## **BETWEEN FAMILY AND FRIENDS**

UNDERSTANDING THE INTERDEPENDENCY OF PRIVATE TRANSFERS

© Florian Tomini

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## **Between Family and Friends**

## Understanding the Interdependence of Private Transfers

Dissertation

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# Chapter 1. Introduction

To a labor economist or an industrial organization economist, a family looks like "a little factory." To a bargaining theorist, a husband and wife are "two agents in a relation of bilateral monopoly." To an urban economist or a public choice theorist, a family looks like "a little city", or perhaps "a little club". To a welfare economist, a family is an association of benevolently interrelated individuals. Each of these analogies suggests useful ways in which the standard tools of neoclassical economics can aid in understanding the workings of a family.

Theodore C. Bergstrom (1994)

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### 1.1 Introduction

People have always given support to their family and friends. This support is mainly composed of transfers of money, goods and services, but also mutual advice or interest shown. The content and intensity of transfers vary depending on the context of the family and country, but their societal role remains certainly important all over the world (Schoeni 1997; Jensen 2003; Kohli, Künemund et al. 2005; Cox and Fafchamps 2006). The complexity of motivations behind these private transfers has always attracted the attention of researchers from various fields. Prosocial behaviour, or the motivation to give to family and friends when there are no immediate or visible personal gains (Batson and Powell 2003), has been debated for a long time. During the past century disciplines like psychology, anthropology and sociobiology have come up with various theories and explanations on such motivations. Their arguments have always orbited around the altruistic and nonaltruistic motives. Economists have mostly favoured selfish motivations and only recently admitted altruism as one of the motives driving giving to family members (Becker 1981; Simon 1992; Altonji, Hayashi et al. 1997). However, understanding the motives of private transfers and support is only the first step. The next step is to understand how people would adjust transfers when transferring to multiple family members or friends. Economics may use the knowledge on the motives (why do people transfer) in order to understand better the interdependency and timing of the transfers (when do people transfer and to whom).

This thesis presents an in depth investigation of the interdependence of private transfers and support given to family members or friends. When transferring to a particular family member or friend, people have to decide whether to transfer or not to the other ones. Transfers and support are not only affected by factors like financial constraints, physical distance or communication barriers but may also be affected by transfers to others. How do people react in such circumstances? Will the transfers to a family member (e.g. one of the children) impose the cost of reducing transfers to the other members (e.g. the other children) at a particular point in time? How will the transfers to the same member of the family relate over time? If someone gives to one of his/her children, is he/she more or less likely to give to the other children or friends? Furthermore, if migration relocates family members, splits families and exposes migrants to new people and different cultural practices, is it also likely to affect the support received by family and friends?

### **1.2** The general context

The important social-economic developments happening during the last decades in most of the developed countries have put the support given through the family under constant stress (Bengtson 2001; Kijn and Komter 2004; Attias-Donfut, Ogg et al. 2005; Kohli, Künemund et al. 2005). The declining male breadwinner/female housewife, rising female employment rates, changing family structures, increasing demands for a flexible and inclusive labour market and impact of internal and international migration have had a major impact on the position of the family in the society and the support provided to family members (Esping-Andersen 1999; Leira 2002). To date, driven also by the difficulties faced by the welfare systems, many developed nations are attempting to develop policies

encouraging the changes in the family support patterns in order to increase labour force participation rates and support late retirement. This, in turn, leads to changes in the relationship between partners, children and parents and also between other family members or friends who live outside of the household.

Developing or transition economies, on the other hand, are struggling to deal with the consequences of rapid urbanization and internal (international) migration (Byerlee 1974; Becker, Morrison et al. 1999; Ravallion 2002; Macours and Swinnen 2008). The massive migration towards the urban areas in these countries has led to a rapid growth of poverty. Such trends are foreseen to continue in the future and predictions show that 60 per cent of the poor will live in the urban areas when half of the developing world will migrate from rural to urban areas (Ravallion 2002). Such movements promote the split up of the families and change support networks influencing the giving patterns of the migrants. The weak role of the welfare systems and inefficient financial markets emphasize much more this role. Public policies in the developing world are mainly directed in increasing formal employment and fighting the increasing urban poverty, while people rely much more on private transfers from family and friends.

The changing role of the family support both in the developed and developing countries emphasizes the need to increase knowledge on the complex reciprocal relationships between families and the welfare state policies. The success of public policies addressing labour market participation, informal care, or household poverty will clearly depend on better understanding of the family interactions and their impact on individual behaviour.

### 1.3 Main arguments

The thesis builds on the existing theories and empirical evidence on motivation of private transfers. The thesis focuses on the private transfers of income (hereafter referred as inter-vivos), goods, services and advice between family members and between friends.<sup>1</sup> Motivation theories help in understanding better the 'why' of the private support. What motivates people to support family and friends? Which motives are stronger, and to whom they apply? While this is certainly the first step in understanding the private transfers and support, a further step will be to understand "when" do people transfer and to "whom". How do people choose between family members or friends, and how are such transfers dependent over members, time or space?

Economists have always recognized the role of the private transfers of money and time in the economy. They have, for a long time now, tried to test whether such transfers are driven by altruism or other selfish motives (Schokkaert 2006). In fact, altruism is one of the prepositions originating from sociobiology and psychology. In these terms, altruism refers to actions that aim in benefiting others more than oneself (Piliavin and Charng 1990), or to actions that decrease the lifetime direct fitness of an actor and benefits one or more recipients (Trivers 1971; Wilson and Wilson 2007). Social psychologists classify it as a subset

<sup>&</sup>lt;sup>1</sup> Inter-vivos transfers are transfers of income/wealth happening during the lifetime of a person. Contrary to bequests, inter-vivos are supposed to be intentional and therefore more revealing in terms of motivations behind them (see Cox and Rank 1992).

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of prosocial behaviour, referring to actions like helping, comforting, sharing and cooperating intended to benefit others (Batson and Powell 2003). Prosocial behaviour is said to be motivated by both altruistic and non-altruistic motivations. It is argued that altruistic behaviours are triggered by strong sentiments like affection, sympathy, empathy, and compassion or pity (Kolm 2006). They are mostly observed in very close relationships (e.g. the love of a parent for own child), or when other strong sentiments are involved (e.g. the compassion from the other suffering). Non-altruistic behaviours on the other hand are triggered by normative motivations (e.g. moral obligations or values that do not necessarily lead to altruistic actions) as well as social effects or simply self-interest (a more detailed discussion of these motives is given in section 2.2). Such motivations may be observed both in relationships with close relatives and non-relatives (Kolm 2006).

In the last years economists have tried often to incorporate the altruistic motives in the neoclassical models. Adam Smith in his well known book "The Theory of Moral Sentiments" (1759) states that there exist some principles in the nature of even the most selfish man making him interested in the fortune of others although "… he derives nothing from it except the pleasure of seeing it".<sup>2</sup> His view coincides mostly with what is called as 'the egocentric' theory of altruism developed further by Gary Becker. Becker argues that the utility of the potential beneficiaries is embedded in the utility of the donor (Becker 1981). Therefore, a parent for example, will help his/her needy child only by enjoying the pleasure of this child by the added consumption. Becker's egocentric altruist parent does not derive pleasure because the child is assisted but because the child's pleasure is already in the utility function of the parent. This is in the same lines as the hypothesis of genetic fitness and kin selection previously developed by Hamilton (Hamilton 1964).

Another proposition mostly explored by the economists is also that of the "egoistic" theory of altruism. This assumes that people give to other primarily because they are expecting something in return (known as 'tit for tat' strategy) (Khalil 2004). The egoistic theory coincides with other theories on reciprocal behaviour like: reciprocal altruism theory (Trivers 1971), and reciprocal behaviour in game theory (Fehr and Gächter 1998). This view was also used to explain some extensions of the "egocentric" model of altruism like the exchange of goods for services (Cox 1987), or the strategic bequest motives (for a more detailed discussion of these motives see section 2.3).

The above prepositions are not exclusive and do not necessarily compete with each other. Whatever the motives, either for pure, egoistic or egocentric altruism, people tend to give economical and social support to their family and friends. If the other disciplines have improved our understanding on the motives of such support, economics may explain much more on people's giving behaviour when they have to transfer to more than one family member or friend. For this, one has to understand the supply side of transfers or support. Economics tools may be used to understand whether transfers to family and friends are substitutes or complements to each-other. The questions asked in this thesis relate mostly to such interdependence of transfers between family members and friends.

<sup>&</sup>lt;sup>2</sup> Smith, A. (1759), The Theory of Social Sentiments (1969, Indianapolis, Liberty Classics).

