7.961*	1.71
Characteristics of the parent :								
Age	0.262***	4.63	-0.043	-0.29	0.270***	4.79	-0.030	-0.20
Age squared (10^{e}-2)	-0.223***	-4.57	0.056	0.44	-0.230***	-4.72	0.043	0.33
Lives with partner	0.019	0.30	0.064	0.43	0.012	0.20	0.078	0.53
Number of children at home	-0.119***	-6.04	-0.040	-0.71	-0.122***	-6.19	-0.026	-0.46
Number of children outside home	0.064***	4.10	-0.017	-0.41	0.065***	4.18	-0.007	-0.16
Years of education	0.017***	2.98	0.022	1.63	0.020***	3.62	0.014	1.07
Health problems	0.071	1.43	-0.329***	-2.84	0.068	1.38	-0.320***	-2.77
Currently working	0.046	0.83	0.027	0.22	0.028	0.50	0.022	0.17
Household's income (10^{e}-5)	0.562***	4.01	1.116***	3.24	0.597***	4.30	1.094***	3.15
Household's income squared (10^{e}-10)	-0.083***	-2.69	-0.170***	-2.96	-0.089***	-2.89	-0.158***	-2.75
Home owner	0.084*	1.67	-0.019	-0.16	0.098*	1.95	-0.052	-0.42
Duration since migration	-0.119	-0.48			-0.181	-0.77		
French citizenship	0.030	0.59			0.019	0.38		
Difficulties in reading French	-0.147***	-2.70			-0.146***	-2.73		
Origin country :								
Northern Europe	Ref		Ref					
Southern Europe	-0.261***	-2.86	0.280	1.47				
Eastern Europe	-0.209*	-1.65	0.077	0.29				
Northern Africa	-0.260***	-2.60	0.226	1.08				
Central and Southern Africa	-0.437***	-3.17	0.056	0.17				
America	-0.019	-0.10	0.080	0.21				
Middle East	-0.177	-1.26	0.416	1.31				
Asia	-0.412***	-3.07	0.058	0.18				
Religion :								
Catholic					0.026	0.40	0.206	1.27
Muslim					Ref		Ref	
Protestant					0.124	0.96	0.032	0.12
Other Christian					0.019	0.16	0.094	0.34
Other religion					0.055	0.55	0.018	0.08
No religion					-0.089	-0.79	0.241	0.91
Selectivity term			-0.682**	-2.14			-0.662**	-2.03
Number of parents	4999		798		4999		798	
Log likelihood	-2043.9		-3440.3		-2051.3		-3448.3	

Source : Survey PRI 2003.
Significance levels are respectively 1% (***), 5% (**), and 10% (*).
1: Heckman selection model. Identification by exclusion of terms for duration since migration, French citizenship, and difficulties in reading French.

The selection model was estimated via maximum likelihood. According to the results in columns (2) and (4), it appears difficult to explain differences in the logarithm of the transfer amount, the dependent variable. Most of the explanatory variables have no discernable effect on the transfer value. The two main exceptions concern health status and household income. In particular, the gift value is reduced when the head reports health problems, while household income has a positive effect over the bulk of the income range. Not surprisingly, our results suggest that healthier and wealthier parents provide more money to their children. Again,

however, these results can be consistent with both altruistic and exchange motives. Consequently, to differentiate between the motives we turn to an analysis of receipts by children.

The child sample. In this section we examine transfers received by adult children, with each child having equal weight in the analysis. In this circumstance, standard regressions such as Probit models would produce biased estimates. As pointed out by McGarry and Schoeni (1995), unobserved factors associated with transfers, such as the extent of parental altruism or the taste for redistributing resources, tend to be correlated among siblings.

With several observations for a given parental family, we can control for unobserved heterogeneity through the use of panel data techniques. Either random or fixed effects formulations will permit the potential bias that is induced by the presence of unobserved parental characteristics to be controlled. We begin by estimating a random effects Probit model; the underlying assumption is that the random perturbation for each observation may be expressed as the sum of a fixed error term, which is common to the different siblings, and a random error term that is normally distributed and specific to each child. Importantly, the random effects assumption means that the explanatory variables are uncorrelated with the parental effect. Estimates from this model are reported in Table 4; again separate equations are estimated with the country of origin and the religion terms. We note that, in the main, the assessments reached with the 'parent' sample and reported in Table 3 also hold with the 'child' sample.