Question 1: Are financial transfers to children and friends driven by similar motives and do such transfers substitute each other?

The financial transfers are one of the most direct and yet constrained form of giving. People tend to give gifts or money to both children and friends. This raises the question whether financial gifts to and from children and to and from friends are related. Do people give more to their friends if they give less to their children? Or, are people who receive money from one relation also more likely to receive money from others? And, does the relationship with friends change when people have children?

Question 2: Are transfers given to one child dependent on the particular needs or characteristics of other children? And, do different types of transfers substitute or complement each other?

Parents usually transfer part of their wealth, help with every day activities or give support and advice to their children. These transfers depend on the parents' giving patterns, particular needs of children at a given time, but also on the transfers given to the other children or the same child over time. To what extent will be transfers of money, services or support to one of the children influenced by transfers to the other children (and/or to the same child in different years)?

Question 3: What is the effect of migration on the types of transfers received by the migrant households? And, will transfers from friends substitute transfers from family members after migration?

The network of family and friends plays an important role providing economic, social and emotional support in everyday life. Internal migration may put these networks at risk. Relocation of the household (e.g. through internal migration from rural to urban) affects both the type of support given/received but also the importance of particular family members or friends. Financial support becomes much more important in these settings and transfers from friends may become increasingly important. Effects of migration on private transfers are primarily studied looking at the migrant and the family left behind. The questions asked in this thesis are: How does the relocation of entire households affect the receipt of inter-household transfers from kinship members and friends? Will the composition of received transfers change? Or, will the sending relatives be different?

### 1.4 Outline

The thesis presents the theoretical and empirical investigations of the motives and interdependence of support given to family and friends. The main arguments and investigations are based on the theoretical concepts and questions posed above. The chapters and their summaries are presented below.

The second chapter consists in an introductory literature review of the main theories on private support between family members. Psychologists, anthropologists, sociologists and economists have looked at the motives of transfers. Their views differ depending on the discipline and focus of the research. Most of the explanations given to date fall broadly within the two more distinct categories: altruistic and selfish behaviour. The chapter gives the main groups of sentiments or factors motivating altruistic and non-altruistic behaviours according to the research in social psychology, sociobiology and anthropology. It also presents how sociologists have grouped together the transfers in order to measure the extent of solidarity between family members. The main applications and theoretical advances in economics are given in a separate section reviewing the egoistic and egocentric giving and altruism. The chapter elaborates further the three central hypotheses (above) and also gives an overview of the recent empirical evidence for each of them.

Chapter three looks at financial transfers and explores simultaneous transfers to/from children and friends. The aim is to improve the understanding on the motives for financial solidarity and also test the substitutability of transfers to/from children and friends. The chapter uses data from the first wave of 2005 of Netherlands Kinship Panel Study (Dykstra et al. 2004). The likelihood of financial transfers is firstly related to individual characteristics of both the anchor and respective donors or beneficiaries. The correlations between each pairs of transfers (for the main sample and different sub-groups) are also investigated. Empirical findings suggest that there exist a strong correlation between outward or inward transfers made to/from both children. A positive though weaker correlation is found when comparing simultaneous transfers to/from children and friends. There exists a strong tendency for reciprocity between friends. With the increase of the number of children reported, transfer reciprocity between anchors and their friends declines. Findings support 'warm glow' related motives, and do not support the altruism hypothesis as explanation for financial solidarity.

The fourth chapter analyses the interdependence of giving to similar members of family. The subject here is the most common transfers in the family, the intergenerational transfers from parent to children. Inter-vivos support of parents on the other hand may depend on particular giving patterns, needs of children at a given time, but also on the needs of the other children (or the same child over time). The chapter uses the data from Netherlands Kinship Panel Study for 2005 and 2007 to explore both the "between-children" and "between-time" interdependence of different transfers. The transfers considered include money transfers, household help, odd-jobs help, advice, and interest given to children. The correlations of different transfers are analyzed, focusing at the effect that transfers to other children (or to the same child over the years) have on the likelihood of transferring particular transfers. The estimation results distinguish both the "equity" effect and the "exhaustion" effect of parents. Parents tend to transfer similar transfers to both children, and also positively associate transfers among them. However, parents seem to "exhaust" their resources and do not always relate different transfers with each-other when it comes to different children.

Chapter five looks at transfers of money, goods and services to all members of family and friends when the entire household migrates internally. The data used to analyse this come from a unique survey among internal migrants in peri-urban Tirana (Albania). The giving and receiving of money, goods, and services transfers by migrant households are considered both before and after migration. By looking at frequency of transfers before and after migration, I check whether the structure of transfers changes and whether friends have superseded family as important sending partners. The empirical findings show that the types of transfers received and the relatives or friends sending transfers change after migration. It is found that households receive fewer transfers than before migration, but that financial transfers increase. Friends become increasingly more important after migration, substituting for transfers from siblings and more distant relatives.

The findings from chapter two to five are summarized in chapter six. This chapter includes also recommendations on further research.

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## **Chapter 2.** Transferring to family and friends: A review of the motives, evidence, and the role of economics

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How selfish soever man may be supposed, there are evidently some principles in his nature which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it.

Adam Smith (1969). The Theory of Moral Sentiments, p:1.

### 2.1 Introduction

People give financial and non-financial support to their family members and friends. This support is important both from an economical and social perspective. Private transfers are argued to be important in determining capital accumulation in transferring wealth to younger generations (Barro 1974; Kotlikoff and Summers 1981; Cox and Raines 1985), serving as a form of insurance against income shocks (Kotlikoff and Spivak 1981; Altonji, Hayashi et al. 1997). Support to family and friends is also argued to create cohesion and solidarity among family members (Bengtson and Roberts 1991). The role of private transfers and support in the economy and the impact on family life has attracted the attention of researchers from various disciplines. Psychologists, anthropologists, sociologists and economists have explored the motives and the dynamics of transfers. Their views differ depending on the discipline and focus of the research. Most of the explanations given on the motivation of the transfers fall broadly within the two more distinct categories: altruism and self-interest. The literature shows that altruistic behaviours are most likely to be observed in parents-children relationships or whenever strong emotions/sentiments arise with respect to others (Trivers 1971; Berkowitz 1972; Becker 1976; Batson 1991; Khalil 2004). Selfish behaviours are mainly associated with motives of "quid pro quo" (e.g. immediate or delayed exchange, investments in own children, etc) and mostly explored by economists (Chiappori 1988; Cox and Rank 1992).

Altruism is more popular among non-economists as the main reason explaining prosocial behaviour (giving to others in situations when there are no immediate or visible gains). Such motives are usually indentified with acts that decrease the lifetime direct fitness of an actor and benefits one or more recipients (Trivers 1971; Wilson and Wilson 2007). Economists have been more sceptical in accepting such non-selfish motivations. However, adapting altruistic behaviour to explain some of the prosocial behaviours is also becoming more popular in economics (Schokkaert 2006). The evidence brought up from other disciplines (e.g. psychology or sociobiology) has contributed to a wider acceptance of the concept of altruism. Psychology has shown that people's behaviour is influenced by strong empathic feelings (Batson 1991; Hoffman 1991). Sociobiology has shown that giving is greatly influenced by the existence of common genes (Hamilton 1964; Trivers 1971). Game theory on the other hand has shown that altruistic persons can survive among other egoistic ones (Bester and Güth 1998). Considering these developments, some argue that other disciplines may have a comparative advantage over the simplistic approach of reducing all prosocial giving into strictly selfish behaviour adapted by economics (Schokkaert 2006). On the other hand, adapting Edward Glaeser's argument for situationalism and the application of the findings of other disciplines in economics (Glaeser 2004), we can argue that economics may benefit from the increasing body of evidence found in favour of non-selfish behaviour by other disciplines.<sup>3</sup> In fact, the importance of economics in understanding individual giving behaviour derives from the recent findings of other disciplines. In the real world, altruistic motives are often endogenous to the particular relationships and even conflicting if

<sup>&</sup>lt;sup>3</sup> Edward Glaeser (2004) argues that the economic prediction deriving from the assumptions of the rational cognition and stable preferences may be challenged by the facts supporting situationalism (sustaining that decisions are dependent on local influences and not long-run well-being).

more than one subject is considered (e.g. parents may decide to treat their children differently despite the altruistic motives towards them). To understand such situations one has to understand the supply side of transfers/support. Economics has all the tools to understand how the patterns of giving will also reflect the substitutability or complementarity of transfers over family members and friends. The new evidence on altruistic motives raises further questions on how individuals will adapt their behaviour under certain circumstances. For example, if altruism is mostly observed/applied to close family members how would people behave when they have to deal both with family and friends? Would transfers to/from such members serve as substitutes or complements to transfers to/from friends? How would transfers from benevolent individuals change when similiar family members are involved? Interactions and transfers are also often spread over time and over multiple family members and/or friends. How would the transfers of benevolent individuals change in this context? How do these transfers change if they move in another place?

Psychology, sociobiology/anthropology, sociology and economics have looked at particular behaviours that trigger the support to family and friends. A psychologist looks at the family transfer as the elaborated form used to express sentiments and feelings (it is argued that such sentiments and feelings often motivate altruistic or non-altruistic transfers). A sociobiologist considers family transfers as the ways people use to ensure the transmission of their genes over time (the kin selection). An anthropologist considers the family transfer as a form of a rhetorical gesture in social communication. In this sense transfers are dependent on a set of social norms and obligations and possible political manoeuvring (Schieffelin 1980). A sociologist looks at the family transfers as a complexity of actions through which social relations and ties among this small group are materialized. An economist looks at family transfers mostly as a way through which individuals give up their own consumption in order to maximize the utility of their family as a unit, or because they are maximizing their long-term utility.

Disciplines like psychology or anthropology have dedicated a lot of attention to the motivation behind prosocial behaviour. But, how do benevolent people change their behaviours when they transfer to multiple relatives and friends? How does this change if they migrate from one place to another? Lack of data but also the level of the current theoretical frameworks can limit us in understanding this. This chapter reviews the main achievements of different disciplines in explaining the main motives behind transfers to family or non-family members and puts forward the main directions on which economics may benefit in order to better explore the mechanisms behind such transfers.

This chapter is organized in six sections. Section two gives an overview of the research on motivations in social psychology, anthropology, and sociology. Section three and four review the main economical theories explaining family transfers and the empirical evidence up to date. Section five gives an overview of the theoretical evidence looking at transfers over different family members, over time and over space.

### 2.2 Motives for private support in other social sciences

The following sections give an overview of the main motives for private transfers and their implications for support given to family and friends from the perspective of different disciplines. The concepts presented are by no means comprehensive of the vast literature that exist in each of these disciplines, and give a summarized view for each of them.

### 2.2.1 Prosocial behaviour and altruism in social psychology

The motives for private transfers within psychology are mostly studied by social psychology (which is a distinguished branch in psychology including psychologists and sociologists) focusing on "...how individuals think about, interact with, and influence each other" (Bordens and Horowitz 2001). Social psychology has dedicated attention to the fact that people tend to give to others in situations when there are no immediate (or visible) gains for the donors. This is referred to as the prosocial behavour. The prosocial behaviour relates to actions like helping, comforting, sharing and cooperating (Batson and Powell 2003). Social psychology divides the explanations of prosocial behaviour between altruistic and non-altruistic motives.

Serge-Christophe Kolm (2006) gives a comprehensive picture of the types of altruistic and non-altruistic behaviours for non-market transfers (see also Table 2.1) and the sentiments behind them. According to this classification, altruism is mostly related to hedonistic and normative behaviour. Altrustic motives can trigger transfers and help to family and friends, but such support can also be motivated by non-altruistic causes.

Kolm describes hedonistic altruism as related to situations where own hedonism makes a person to value the pleasure or the lesser pain of others. Individuals value more when another person is in a situation perceived as better for her/him. In such cases own hedonism leads to situations where a person is happier because someone else is happier or better off. Hedonistic altruism is triggered by psychological factors like affection, sympathy, empathy, emotional contagion (the induced emotion form others behaviour that is usually weaker than own emotions), compassion or pity (Kolm 2006).

Pure hedonistic altruistic behaviour is mostly based on the empathic altruism hypothesis.<sup>4</sup> Empathy altruism as defined by Charles D. Batson (1991) refers to the empathy feeling towards someone suffering. This empathy will likely be aversive (people do not like unpleasant emotions), yet it will not arouse egoistic-like actions to reduce such aversive emotions. The empathic altruism hypothesis sustains that such empathy will likely induce altruistically motivated behaviour aiming to help the needy people in reducing the suffering (Hoffman 1981; Batson 1991; Eisenberg 2000).

Affection towards someone is a stronger sentiment associated mostly with close kin relationship (e.g. parent – children) (Knafo and Plomin 2006). Affective altruism implies liking someone and therefore considering a good thing what is a good thing for her/him (including alleviation of suffer or pain). From this perspective affection can be combined with empathy. Affection may also mean that people take a more paternalistic role towards

<sup>&</sup>lt;sup>4</sup> Empathy here refers to the situation when we put ourselves in the places of the other person (this can refer to the physical mental, conditions, etc).

someone, wishing what is judgeed as the best of that person, but not necessarily the most conducive to her/his pleasure (Kolm 2006).

Sympathy is also one of the sentiments triggering altruistic behaviour. This is usually defined as "...an effective response that consist in feeling sorrow or concern for the distressed or needy other" (Eisenberg 2000: pp. 678). To some extent, sympathy can be associated with affection but does not impose a sense of responsibility over the other's good. As a result, the sentiments generated by sympathy are of a lower intensity than those originated from affection. This implies that sympathetic altruism applies more to distant members of family or to friends rather than to close relationships like children or parents.

Moral altruism relates to sentiments like compassion and pity, which both arise when observing someone suffering or being in poor situation (Kolm 2006). These two sentiments do not need to be associated with prior relations and/or positive sentiments between eachother. People feel compassion or pity for the suffering of estrangers, while for the closest relatives this sentiment is "crowded out" by affection (the higher degree of pain or discomfort we feel for our closest relatives leaves no room for pity). However, the compassion or pity people feel for others is to a lesser extent if compared to the degree of pain of that person, and in real world can also be mixed with other sentiments (e.g. empathy or emotional contagion).

Kolm argues further that altruistic motives include also the normative altruism, which in other words can be described as the situation when the individual considers the good of somebody else as "... a value in itself, a final or end value" (Kolm 2006 pp. 60). This is represented by three categories: intuitively moral altruism, the social normative altruism and rational normative altruism. Shalom Shwartz (1977) explains that normative altruism (of both forms) has three main conditions: 1) the moral obligations are so strong so that they push an individual to take specific actions, 2) moral obligation is activated by an individual's cognitive structure of norms and values , and 3) action triggered by such feelings may be neutralized if appropriateness or relevance of the obligations is questioned (Shwartz 1977).

Philippe Rushton defines a norm as "... a standard by which the actions are judged and on that basis approved or disapproved" (Rushton 1979, p 234). In normative altruism the individuals with higher scores of internalized norms of "social responsibility", other oriented values, or moral reasoning are more likely to behave prosocially than individuals with lower scores (Berkowitz and Daniels 1664; Berkowitz and Lutterman 1968; Berkowitz 1972; Rushton 1976; Rushton 1979). Individuals may use such standards to differentiate between right and wrong actions, appropriate and inappropriate behaviour, etc. Rushton argues further that the extent to which norms can influence the behaviour depends on the "internalization" of them. Thus, norms referred to as "moral principles" are strong norms that are turned into "oughts", more abstract norms are referred to as "values". In general the term norm as generally used in literature includes principles, customs, rules, and values.

Rational altruism in Kolm's classification refers to the situation where a person acts altruistically because of sentiments arising from counterfactuals (situations that do not exist but are imagined by people and thus influence their preferences and possibly choices). In these situations individuals are using aspects of rationality (logical reasoning, equality concerns, and consistency) and combining these ones with values. The categories of rational altruism include two subsets of motivations. The first one is based on "selfish" rational motivations and includes substitution and putative reciprocity. The sentiments here are similar to the empathic ones. The usual reasoning is to use counterfactuals like "*imagine youself in his/her situation*" (substitution) or "*he/she would have helped if the same happened to you*" (putative reciprocity) (Kolm 2006). The second subset is based on social rational motivations and includes impartiality (justice) and universalization. The use of counterfactuals is in the function of judging the situations taking an impartial role (impartiality) or by imaging the actions of the other people only referring to Kant's concept of universalization (e.g. asking the question "*what if the others did not contribute?*"). Both these subsets are further elaborated in Kolm (2006).<sup>3</sup>

	MOTIVES		Sentiments
Hedor C natura	Hedonistic,	Affective Affection/Sympathy	
		Pure hedonistic	Empathy/Emotional contagion
	Ilatulai	Moral	Compassion/Pity
TRL		Norms and values	Moral intuition/ Social norm
AI	Normative	Patienal (calfish or casial)	Substitution/Putative reciprocity
		Rational (senish of social)	Impartiality/Universalization
	Non-altruistic normative	Duty Propriety Self-satisfaction Habit Tradition	
UISTU		Receive others' opinion	Praise/esteem/gratitude/virtue status
LTRI	Social effects	Social situation	Hierarchal status/superiority/suppress
NON - AI		Social relation	Relation keeping/showing goodwill/agreement/liking/enjoying, etc
		Indirect effects	
	Self interests	Receive return gift	
		Receive reward	From others/institutions/in the future
		From situation or status	

<b>Table 2.1</b> <i>T</i>	The classification	of motives for	r private non-market	transfers
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Source: Adapted from Kolm (2006)5

Following the same classification, non-altruistic transfers can derive from normative motivation as well as social effects or simply self-interest. Normative motivation here refers again to moral obligations or values that do not necessarily lead to altruistic actions. In this case giving is triggered by moral obligations (duty or proper actions) that would induce self-praise or social praise and also actions that are already part of habits or traditions.