In regard to the transfer probability the findings in equations (1) and (3) are similar so we comment only on the former. The probability of a child being helped increases with the parent's age, at least until age 56.4; the receipt of a transfer is also a positive function of parental income and wealth, the latter proxied by home ownership. In contrast with the Table 3 findings, we note a decline in the probability of receipt as a function of number of offspring--irrespective of whether the children live at home or outside the parental household--suggesting a process of competition for parental resources: the more siblings, the lower the probability of receiving assistance. Consistent with the earlier results, we again find evidence of an acculturation effect in that difficulties in reading French predict a lower rate of receipt, as well as significant origin country terms (highest for Northern Europe and America), and an indication of a religious predisposition (lowest transfer rate by Muslim migrants [column 3]), though this last finding is not significant.

Turning to the child's characteristics we first note that they are important for explaining parental transfer decisions in that an assumption that the child's covariates are insignificant in the Probit equations is rejected by a Wald test; thus, parents appear to take into account the circumstances of their children when making transfer decisions[13]. Receipts are an increasing function of a child's age until age 36 (column 1); beyond this point assistance from parents is a less likely event. It is hardly surprising that parents target transfers to younger offspring who, presumably, are coping with the costs of starting a household or with childrearing. A second finding relates to gender: female children are substantially less likely to receive transfers, a result that departs from studies in the United States (e.g., McGarry and Schoeni 1995, Table 7) and which we explore later in the paper.

To understand parental motives we turn to the relationship between the economic circumstance of a child and the receipt of transfers. As before, we proxied a child's economic situation by a set of variables: education, occupation, and a subjective measure of financial need that was reported by the parent. The education variable is not significant; both the occupation and financial status terms, however, provide consistent results--assistance is more likely to be received by a child who is a student or otherwise not in the labor force, in contrast with an

[13] This suggests that we can reject the hypothesis that transfers from parents are explained by some kind of warm-glow process, according to which parents derive egoistical pleasure from the act of giving.

Table 4: Random effects Profit and Heckman selection estimates for transfers received by children

Variables		(1) Probability		(2) Gift value (log) [1]		(3) Probability		(4) Gift value (log) [1]	
		coef	t-test	coef	t-test	coef	t-test	coef	t-test
Constant		-17.666***	-4.58	5.913	1.37	-17.067***	-4.56	6.577	1.53
Characteristics of the parent :									
Age		0.461***	3.36	0.065	0.42	0.409***	3.05	0.059	0.39
Age squared (10^e-2)		-0.403***	-3.39	-0.034	-0.26	-0.358***	-3.06	-0.030	-0.23
Lives with partner		0.189	1.29	0.064	0.44	0.104	0.74	0.058	0.39
Number of children at home		-0.372***	-8.11	-0.059	-1.02	-0.368***	-8.23	-0.040	-0.74
Number of children outside home		-0.088***	-3.11	-0.027	-0.63	-0.107***	-3.70	-0.016	-0.38
Years of education		0.033***	2.59	0.008	0.55	0.044***	3.51	0.000	0.01
Health problems		0.051	0.46	-0.216*	-1.87	0.084	0.76	-0.214*	-1.86
Currently working		0.093	0.79	0.016	0.13	0.092	0.75	0.019	0.16
Household's income (10^e-5)		1.277***	3.66	1.067***	2.88	1.243***	3.63	1.000***	2.65
Household's income squared (10^e-10)		-0.207***	-3.91	-0.156***	-3.09	-0.200***	-3.81	-0.139***	-2.74
Home owner		0.281**	2.44	-0.014	-0.11	0.262**	2.28	-0.031	-0.25
Duration since migration		0.007	1.05			0.010*	1.68		
French citizenship		0.158	1.35			0.132	1.16		
Difficulties in reading French		-0.434***	-3.30			-0.390***	-2.97		
Origin country :									
Northern Europe		Ref		Ref					
Southern Europe		-0.601***	-2.97	0.241	1.26				
Eastern Europe		-0.514*	-1.83	0.036	0.13				
Northern Africa		-0.723***	-3.22	0.313	1.49				
Central and Southern Africa		-1.110***	-3.71	0.248	0.91				
America		-0.117	-0.34	0.106	0.34				
Middle East		-0.503	-1.64	0.414	1.41				
Asia		-0.919***	-3.15	-0.154	-0.47				
Religion :									
Catholic						0.202	1.35	0.045	0.28
Muslim						Ref			
Protestant						0.268	0.91	-0.147	-0.51
Other Christian						0.119	0.46	0.126	0.55
Other religion						0.116	0.49	0.022	0.10
No religion						-0.229	-0.89	0.118	0.44
Characteristics of the child :									
Female		-0.216***	-3.39	0.100	1.19	-0.219***	-3.46	0.085	1.00
Age		0.085*	1.95	-0.115*	-1.86	0.089**	2.05	-0.123**	-2.00
Age squared (10^e-2)		-0.112*	-1.69	0.174*	1.79	-0.119*	-1.79	0.184*	1.90
Lives with partner		0.069	0.88	0.231**	2.41	0.077	0.98	0.221**	2.31
Number of children		0.016	0.49	-0.070*	-1.72	0.013	0.42	-0.067	-1.61
Years of education		0.007	0.88	0.012	1.29	0.007	0.90	0.011	1.19
Occupation	Working	Ref		Ref		Ref		Ref	
	Student	0.704***	5.50	0.286*	1.68	0.703***	5.53	0.234	1.37
	Unemployed	0.142	1.22	-0.003	-0.02	0.145	1.26	0.017	0.11
	Inactive	0.196**	1.98	-0.140	-1.07	0.182*	1.84	-0.121	-0.92
Financial status	Rich	Ref		Ref		Ref		Ref	
	Fair	0.276***	3.31	-0.118	-0.97	0.271***	3.32	-0.114	-0.92
	Poor	1.029***	9.87	-0.137	-0.78	1.030***	9.89	-0.162	-0.95
Distance	In France: Less than 10 kms	Ref		Ref		Ref		Ref	
	In France: More than 10 kms	-0.052	-0.65	0.054	0.49	-0.062	-0.78	0.037	0.33
	Does not live in France	0.916***	8.21	-0.155	-0.94	0.913***	8.13	-0.193	-1.17
Selectivity term				-0.082	-0.14			-0.123	-0.24
Number of children		13762		1269		13762		1269	
Number of families		4999		798		4999		798	
Log likelihood – Chi2		-3038.9		101.7		-3046.6		88.2	