<sup>&</sup>lt;sup>5</sup> Kolm, S.-C. (2006). Introduction to the Economics of Giving, Altruism and Reciprocity. <u>Handbook on the Economics</u> of <u>Giving, Reciprocity and Altruism</u>, S.-C. Kolm and J. M. Ythier, Elsevier. **1**: 1-114.

Social effects relate to the societal effects arising from: 1) judgements or sentiments of the people who value the actions of the beneficiary (i.e praise, esteem or gratitude) (Batson and Powell 2003), 2) maintaining (or conquering) a social status within the society (e.g. hierarchal status, superiority, etc), and 3) keeping a social relation with the receiver (the motive here does not correspond to the altruistic ones as the subject of the action is the giving and not the object or the amount given – people care more about giving something and less what is that they give).

The last non-altruistic type includes the self-interest giving. Here, the costs involved with the giving are expected to be compensated (or most often overcompensated) directly to the giver. Sections 2.3 and 3.2 will deal more extensively with such giving (reciprocity, exchange, etc).

#### 2.2.2 Genetic fitness in sociobiology

Sociobiology has looked at the concept of altruism and the interrelations with the Darwinian theory of evolution by natural selection. Sociobiologists look at life as a series of choices in which the individual strategically evaluates the potential benefits and costs of alternative behaviour to finally choose the alternative with the maximum yield (Baker 2008). The first contribution came from the work of E. O. Wilson, an entomologist who had tried to explain the origins of altruism, in his book "Sociobiology: A new synthesis". Wilson argued that altruism was embedded in the genes. But, if this was a genetic behaviour than how could this be transmitted through Darwinian natural selection? Wilson answered this dilemma by employing the mechanism of "kin selection". In fact he argued that the individual is not even altruistic, but "selfish". He further argued that most of the behaviours are results of polygenetic factors involving more than one gene (he called this "inclusive fitness"). Relatives share a good proportion of common genes so individuals who sacrifice themselves would do so to transmit their "sacrificing" genes over the next generations. William D. Hamilton argued that in a competing environment the person's genetic fitness is increased by behaving more altruistically towards their children, grandchildren, siblings or anyone else who carries a relatively high proportion of their genes as this would increase their Darwinian fitness (Hamilton 1964; Hamilton 1972).

The drawback of this theory is that it may only apply to relatives (therefore sociobiology has been nicknamed as the "biology of nepotism"). This was the main reason leading Robert Trivers to introduce the complementary concept of "reciprocal altruism" (Trivers 1971; Trivers 2006). According to this concept non-relatives behave altruistically towards each-other knowing that the others will also behave altruistically towards them. In this case an individual initially gives transfers to its kin members not discriminating between them. After a couple of potential exchanges he/she engage in long-term reciprocal exchange only with those individuals who reciprocate.

### 2.2.3 Gift giving and reciprocity in anthropological studies

Social anthropologists argue that gift giving "... involves the bestowing of services or goods by one individual or group upon another without expectation of an equivalent or formal return" (Beals 1970, p. 232). Gift giving is common in most of the societies (even the

most developed ones) and it is a way of establishing informal social relationships or an expression of friendliness. Often gift giving is accompanied by a return gift. The return gift may not necessary be an equivalent of the first gift and often implies the continuation of the social relationship. In fact, many argue that reciprocity "...appears to be the underlying principle of gift exchange" (Komter 2004). Geoffrey MacCormak (1976) argues that the terms 'reciprocity' and 'reciprocal' are often used in the same context as 'gift', 'counter gift', or 'exchange' and it is not clear whether they are synonyms to the later ones or simply express extra qualities not given by them. In fact, there exists a difference between how reciprocity is viewed by social anthropologists and economic anthropologists (discussed in the next section). Marcel Mauss argues that gift giving is considered reciprocity when operates under the principle "...to give, to receive and repay" (Mauss 1969, p.80). As such, reciprocity is considered " a more general exchange principle governing besides economics social organization and kinship" (Erickson and Murphy 2008).

Polanyi (1957) has been one of the first researchers in social sciences stressing the point that reciprocity in gift-giving differs from the strictly market exchange in economics. From his point of view, reciprocity in modern industrial societies is seen mostly in family and inter-household relations, and in general is defined as a reciprocal exchange of goods and services constituting an integral component of long-term relationships. From his perspective, reciprocity is a set of socially obligatory gift-giving, representing material expressions of the relationships of kinship and friendship.

Along the same lines, Serge-Christophe Kolm (2002) defines reciprocity as "treating the others the same way they did treat you, just because of this particular fact and not as a result of an expected or pre-agreed exchange". It is argued that reciprocity differs from the concept of exchange ('quid pro quo') used usually in economics as it proceeds from a set of "internal" obligations (e.g. to give, to receive, and to give back) driven by norms or collective values, and group or social pressure (Kolm, 2000). In fact, Kolm argues that a family is neither a 'paternalistic entity' á la Becker and nor an exchange á la Chiappori,<sup>6</sup> but it represents a dense and intense network of various reciprocities in sentiments and conduct. In this context the commands and exchanges are embedded in larger relations of reciprocity among the family members (Kolm 2006).

Serge-Christophe Kolm (2006) further argues that as reciprocity mainly refers to gifts, motives driving reciprocal giving relate to the motives behind altruistic or non-altruistic private transfers (see Table 2.1). The motives of reciprocal giving fall in three distinct categories which can be labelled as: 'liking reciprocity', 'comparative reciprocity' (balancing, matching or compensatory) and 'continuation reciprocity'. According to this categorization, 'liking reciprocity' refers to the situation where a gift is made because of: 1) reciprocity in liking, or in other words as people tend to like those who like them, this liking induces reciprocal gifts<sup>7</sup>, or 2) liking reciprocity in giving, or returning a gift because people like the person that gave (and that person gave a gift because he/she also likes these people). The

<sup>&</sup>lt;sup>6</sup> See also Chiappori, P.-A. (1988). "Rational Household Labor Supply." Econometrica 56(1): 63-90 and Browning, M., F. Bourguignon, et al. (1994). "Income and Outcomes: A Structural Model of Intrahousehold Allocation." The Journal of Political Economy 102(6): 1067-1096.

<sup>&</sup>lt;sup>7</sup> Liking is based in a series of interrelated outcomes that relate to previous actions and sentiments like: affection, liking to be liking, being the object of attention, approval, passion, etc.

explanation for the second motive, comparative/balancing/matching, assumes that individuals return gifts or favours because they are aiming to balance between what they have benefited and what is provided in return. The gift in this case reduces some inequalities in the relationship and the giver reciprocates the gift often from a feeling a moral debt towards the initial benefactor (by balancing his/her gift). Kolm calls this 'pure reciprocity' as this is related purely to the first act of giving and does not depend on other motives or feelings. The last motive, the continuation reciprocity, is driven more from selfish behaviour. The main aim of the gift is to induce a return gift. This motive has more resemblance with the exchange hypothesis as it assumes that the reciprocal gift is a means for inducing further gifts in the future.<sup>8</sup>

More contributions to the discussion on family transfer motives come from the work of sociologists studying reciprocity 'norms'. Alvin Gouldner (1960) describes the reciprocity norm defining "...certain actions and obligations as repayments for benefits received" (Alvin Gouldner 1960, p.170). Others look at it as the norm that "...prescribes that one should help those who have helped him/her in the past and retaliate against those who have been detrimental to his/her interests" (Marco, Marcello et al. 2003). Vern Bengston argues that in family life intergenerational norms of reciprocity norms are very high. These norms are based on the rule that one should care for own family in times of need, being this care independent from gains from the same relationship in the past or the future. In the family perspective they are materialized in two main forms; obligation toward own children/parents (Kalmijn 2006) and reciprocity norm. The obligation toward children and parents is considered the strongest norm in the family (norms towards children are consider even stronger than the ones toward parents). Another derivation of reciprocity norm mentioned earlier is also the indirect (serial) reciprocity (Arrondel and Masson 2001), which involves more than one generation. This implies that norms and their consequences are passed on from one generation to another.

### 2.2.4 Family solidarity and intergenerational support in sociology

The work of sociologists on family transfers has been focused on intergenerational relations. They define the concept of intergenerational family solidarity as the "social cohesion between generations" (Bengtson and Oyama 2007). Previous authors have referred to this as family unity, family coherence/integrity, or family solidarity and the concept builds on the findings of social psychology of small group and family cohesion (Jansen 1952). Vern L. Bengtson (1993) argues that such solidarity "…*reflects norms of 1) filial piety, 2) reciprocity, 3) altruism and 4) self-interest (individuals expectations for their future)*" (Bengston 1993, p.21).

Family solidarity from this perspective includes a few dimensions of solidarity consisting mainly in the extent of interactions between family members. Jansen (1952) argued that these interactions included: 1) agreement, 2) concern about each-other, 3) cooperation, 4) enjoyment of each-other company, 5) affection; 6) esteem for each-other, 7) interest, 8) and confidence.

<sup>&</sup>lt;sup>8</sup> See also Kolm, S.-C. (2006). Reciprocity: Its Scope, Rationales, and Consequences. Handbook on the Economics of Giving, Reciprocity and Altruism. S.-C. Kolm and J. M. Ythier: 371-541

SOLIDARITY	MANIFESTATION	INDICATORS	EMPIRICAL MEASURES
Associational	Engagement and interaction in various activities	Contacts with other family members	Frequency of: 1. face- to-face, 2. telephone, 3. mail, etc
		Participation in common activities	Frequency of: 1. recreation activities, 2. special occasions, etc.
Affectional	Positive sentiments about family members	Affection for family members	Perceived ratings of: 1. warmth, 2. closeness, 3. understanding, 4. trust, respect, etc.
		Reciprocity in positive sentiments	Perceived ratings of: 1. reciprocity in sentiments
Consensual	Agreement on values,	Concordance on specific values, attitudes, and beliefs	Perceived ratings
	attitudes or beliefs	and beliefs	Perceived ratings
Functional	Exchange of services or assistance	Assistance or help to family members	Frequency of: 1. financial, 2. physical, 3. emotional
		Reciprocity in exchange of resources	Perceived ratings
Normative	Commitment to norms of familial roles and obligations	Importance of family roles	Perceived ratings
		Strength of filial obligations	Perceived ratings
	Opportunities for al intrafamily relationships	Residential proximity	Physical distance
Structural		Number of family members	Number of siblings, cousins, other members.
- Tuctului		Health conditions	<ol> <li>Health rating</li> <li>Invalidity</li> <li>Chronic illness, etc.</li> </ol>

### **Table 2.2** Family solidarity types and indicators

Source: Bengtson, V. L. (1993). Is the "Contract Across Generations" Changing? Effects of Population Aging on Obligations and Expectations Across Age Groups. The Changing Contract Across Generations V. L. Bengtson and W. A. Achenbaum. New York, Walter de Gruyter, Inc.

Focusing on the intergenerational relationships, Bengston (1978) refined the categories in five dimensions (Table 2.2): 1) structural solidarity - factors facilitating or constraining the interaction of family members (e.g. physical distance), 2) association between family members (e.g. activities carrying out together), 3) affection showed (e.g. emotional support to each-other), 4) consensus (agreement on main values or life styles), 5) functions (help and support exchanged), 6) norms (degree of obligation towards other members of the family). Each of these dimensions contributes to the degree of solidarity within the family.

### 2.3 Motives for private transfers in economics

The economic literature focuses mainly on money and services exchanged within the family. Again, the main focus is on the intergenerational solidarity and on explaining the

main motives behind the private transfers and their implications for the individual and household welfare. The literature is mostly centred on how the market and home goods (e.g. house works) are produced and distributed among the members of the family (Becker 1974; Becker 1981). In the past decades the discussion on the motives of transfers, or as often called in economics interdependent – or sometimes also transferable – utility (Bergstrom 1994), is dominated by two main arguments: 'altruism' and 'exchange'. The arguments are based on the fact that human beings can take the roles of either 'altruistic' or 'egoistic' unities. The derived consequences from these behavioural changes serve as a basis for the main economic models of family transfers.

### 2.3.1 Altruistic transfers in economics

In the last years economists have tried more often to incorporate the altruistic motives in the neoclassical models. Adam Smith in his best known book "The Theory of Moral Sentiments" (1759) states that there exist some principles in the nature of even the most selfish man making him interested in the fortune of others although "... he derives nothing from it except the pleasure of seeing it".9 Gary Becker has studied altruism motives driving transfers within the family. He argues that economists commonly take tastes as given and assume that the self-interest dominates all other motives. But, there is something else beyond self-interest and this is related to genetic selection and altruism (Becker 1981). In this context, a person is considered to be *altruistic* with respect to another person if his/her welfare depends on the welfare of this other person. Based on this definition, economic literature describes the altruism model as a model where for example parents care for wellbeing of their children, or in other words they receive utility from their own consumption and also from consumption of their children. Consequently, the parent (or the head of the family), may choose to transfer resources to needier family members because of altruism. A distinguished feature of this model is the fact that during the lifetime a needy member of the family will receive more than she gives. If this hypothesis holds in empirical terms, then some characteristics of the needy receiver should be directly related to the extent of financial transfers, (like a drop in incomes, sudden illness leading to psychological or financial consequences, etc). The model assumes that the parent, for instance, will substitute for any drop in the wellbeing of their children due to unsatisfied needs. This form of altruistic behaviour can also be generalized for other relationships between a potential donor and a beneficiary and is usually classified as "paternalistic altruism". One of its distinguished features is that from the level of potential motivations, the number of donors does not really play a great role. On the other hand, if the behaviour of donors/recipients is to be analyzed in a multi-actor context, then the number of such actors and the respective interactions may turn to be crucial. Another debatable point of the model is the assumption that parents may observe at any time the well-being level of their children, and would consequently intervene to cope for any deficiencies. Even if this was the case, altruistic behaviour would create disincentives for the child. In fact Becker (1981) argues that this might lead the children to reduce their effort in income-generating activities knowing that they will be backed-up by their altruistic parents (who can only observe the drop in

<sup>9</sup> Smith, A. (1759), The Theory of Social Sentiments (1969, Indianapolis, Liberty Classics).

incomes). Becker argues that even such "selfish" children would still be interested in maximizing the utility of the family as a whole (even though their welfare depends only in own utility from consumption) and this is widely known as 'the rotten kid' theory.<sup>10</sup>

### 2.3.2 Egoistic transfers in economics

The academic discussion on altruistic behaviour orbits around the fact whether most altruistic acts can simply be justified by implicit egoistic reasons. Many researchers still struggle to prove whether people can 'translate' each of so-called altruistic gifts in terms of other self-interest driven behaviour. The recent experiments in social psychology research favour mostly the existence of the altruistic part of human nature. As Pilivian and Charng (1990) put it: "...true altruism – acting with the goal of benefiting another – does exist and is a part of human nature". Yet, many agree that observing altruistic behaviour in its 'pure' form is very rare and in most of the practical actions is usually combined with other motivations. In fact, many economists have tried to explain the acts of giving using a "selfish" or "strategic" interpretation mostly referred as "exchange". In trying to test empirical altruism Cox (1987) used data from US President's Commission on Pension Policy Survey. He found a positive correlation between the transfers and the wealth of the recipient, which suggested the presence of some other non-altruistic motives. Using incomes as an indicator of wealth, Cox concludes that the transfer do not necessarily decline with the increase of the recipient's incomes. He suggests that utility of the transfer's donor is not only dependent on the consumption of both himself and the recipient (as the altruism model suggests), but depends also on services received by the recipient. The types of services that Cox is referring relate to help with home produced products that incorporate also the attention versus the donor (parents in his case), companionship, and conformity with the paternal behaviour and norms. This is an important feature of these services as it distinguishes them from the other services for which the market can provide substitutes.