Source: Survey PRI 2003.

Significance levels are respectively 1% (***), 5% (**), and 10% (*).

1: Heckman selection model. Identification by exclusion of terms for duration since migration and French citizenship. Standard errors are adjusted for clustering at the household level.

employed child. Similarly, parental aid is more frequent if a child is in fair or poor economic circumstance, rather than "rich". Parents, therefore, appear to target their less well-off children for transfers.[14]

We have also attempted to explain the transfer amount at the child level. Ideally, one would like to introduce random effects into the selection model. However, when attempting to estimate such a model we failed to reach convergence. Consequently, in the following, we rely on standard sample selection models. Regarding the exclusion restrictions for identification, we drop the variables for years since migration, French citizenship, and difficulties in reading French from the gift value equations[15]. Again, as reported in columns (2) and (4), we find fewer significant determinants of the transfer amount. Among the parental characteristics, only household income bears a strong relation to the transfer amount. The findings with the children's variables are equally sparse; only living with a partner has an unambiguous (positive) impact.

To summarize, the findings from migrants to France indicate that parents are more likely to help their poorer children, a finding that is consistent with both the altruistic and exchange models. A further result, however, supports altruism. The exchange motive is based on a notion of reciprocity; commonly transfers are given to a child in return for assistance to parents in the form of visits and other services. Such a process would suggest more frequent or larger transfers to children who live in proximity to parents and, consequently, are in a better position to provide services. In this regard, our findings indicate no effect from distance within France, and a higher rate of transfers to children living in the home country (columns 1 and 3 of Table 4); thus, there is no suggestion that proximity is associated with a higher likelihood of transfer receipts.

5. THE INTRAHOUSEHOLD ALLOCTION OF TRANSFERS

To this point all the adult children have been included in the econometric analysis. This has permitted us to describe how a child's likelihood of receiving assistance is influenced by the characteristics of the parent and the child. However, we have not yet examined the intrafamily allocation of transfers, which is central to discriminating between the competing hypotheses about parental motives. In the present section we turn to the allocation decision, with the sample restricted to families having between two and four children. One child families are deleted because there is no allocation decision to be made; families with more than four children are dropped because of the questionnaire design, which was discussed earlier. The sample is now reduced to 3,149 families.

Consider the magnitude of unequal sharing as reported in Table 5 and, for the moment, examine only the top panel, referring to the total subsample. On average, some money is received by all of the siblings from their parents in 7.9% of cases (column 4), while the proportion of families in which at least one child, but not all, obtained assistance is 9.8%. Hence, among families that received assistance, the frequency of unequal sharing is 55.4%, a figure only slightly below the reports of others (e.g, Wilhelm 1996, though with respect to bequests). Also, not unexpectedly, the odds of unequal sharing increases sharply with family size (column 5).

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[14] It may be that the negative relationship between the probability of transfer receipt and the recipient's economic situation is a consequence of liquidity constraints (see Cox, 1990).

[15] The model was estimated via maximum likelihood with the standard errors adjusted for clustering at the household level since we can have multiple observations (children) in a family.

Table 5. Occurrence of unequal and equal sharing

A. All

Number of childen per family	(1) Number of families	(2) No recipient	(3) One child at least, but not all	(4) All children receive	(5) (3)/(4)
1	1164	87.2	-	12.8	-
2	1601	81.4	7.7	10.8	0.71
3	989	82.1	11.9	6.0	1.98
4	559	85.2	12.0	2.9	4.14
More than 2	3149	82.3	9.8	7.9	1.24

B. Muslim

Number of childen per family	Number of families	No recipient	0ne recipient at least, but not all	All recipient	(5) (3)/(4)
1	253	93.7	-	6.3	-
2	329	91.8	5.5	2.7	2.04
3	304	88.5	10.5	1.0	10.50
4	274	89.4	9.9	0.7	14.14
More than 2	907	90.0	8.5	1.5	5.67

C. Non Muslim

Number of childen per family	Number of families	No recipient	0ne recipient at least, but not all	All recipient	(5) (3)/(4)
1	911	85.4	-	14.6	-
2	1272	78.8	8.3	12.9	0.64
3	685	79.3	12.6	8.2	1.54
4	285	81.1	14.0	4.9	2.86
More than 2	2242	79.2	10.3	10.4	0.99

Source: Survey PRI 2003.
Families with more than 4 children are excluded from the sample.

We emphasize that our characterization of "equal" and "unequal" sharing is based on transfer probabilities, not on amounts transmitted, and is therefore an approximation to the true figures. Nonetheless, our estimate of unequal sharing constitutes a lower bound, since if a child did not receive any assistance, the parental family could never be characterized by equal sharing. A second limitation of our characterization derives from the five year period to which the transfer question pertained. Any transfers made outside this time interval are not visible to us[16].

We now turn to the determinants of the provision of unequal transfers, using the restricted sample that is limited to families with two to four children in which at least one transfer was made. The estimates reported in Table 6 come from a Probit model that contrasts "unequal" with "equal" allocation. We find that unequal sharing is greatly increased by number of offspring, whether living in the parental home or elsewhere. With several adult children it appears that parents become more selective. At the same time, there is little indication that the level of parental resources, as measured by income or wealth (homeownership), influences the parental decision, though there is a small tendency to equal allocation among better educated respondents. Finally, there is some suggestion of a cultural effect, as evidenced in the greater tendency of Muslim immigrants to engage in unequal allocation, an issue that we explore in the next section.

[16] The reasons for limiting this question to the past five years were noted earlier. Since we have data on the amount received by each child, we have also examined another definition for equal transfers, namely amounts in the range of 0.9 to 1.1 of the average for the sibship. The multivariate results are quite similar under the two definitions.

Table 6. Probit estimates of unequal allocation by parents

Variables	Unequal sharing	
	Coef	t-test
Constant	-4.609	-0.97
Characteristics of the parent :		
Female	0.058	0.46
Age	0.141	0.88
Age squared (10^{e}-2)	-0.117	-0.84
Lives with partner	-0.245	-1.37
Number of children at home	0.608***	6.09
Number of children outside home	0.393***	4.85
Years of education	-0.027*	-1.94
Health problems	-0.018	-0.14
Currently working	-0.065	-0.46
Household's income (10^{e}-5)	-0.461	-1.23
Household's income squared (10^{e}-10)	0.097	1.21
Home ownership	0.083	0.55
Duration of migration	-0.006	-0.99
French citizenship	-0.060	-0.46
Difficulties in reading French	-0.029	-0.18
Religion :		
Muslim	0.517**	2.36
Other religion	Ref	
Characteristics of the child :		
All children in France	Ref	
All children in the origin country	-0.215	-0.86
Children in both countries	0.309*	1.89
Number of families	557	
Number of cases of unequal sharing	309	
Log likelihood	-322.1	

Source : Survey PRI 2003.
Reference category is equal sharing. The sample is restricted to parents who have exactly two, three or four adult children, and have transferred resources to at least one of their adult childen. Significance levels are 1% (***), 5% (**), and 10% (*).