On the other hand, Bernheim, Shleifer and Summers (1985) have looked at the 'strategic bequest' motive focusing on bequests that parents leave to their offspring. The basic concept behind their theory is that people pursue their self-interest through exchanging within the family and that this is enforced by explicit economic incentives. In other words testators influence actual behaviour of their potential beneficiaries through promised future bequests, 'rewarding' or 'punishing' them accordingly. One of important features of this theory is that it implies that parents using future promises impose some enforceability of exchange within the family. In the 'rotten kid' model developed by Becker (1981) it is assumed even the most selfish children would be provided with optimal incentives through altruistic behaviour of their parents (see above). Another important consequence of this theory is that it implies that the parent will have a strong role on the decision made by their children, and consequently will influence important decisions related to education, marriage, migration, etc.

Based on these later implications, a series of other papers has elaborated more on the exchange hypothesis. These papers have defined support flows as driven by exchange

<sup>&</sup>lt;sup>10</sup> The critiques of the 'rotten kid' claim that one of the main drawbacks of this theory is that it fails when it comes to consider the case of 'asymmetric information' (see also Bergstrorm 1989, for a more detailed discussion).

relations taking forms of: *delayed exchanged* (parents invest in children when they are young and they "repay" back" when grown up), *strategic bequest* (children support their parents when these ones are old so they can receive money/property after their death), and the *direct exchange* (children and parents exchange goods and support in the same time – e.g., services for transfers).

Other elaborations of exchange motives and 'egoist' approaches come from researchers that consider family as a source of capital. Cigno (Cigno, Giannell et al. 1998) argues that if we assume absence of altruism motives in family exchange, then transfers from the middle aged to younger generations can as well be considered as loans, while transfers in the opposite direction as repayments of these loans. Taking this approach Masson and Pestieau (Masson and Pestieau 1997) propose a general distinction of family transfers into three types; accidental, voluntary, and capitalist ones. They argue that *accidental transfers* occur because of deferred consumption and precautionary causes. Because of uncertainties of the individual's life cycle and imperfections of capital markets individuals cannot (completely) smooth out their current incomes during the life span. A consequence of this phenomenon is also unspent income that remains versus the end of one's life. Of course, if we assume perfectly efficient capital markets, this problem will be resolved, i.e. by the provision of annuities, and these types of transfers will be very rare. The *voluntary transfers* and *the capitalist ones* are described as driven either by the motives of altruism or exchange and are also explained above.

### 2.3.3 Family transfers as public goods

Considering that intra-family transfers are mostly seen as contributions to public goods (e.g. transfers to children or younger generations by their parents) they have important policy implications and have received a lot of attention. In this sense, families are substituting for capital markets, children care, and other public goods which cannot be provided by governments or markets. In countries where such services are missing intra-family transfers are seen as a part of risk sharing strategies.

In fact, if we consider family transfers as contributions to public goods, than transfers predicted by altruism theory (and to a greater extent also exchange theories) are subject to a "crowding-out" effect over public provided transfers (e.g. if enough resources to cover the effect of negative events are available through alternative public or private transfers or if the services are provided from other sources than the intergenerational transfers can be easily substituted). Yet, many researchers studying intra-family transfers (Guth, Offerman et al. 2002; Kohli and Künemund 2003) observe that even in those countries where such public transfers/services are available, the private transfers do not completely disappear. This fact calls for more attention to other motives that can complement (or even substitute) altruism and exchange. Following this logic, James Andreoni (Andreoni 1989; Andreoni 1993) extends the altruism hypothesis to the "impure altruism" hypothesis or to the "warm glow" hypothesis. And reoni argues that people usually contribute to a certain public good because of two reasons; the first being because they simply demand for more of this public good (what is called from Becker's model the "altruistic" reason), and the second being because they benefit some private goods from their gifts as well. Consequently, he implies that utility of donor is dependent not only on total amount of the utility of both the donor and
the recipient, but also on the act of giving itself. In this case, the parents do not only care directly for the well-being of their children but care also for the fact that they are giving to their needy children. In fact, if a parent acts according to the "warm glow" principle than the transfer is less dependent of the characteristics of the child. Andreoni argues that the "crowding out effect" of the private transfers by public social transfers will never be complete, as behaving according to the "warm glow" principles makes the private transfers an imperfect substitute for the public ones.

## 2.3.4 Reciprocity in economics

Reciprocity has been also explored in economics. The definition used is not that different from the one used by social anthropologists. Fehr and Gächter speak of reciprocal behaviour as "...a desire to be kind or hostile in response to kind or hostile actions" (Fehr and Gächter 1998). Similarly Falk and Fischbacher define reciprocal people as the ones who "...reward kind actions and punish unkind ones" (Falk and Fischbacher 2006). What distinguishes these behaviours from purely selfish behaviour is the fact that people reciprocate such actions even if no gains can be expected in return. In everyday life people often reciprocate gifts to complete strangers even knowing that they will (almost) never meet them again, or take revenge even knowing that such actions would also harm themselves. In ultimatum games<sup>11</sup> for example often low offers are rejected by the respondents (Güth and Tietz 1990; Güth 1995; Hoffman, McCabe et al. 2008), or in trust games<sup>12</sup> participants reward the kindness of the first player (Anderhub, Engelmann et al. 2002; McCabe, Rigdon et al. 2003; Pillutla, Malhotra et al. 2003).

The discussion on whether reciprocal acts can be attributed to purely selfish behaviours or to something else has been the centre of most of the theoretical models and empirical/experimental tests in economics. Such models often treat reciprocity as a series of repeated interactions where prosocial behaviour could be achieved as a stable equilibrium between purely selfish actors. The self-interest of even the most selfish players coincides with the self-interest of the other players, and reciprocity therefore is the situation where everybody gains (Schokkaert 2006).

## 2.3.5 Other views

Other views and theories of intergenerational and family relationships have been presented over the years. Looking beyond economical motives, Cox and Stark (1994) have explored the hypothesis of 'demonstration effect' as one of reasons for the financial transfers between parents and children. They stress the point that other theories of intergenerational transfers may not always explain motives behind such transfers. Consequently, if we believe that other motives (as the exchange or rewarding/punishment by means of anticipated future bequests) may only mildly change the behaviour of children, than parents may have also other reasons to transfer to their children. They introduce the idea of 'preference

<sup>&</sup>lt;sup>11</sup> Ultimatum games take place between two players A and B who have to divide a fixed amount. The proposer A offers a certain share to the responder B who can accept or reject it. If B rejects the offer, both A and B receive nothing.

<sup>&</sup>lt;sup>12</sup>Trust games are also played between players A and B. The first player A may choose between non-cooperating or trusting the second player B. When the first player A decides to trust player B, the later may decide to respond back to player A by choosing between exploitation or rewarding.

shaping', which hypothetically should be a mechanism that is used by parents (in this case) for reinforcing and securing the exchange and support from their offspring generations. The 'demonstration effect' assumes that parents demonstrate to young generations the way they should behave by setting them an example. The example is their benevolence towards elder generations, or grandparents. The presence of the child and her/his characteristics would affect frequency and extent of transfers from parents to grandparents.

## 2.4 The empirical evidence on intergenerational and family transfers

The available empirical work investigating rationales behind family transfers has been rapidly growing in the last decades. The increased interest in understanding family processes, the latest development in theoretical work, and availability of data for more countries have been the determinant factors in attracting more researchers to investigate these relationships.

Yet, despite the growing body of evidence, summarizing the findings within the same framework would be a challenging task that would require a consensus on some fundamental issues, like; variability in the design and collection of the questionnaires, differences in defining the family transfers, the extent of the details available on characteristics of both the donor and the receiver, differences in institutional frameworks for countries where data are collected, and also the variability of technical tools used in these analyses.

The vast majority of empirical papers concentrate on testing two basic hypotheses of family transfers: the altruism and the exchange. Table A2.1 (see the annex) gives an overview for some of the papers studying the family transfers, their focus and their main findings.

Most of the studies focusing on the general aspects of the family transfers have found that monetary transfers within a family flow primarily from old to young generations (Altonji, Hayashi et al. 1992; Cox and Rank 1992; Gale and Scholz 1994; McGarry and Schoeni 1995; Altonji, Hayashi et al. 1997). Gale and Scholz (1991) also find that the probability of giving inter-vivos transfers increases with age, peaking at ages 55 -64. This is also supported by other studies suggesting for an age effect on the probability of transferring to children.