To better understand how parents divide their resources among children we utilize a conditional Logit approach first proposed by Chamberlain (1980). Restricting the sample to families in which at least one child, but not all, received a transfer, the strategy entails an examination of the characteristics of the children in order to ascertain which factors may have influenced the decision; parental characteristics are not introduced since they do not vary among the children of a given sibship. The sample restriction reduces the number of available families to 309. Results for this fixed effects formulation are presented in Table 7.

An examination of the determinants of the intrahousehold allocation (column 1) reinforces the earlier findings that parents provide greater assistance to their less well off children. Offspring who are not in the labor force (students; "inactive") are more likely to receive parental aid; a similar assessment is reached with the financial status measure--less well off children have a higher probability of being helped. There is also evidence that offspring residing in the origin country receive more assistance, a result that may reflect the poorer economic circumstance of these children or, perhaps, feelings of obligation to family members left behind. In combination, these results, based on the intra-household allocation, provide support for an altruistic motive over an exchange explanation. Finally, we note again, in column (1), rather strong evidence that

female children are less likely to receive parental help, which brings us to a consideration of cultural factors in the determination of the parental allocation decision.

Table 7. Fixed effects Logit estimates for transfers received by children

Variables		(1) All families		(2) Muslim		(3) Non-Muslim	
		coef.	t-test	coef.	t-test	coef.	t-test
Characteristics of the child :							
Female		-0.411**	-2.51	-1.048***	-2.88	-0.170	-0.88
Age		0.206*	1.66	0.761**	2.01	0.123	0.87
Age squared (10^{e}-2)		-0.350*	-1.74	-1.379**	-2.01	-0.210	-0.95
Lives with partner		0.082	0.39	-0.257	-0.52	0.091	0.37
Number of children		0.029	0.28	0.336	1.37	-0.044	-0.35
Years of education		0.035	1.59	0.025	0.58	0.027	1.00
Occupation	Working	Ref		Ref		Ref	
	Student	1.256***	3.88	1.783**	2.45	1.114***	2.88
	Unemployed	0.366	1.13	0.962*	1.69	0.103	0.23
	Inactive	0.644**	2.46	1.229**	2.21	0.365	1.16
Financial status	Rich	Ref		Ref		Ref	
	Fair	0.522**	2.35	0.640	1.03	0.471*	1.93
	Poor	1.519***	5.49	1.089*	1.68	1.574***	4.91
Distance	In France: Less than 10 kms	Ref		Ref		Ref	
	In France: More than 10 kms	-0.198	-0.88	-0.756	-1.22	-0.036	-0.15
	Does not live in France	0.837***	2.67	1.532*	1.92	0.651*	1.83
Number of children		870		240		630	
Number of families		309		77		232	
Log likelihood		-280.9		-66.1		-207.4	

Source : Survey PRI 2003.

Dependent variable contrasts transfer received by a child versus not received. The samples are restricted to families comprising at most four adult children in which at least one child, but not all, received a transfer from parents. Significance levels are 1% (***), 5% (**), and 10% (*).

6. CULTURAL INFLUENCES ON THE PARENTAL ALLOCATION

Migrants bring with them a cultural heritage regarding proper family arrangements and the responsibilities of parents and children to one another. Although the full force of these traditions is likely to be eroded with duration in the receiving country, immigrant groups that are very different from long term residents in language, religion, and normative values are likely to acculturate slowly (Breton, 1964). In this section we examine the Muslim--non-Muslim divide among immigrants to France because this division represents a deep cultural cleavage in French society. Some evidence of the force of this distinction for parental transmissions is apparent in the descriptive information of Table 2, in which rather considerable differences in parental reasons for providing assistance are reported by Muslim and non-Muslim respondents. In this section we undertake an examination of the cultural effects, as they impact upon intergenerational transfers.

Probit estimates are reported in columns (1) and (3) of Table 8 for the probability of a transfer receipt by religious community; these results parallel the Probit formulations of Table 4. What is apparent is the much greater responsiveness among non-Muslims to the parental characteristics: for this group the transfer receipts reflect parental age, peaking at 61 years, household income (see Figure 1), and asset holdings (home ownership)--variables that have little impact on parental decision making among Muslim migrants. Even the number of children at home, a measure of competition for parental resources which is significant for both communities,

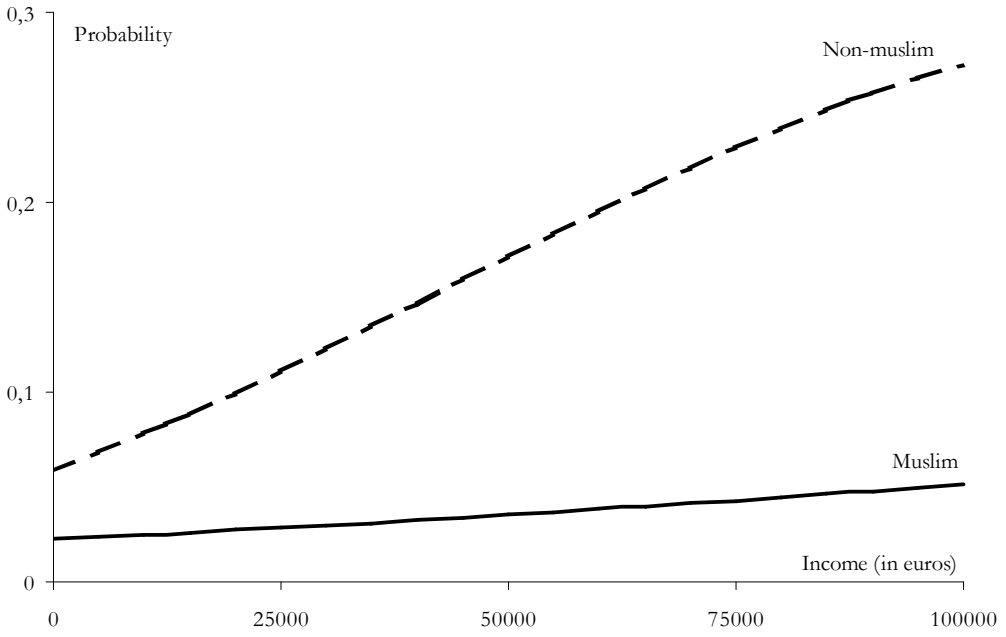
has a marginal effect that is almost ten times as large among non-Muslims than Muslims: an additional child reduces the receipt probabilities by 4.9 and 0.5 percentage points, respectively. The sole exception to this account is the coefficient for number of children outside the parental home, which is significant only for Muslims, though it is quite small in magnitude.

Table 8. Random effects Probit and Heckman selection estimates for transfers received by children, by parent's religion