In general, most of the findings on inter-vivos transfers suggest for parents to children altruism motives (McGarry and Schoeni 1995; Dunn and Phillips 1997; McGarry 1997; Barnet-Verzat and Wolff 2002; MacDonald and Koh 2003). According to these facts, parents' transfers to their children appear to be sensitive to any drop in children's incomes. These models test for altruism motives (fluctuations in receiver's income has been used very often as a test of altruism model), and also other exchange motives (e.g. other services exchanged between the two parties). Rosenzweig and Wolpin's (Rosenzweig and Wolpin 1993) found that a \$5,000 increase in the adult child's earnings reduces the probability of co-residing by 11.1 percent and reduces the probability of receiving a monetary transfer while not residing at home by 10.9 percent. Altonji et al., using data from the Panel Study of Income Dynamics in the United States found that the respondent's income has a negative effect on the amount of transfers received from parents (Altonji, Hayashi et al. 1992). McGarry and Schoeni (1995)

using data from Health and Retirement Study reveal that larger financial transfers are given to adult children with lower income, and this result holds when they look within families by controlling for family fixed effects (McGarry and Schoeni 1995). Dunn and Phillips (1997) using data from Asset and Health Dynamics of the Oldest Old study also find that intervivos transfers are more likely to be given to poorer children within a family, but that children of different income levels are equally likely to receive parental transfers at the time of the death of a parent.

A series of other papers suggest that there is something more than altruism going on between family members. Many papers find that exchanging financial transfers for transfer of time and care is also a strong and evident motive for intergenerational transfers (Cox and Rank 1992; Cox, Eser et al. 1996; Light and McGarry 2004; Koh and MacDonald 2006). Usually the evidence shows that time is exchanged for money, but there are also a couple of studies suggesting that there is a flow of money that people invest for building their children's human capital. Most studies focusing on human capital aspects have found that individuals with more years of schooling give and receive greater amounts of money transfers (Cox and Rank 1992; Lillard and Willis 2002, Barnet-Verzat and Wolff 2002; Kalmijn 2005;). Parents who transfer more to their children are also parents who invest more in their children. Using a sub-sample from Netherlands Kinship Panel Survey data Kalmijn (2005) finds no clear evidence that the educational differences play a role in the financial exchange within the family.

# 2.5 Giving to family and friends and the role of economics

The explanations of the motives behind transfers to kinship and friends certainly require a multidisciplinary approach. Economists have already started to use the evidence found by other disciplines to explain the consequences of such motives in the context of individual self-interest driven behaviours. However, the evidence brought over the last decades shows that individuals may also have good reasons to transfer to their family or non family members even when the gains are not immediate or clearly visible. Altruistic behaviour is accepted now more and more among economists as a possible motivation for private transfers to family and friends. But accepting such motivations is only one step. The next step is to understand how individuals would adapt their transfers to family members when multiple givers/receivers are involved. Economics may use the recent findings of other disciplines to explain the substitutability or complementarity of transfers over family members and friends. For example the new evidence on altruistic motives raises further questions on how individuals will adapt their giving behaviour when they have to deal both with family and friends? Would transfers to/from such members serve as substitutes or complements to transfers to/from friends? How would transfers from benevolent individuals change when similiar family members are involved? Interactions and transfers are also often spread over time and over multiple family members and/or friends. How would the transfers of benevolent individuals change in this context? How do these transfers change if they move in another place?

The next sections give the evidence that exists on family transfers among different family members (e.g. between own children), non-family members (e.g. family and non-family members) and also over time and space.

#### 2.5.1 Transfers over different children

Transfers from parents to children are certainly the most intense transfers within the family. Such transfers usually involve money, time or other resources and can be determined by both characteristics of parents and children. But, what would happen if multiple children are involved and when the parents need to decide on "to whom?" to transfer and "what"? Would the transfers to a child be dependent on the transfers to the other?

From the basic form of the altruism model (see Appendix 7.1) the utility function of a parent transferring to more than one child could be written as:

$$U_{p} = U_{p}(c_{p}, U_{k1}(c_{k1}), U_{k2}(c_{k2})),$$
(2.1)

where  $U_p$  is the utility of the parent,  $c_p$  is the consumption of the parent, and  $c_{k1}$  and  $c_{k2}$  are the consumption of child 1 ( $k_1$ ), and child 2 ( $k_2$ ). On the other hand, the consumption of the child 1 and child 2 is determined by their own incomes  $y_{k1}$  and  $y_{k2}$  as well as the transfers from the parents  $t_{k1}$  and  $t_{k2}$  (where t indicates the transfers to child 1 and 2). The budget constraints for the parent, child 1 and child 2 (under the assumption that the price of the gifts is equal to 1) will consequently be written as:

$$y_p = c_p + t_{k1} + t_{k2} \tag{2.2}$$

$$c_{k1} = y_{k1} + t_{k1} \tag{2.3}$$

$$c_{k2} = y_{k2} + t_{k2} \tag{2.4}$$

This is under the assumption that the parent can choose independently on the allocation of gifts to child 1 and child 2. But if we assume that the parent divides his/her total gifts between child 1 and child 2 so that the total amount of gift *T* is  $T = t_{k1} + t_{k2}$  then

the contributions to each child can be written as:

$$t_{k1} = \alpha T \tag{2.5}$$

$$t_{k2} = (1 - \alpha)T \tag{2.6}$$

where the coefficient  $\alpha$  represents the extent of transfer substitutability between the children. The maximization problem for the parent *p* doesn't change much from that of the single child model (see also Becker 1981) and becomes:

$$\max U_{p} = U_{p}(c_{p}, U_{k1}(c_{k1}), U_{k2}(c_{k2}))$$
(2.7)

s.t. 
$$c_n + c_{k1} + c_{k2} = y_n + y_{k1} + y_{k2}$$
,  $t_{k1} \ge 0$ , and  $t_{k2} \ge 0$  (2.8)

The solution to such model would simply show that an altruist receives the same utility from an increase of own income or the income of any children (see also Becker 1981, pp:287). But, the relative transfer to any of the children will depend on the fact to whether such transfers are seen as perfect substitutes to each other. Of course, this theoretical setting

becomes more complicated when different types of transfers are brought into the model and when the interdependency of all these inter-vivos transfers from the parent to both children are taken into account.

Previous studies have focused more on the distribution of bequests from parent to their children. This evidence shows that parents distribute equally the amounts left to their children (Menchik 1980; Dunn and Phillips 1997; Jellal and Wolff 2007). This fact questions the proposition of the altruism model stating that the needy get more in terms of transfers (so that they can compensate their drops in utility). Light and McGarry (2004) mention that often parents tend to play 'favourites' by giving unequally transfers to their children. They look specifically at bequests, i.e. inherited real estate, and explore questions on the reasons of giving equal/unequal transfers. They analyse the reasons behind transfers of bequests and mention among other motives; altruism (people give transfers according to children's needs), exchange (particular children have given more than others in earlier relationship), evolutionary (favouring biological children), and equality (children are seen equally).

The evidence on simultaneous inter-vivos transfers is still mixed. Studies looking at intergenerational altruism show that inter-vivos transfers are used from parents to equalize children's welfare (McGarry and Schoeni 1995; Dunn and Phillips 1997; McGarry 1997; Barnet-Verzat and Wolff 2002; MacDonald and Koh 2003). This effect derives directly from the altruism hypothesis according to which altruistic parents tend to transfer to the needier children. These kind of transfers are often called 'compensatory' transfers (compensating for drops in the utility of children).

But parents do not only transfer to the needy child. Stark and Zheng (Stark and Zhang 2002) argue that in fact parents may choose to transfer non-compensatory inter-vivos to their children. Parents may simply support the more competitive children relying also on the between-siblings altruism. An additional reason that may lead parents to transfer non-compensatory transfer may also be the equity concern towards all children. This latter one may lead parents to transfer to all of the children simultaneously.

Bernheim and Severinov (Bernheim and Severinov 2003) develop a theoretical model showing the distribution of parent's transfers to multiple children when information is available to all parties. They conclude that transfers tend to be equal when they are observable to all children, and that the same argument could be brought to argue for unequal distribution of inter-vivos transfers.

Economists have managed to test hypotheses like altruism or exchange when transfers are directed to one of the family members (usually one of the children). However, interaction of family members tends to be multidimensional and transfer types tend to be related to each other. Moreover, family members consider more than one family member when deciding to interact and transfer. Testing for altruism or exchange reveals only a part of the nature of these transfers, other dimensions are still to be explored.