Variables		Muslim				Non muslim			
Variables		(1) Probability		(2) Gift value (log) [1]		(3) Probability		(4) Gift value (log) [1]	
		coef	t-test	Coef	t-test	coef	t-test	coef	t-test
Constant		-1.512	-0.33	5.216	0,96	-27,553***	-5,20	7,340	1,43
Characteristics of the parent :									
Age		-0.084	-0.53	0.045	0,20	0,772***	4,22	0,037	0,24
Age squared (10^-2)		0.069	0.50	-0.048	-0,25	-0,683***	-4,33	-0,002	-0,01
Lives with partner		0.021	0.12	0.344*	1,71	-0,115	-0,41	-0,017	-0,12
Number of children at home		-0.127***	-2.95	-0.086	-0,79	-0,721***	-9,60	0,008	0,06
Number of children outside home		-0.105***	-2.74	0.004	0,04	-0,090	-1,36	-0,032	-0,58
Years of education		0.045**	2.49	0.011	0,27	0,051***	3,29	-0,005	-0,35
Health problems		0.084	0.59	0.058	0,38	0,227	0,82	-0,272***	-2,62
Currently working		0.054	0.34	0.326*	1,93	0,027	0,13	-0,019	-0,17
Household's income (10^-5)		0.837*	1.73	0.527	0,67	2,879***	4,24	2,029***	2,64
Household's income squared (10^-10)		-0.086	-1.17	-0.074	-0,80	-1,154***	-3,63	-0,780**	-2,35
Home ownership		0.149	0.95	0.151	0,72	0,330**	2,07	-0,095	-0,73
Duration of migration		0.008	0.94			0,007	0,75		
French citizenship		0.221	1.20			-0,073	-0,53		
Difficulties in reading French		0.108	0.69			-0,835***	-4,82		
Characteristics of the child :									
Female		-0.464***	-4.22	-0.217	-0,64	-0,088	-1,07	0,092	1,01
Age		0.023	0.36	-0.073	-0,82	0,112*	1,80	-0,138*	-1,83
Age squared (10^-2)		-0.019	-0.20	0.074	0,54	-0,156*	-1,65	0,213*	1,89
Lives with partner		-0.067	-0.51	0.071	0,32	0,122	1,15	0,255**	2,12
Number of children		0.047	1.12	0.054	0,69	-0,050	-0,84	-0,088	-1,52
Years of education		-0.004	-0.39	0.034**	2,21	0,022*	1,92	-0,001	-0,06
Occupation	Working	Ref		Ref		Ref		Ref	
	Student	0.749***	3.59	0.033	0,05	0,735***	4,24	0,299	1,36
	Unemployed	0.194	1.29	-0.184	-0,69	-0,017	-0,09	0,130	0,63
	Inactive	0.150	1.05	0.087	0,33	0,361**	2,46	-0,297*	-1,73
Financial status	Rich	Ref		Ref		Ref		Ref	
	Fair	0.378**	2.33	-0.350	-1,05	0,269***	2,61	-0,079	-0,68
	Poor	0.956***	5.27	-0.107	-0,15	1,120***	7,70	-0,133	-0,49
Distance	In France: Less than 10 kms	Ref		Ref		Ref		Ref	
	In France: More than 10 kms	-0.268*	-1.83	0.141	0,42	-0,005	-0,05	-0,015	-0,14
	Does not live in France	1.280***	7.37	0.669	0,78	0,518***	3,29	-0,272	-1,45
Selectivity term				0.354	0.25			-0,460	-0.75
Number of children		5910		253		7852		1016	
Number of families		1640		173		3359		625	
Log likelihood – Chi2		-801.4		327.6		-2165.1		566.1	

Source : Survey PRI 2003.
Significance levels are 1% (***), 5% (**), and 10% (*).
1: Heckman selection model. Identification by exclusion of terms for duration since migration, French citizenship and difficulties in reading French.

Figure 1. The impact of parental income on the probability of gift, by religion



Source: Survey PRI 2003.

With one notable exception, the consequences of the children's characteristics for a transfer receipt are less dramatic. In both communities the less well off child is more prone to receive assistance; similarly, in both, the likelihood of a transfer is greater for a child residing outside France, though the effect is considerably larger for Muslim migrants. What is distinctly different, however, is the role of gender in the two communities. A Muslim daughter has a receipt probability that is around 40% of a son's value (estimated at the means of the independent variables); among non-Muslims there is no gender difference. We suggest that this gender effect is a cultural artifact. As noted earlier, in note 2, it is prescriptive to provide smaller bequests to daughters in Muslim culture; this norm may well influence intervivos transfers as well. Further, in clan organized societies, parents often see their adult daughters as belonging to the husband's family upon marriage, and therefore less the responsibility of the birth parents (Jowett 1991).

To further explore the cultural effects we return to the matter of parental allotments among children. Previously, the data in Table 5 were used to describe the overall rate of equal and unequal sharing in the immigrant population and to note how the proclivity for unequal sharing increases with sibship size. In panels B and C of this table we break out the tendency to unequal sharing by religious community, and note rather considerable difference in the allotment pattern. Overall, the tendency to unequal division, as indexed by the ratio measure in column 5, is some five times greater among Muslim than non-Muslim immigrants; much of this disparity is due to the depressed likelihood of a transfer receipt by Muslim daughters.

Finally, in columns (2) and (3) of Table 7, which is restricted to the subsample of children from sibships of size two to four, we address the impact of children's characteristics on transfer receipts separately by religious group. Again, the evidence is clear that in both communities there is a greater tendency to provide support to more needy children, as revealed by the employment situation of the child and by the parental assessment of the child's financial status. Once again, there is a tendency in both communities to prefer the child who does not live in France, even in the context of controls for a child's financial status, though the effect is considerably larger in the Muslim community. Yet, the most striking finding remains the

tendency among Muslim migrants to provide assistance differentially by gender; indeed, we now find a receipt rate for daughters that is 35% ($e^{-1.048}$) of the rate for sons. Among non-Muslims, by contrast, there is no gender effect.

To summarize, parental characteristics, especially the financial resources of parents, appear to be less relevant to transfer decisions by Muslim migrants; in the main, transfer decisions by this group reflect measures of children's needs rather than the availability of parental resources. This can be interpreted as a less calculative approach by Muslim parents in making transmittal decisions; funds in some amount are routinely provided when required by a child, irrespective of the parents' financial circumstance. The data in Table 2 are consistent with this assessment: Muslim parents provide assistance "because of financial need" at a rate that is twice the figure for non-Muslims (73.1% versus 35.4%). At the same time, as befits parents who often are poor, the amounts provided tend to be small (column 2). The second distinctive difference between the religion groups relates to the children's characteristics. While parents from both communities are responsive to the financial situations of their children, daughters are singled out by Muslim parents for substantially fewer transfers.

Interestingly, this assessment is not limited to the rate of transfer. Columns (2) and (4) of Table 8 show that there is no linkage between transfer amounts and parental resources in the Muslim community, while richer non-Muslim migrants provide more money to their children.[17] Another differences stems from the positive and significant impact of years of schooling in the Muslim case, suggesting that transfers in this group may be aimed at investing in the children's human capital. Finally, we point out that the substantial gender effect, noted in the lower rate of transfers to Muslim daughters, does not carry over to the amount transmitted: conditional on the occurrence of a transfer, the amount is not significantly smaller for daughters. However, the expected value of transfer receipts by Muslim daughters, which takes account of the transfer rate, is considerably smaller than that of sons.

7. CONCLUDING COMMENTS

The primary intent of this paper was to compare the competing motives for parental transfers, altruism versus exchange, in a population of migrants from diverse backgrounds, having different value structures. In the total, undifferentiated population the results provide support for the altruism thesis, in that the more needy children have a higher probability of receiving assistance and, more critically, the transfer rate does not diminish with distance from the parents; indeed, children residing in the origin country have higher rates of receipt.

When we separate the migrants by religion, a rough proxy for cultural background, we find support for an altruistic motive in each of the groups. In both cases there is a greater likelihood of assistance to needy children and in both instances the critical test variable, distance from the parental home, continues to refute a pattern of transfer behavior that favors children who live in proximity to their forbearers, which would be suggested by an exchange motive. Our empirical results therefore differ from Arrondel and Laferrere (2001) and Wolff (2000), who report larger transfers to financially better-off children, though they are consistent with those of McGarry and Schoeni (1995; 1997) and Dunn and Phillips (1997). Beyond these findings we note rather distinctive cultural effects that influence transfer behavior--the lesser importance of parental resources in the decision process of Muslim migrants and the notable tendency in this group to favor sons over daughters in the allocation decision.

[17] For the sample selection models reported in Table 8, we rely on two-stage estimates (with an appropriate correction of standard errors) as we were unable to obtain convergence with a maximum likelihood method.

We hasten to point out that while our results favor altruism over exchange as the dominant parental motive, our data do not permit a test of the pure altruism model, namely whether a euro increase in parental income together with a euro decline in a child's income would be offset by the transfer of one euro from the parent to the child. Also, it is possible to be creative in the construction of exchange models and some have been formulated that cannot be tested with the sort of data available to us. In particular, the "demonstration effect" model discussed by Cox and Stark (2005) is a preference shaping formulation based on an exchange motive, but one that presumes a lag between the time assistance is provided to children and the services required by parents. Thus, if the migrants intend to return to their home countries in retirement--as some do--and would reside nearby the children currently living there, or if the respondents calculate that there is a greater likelihood of receiving services in the future from less well off children because their time costs are lower, our findings cannot reject these sorts of exchange models. What we can say is that our results do not support models of contemporaneous reciprocity between parents and children as guiding parental transfer decisions.

As a final matter we return to the importance of culture in assessing parental motives. While our conclusion from this study, based principally on the analysis of receipts by the several children in a parental household, is that a single parental motive--altruism--characterizes the transfer behavior of both Muslim and non-Muslim parents, this should not be assumed to hold true across societies. There is prima facia evidence, for example, that in less developed countries children are valued for the services they bring to the parental home and, indeed, even conceived with such ends in mind (De Voss 1985). One reason why sibships are large in less developed countries is that children are necessary to help farm the land, bring income to the household, and otherwise assist with the maintenance of a small family enterprise (Clay and Johnson 1992). In the same vein, in these countries, children are often regarded by parents as assurances that they will be cared for in their later years (Jowett 1991; Lillard and Willis 1997). Such expectations are often articulated by parents, so it would not be surprising if these considerations enter into their calculations when contemplating transfers to offspring.

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