#### 2.5.2 Transfers over relatives and non-relatives

The transferring web becomes even more complex if other non-relatives are considered. While generally in economics, altruistic or non-altruistic models are primarily studied based on intergenerational relations people have also interactions with their non-family members of kinship networks. The incidence and the amount transferred to non-family members tend to depend much more on the institutional setting of the particular country but evidence shows that such transfers are not to be neglected even in the context of countries with developed social welfare systems.<sup>13</sup>

While evidence brought from other social sciences has shown that theoretically motives for private transfers to non-relative members may differ from those for more close relatives (Hamilton 1964; Trivers 1971), the question here is how differently will individuals behave towards other members of their kin. While it is true that feeling of guilt and shame reinforce kinship or group numbers and these in return may enhance caring and altruism (Cox and Fafchamps 2006) or reciprocity (Mitrut and Nordblom; Fehr and Gächter 1998; Fehr, Kirchsteiger et al. 1998; McCabe, Rigdon et al. 2003) even among non-family members (see also Annex 7.2) a couple of questions still remain. Would the same persons behaving altruistically towards their offspring behave the same also towards their non-family kinship members? Would individuals behave altruistically towards all members of their kinship, or would the scarcity of resources constrain them in a strategic allocation of resources among them?

James Andreoni (Andreoni 2007) explains that altruism towards multiple members of a group can be congestible.14 In other words this means that altruism towards each member of the extended network of family and friends will depend on the number of people in this network. Andreoni argues that individuals will still behave altruistically but the amount given to each person will decline. A very important aspect here is the identification of the other individuals as members of a group (Andreoni's approach assumes that individuals treat similarly the individuals within the group). However, it is not very clear how people will treat relative and non-relative in these circumstances. Will for example children and friends be complements or substitutes to each other. Will people still be reciprocal to their friends even when the number of children increases?

#### 2.5.3 Transfers over time and space

Time affects the relationships and transfers between relatives and non-relatives. Past transfers are certainly correlated with the present ones. Moreover, changes affecting the structural settings of kinship networks can also affect the patterns of transfers. One of the main factors affecting people's kinship networks is certainly non-circular migration (being this internal or international) (Blumberg & Bell, 1959). Duke-Williams (2009) argues that mobility and migration are key drivers in changes in households. Previous studies have shown that permanent internal migration has pervasive effects on families and kinship networks. Peoples' mobility contributes to the separation of households and the creation of

<sup>&</sup>lt;sup>13</sup> Using the US Panel Study of Income Dynamics Robert Schoeni (Schoeni 1997) showed that 2 per cent of individuals in the sample give a money transfer to their friends, and 1.5 per cent of them receive from them. Cox et al (Cox, Eser et al. 1996) using data from Peruvian Living Standards Survey, found that around 14.2 per cent of individuals exchanged with their non-relatives.

<sup>&</sup>lt;sup>14</sup> In his paper "Giving Gifts to groups: How altruism depends on the number of recipients" Andreoni explains that for an average altruistic person a gift of the amount *x given* to another person is equivalent to the one given to a Group where everybody receives  $x/n^{0.68}$ .

new households. Networks of support also change and the role of the closest family members may increase or decrease. From an economic perspective is important to see how people will adapt to these changes by changing the combination of family members on whom they rely upon or by "opening up" to new non-relatives.

## 2.6 Final remarks

Motives for private transfers are studied extensively from psychology, sociobiology and anthropology. Sociologists on the other hand have constructed models of family solidarity taking into account many different aspects of family and non-family exchanges. In the last decades economists have become more interested in explaining the particular behaviours that trigger the support between family and non-family members, and the complexity of such support. For this they have continuously borrowed concepts like altruism or reciprocity from other social sciences. The altruistic behaviour is more and more accepted in the light of the new findings. But accepting such motivations is only one step. Economics may exploit its comparative advantages over other disciplines in understanding how the interactions between family members may affect such motivations, and how this in return may influence the transfer patterns between the same family members.

Economic models up to date are mostly used to test hypotheses like altruism or exchange when transfers involve one of the family members (usually one of the children). Yet the multidimensional aspect of transfers and the interdependence of relationships between family members and friends have shown that there is much more to say about the reaction of such transfers in these situations. Testing for altruism or exchange reveals only a part of the nature of these transfers, other dimensions are still to be explored. Economic models may certainly explore whether people tend to see giving to family and friends as complements or substitutes, or whether different transfers will be used as complements or substitutes to each-other. Moreover, in the same line, from an economic perspective is important to see how people will adapt their transfers to other relatives or non relatives over time or when facing structural changes in their networks because of phenomena like migration. Blumberg and Bell (1959) argue that rural to urban migration changes the structure of kinship relationships.

## 2.7 Appendixes

#### 2.7.1 Altruism and exchange in economics

From an economical perspective a person is considered *altruistic* with respect to another if his/her welfare depends on the welfare of this other person. This definition implies that for example altruistic parents will care for the wellbeing of their children, or in other words they will receive utility both from their own consumption and also from their children's consumption. In this case the utility function is written as:

$$U_p = U_p(c_p, V(c_k))$$
(2.9)

where  $U_p$  is the utility of the parent,  $c_p$  and  $c_k$  are the consumption of the parent (*p*) and the child (*k*). On the other hand the consumption of the child is determined by his/her own incomes  $y_k$  and transfers from the parents *T*. The consumption function of the child is therefore:

$$c_k = y_k + T \tag{2.10}$$

Of course, this model is a static model that does not take into account incomes or consumptions in the periods different that *t*, and therefore savings are excluded.

The above model of altruism has been used for a long time to test for intergenerational relationships and the altruistic motives behind them. Cox and Rank (1992), developed this model further in order to test the hypotheses of altruism and reciprocity. In their model they introduced also the concept of the services exchanged between the two individuals (the donor – the parent in this case, and the recipient – the child). The utility function of the donor in this case is:

$$U_p = U(c_p, s, V(c_k, s))$$
(2.11)

where *s* now denotes the services provided to the parent by his/her own child. Cox and Rank note that this equation features both altruism and exchange hypotheses.

#### 2.7.2 Reciprocity in economics

Reciprocity in economics is usually defined as rewarding kind actions (e.g. by reciprocating a gift) or punishing unkind ones (e.g. by not transferring a gift to some one who have not reciprocated in the past). In the perspective of a two person relationship this would be the situation where each of them respectively transfers  $g_{ij}$  and  $g_{ji}$  where g is a vector of different transfers (e.g. financial, services, advice, etc). The utility function of individual *i* would be expressed in terms of own endowment  $X_i$ , other person's endowment  $X_i$ , own gift to the other person  $g_{ij}$ , and the gift received back  $g_{ij}$ :

$$U_{i} = U_{i}(X_{i} - g_{ij} + g_{ji}, g_{ij}, g_{ji}, X_{j} + g_{ij} - g_{ji}),$$
(2.12)

The inclusion of the other person endowment is considered as altruism towards the other individual (utility  $U_i$  therefore increases when the amount of gifts increase). The inclusion of the own gift (to the other person) may indicate personal motivation for transfers (e.g. duty or moral obligations) while the inclusion of the other person's gift indicates preferences on reciprocity values (e.g. balance, matching, compensatory, etc).

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AUTHOR	YEAR	DATA	RELATIONSHIP /FOCUS	FLOW OF TRANSFERS	HYPOTHESES TESTED FOR	MAIN FINDINGS
Cox D., Rank M. R.	6 6 2	US National Survey of Families and Households 1987-1988 13017 hhs included Gifts received over the past five years from relatives (parents, siblings, etc), contact and help during the actual year	Intergeneratio nal transfers of money, and time	no information	Altruism Exchange	Findings suggest than the exchange motives are more likely to have driven the transfers rather than the altruism motives.
McGarry, K., Schoeni R. F.	100 G	US Health and Retirement Survey (HRS) and Panel Study of Income Dynamics (PSID), 1988 17,859 children in the sample, of whom 3,661 live with a respondent and 14,198 live elsewhere 16,678 children aged 18 or over	Parent - child relationship Transfer of money and time between generations	HRS cash transfers to children living at home $25.1\%$ , not living at home $20.4\%$ HRS cash transfers to parents living at home $16.8\%$ , not living at home $6.7\%$ HRS time transfers to parents living at home $24.9\%$ , not living at home $6.7\%$	Altruistic motives, and the relation between the incomes and the propensity for transfers.	Negative relationship between children's' income and transfers, suggesting for altruism motives.
Altonji J. G., Hayashi F., Kotlikoff L.	6 6 5	US Pane Study of Income Dynamics 1988 The sample includes 3402 parent- child pairs	Inter-vivos financial transfers between parents and children	20.2 % of the parents gave money transfers to their children 6.9 % of the parents co-resided with the children	Parental altruism	Generally a rejection of the altruism hypothesis. A reduction on parents income of 1 \$ reduces their transfer to children by less than 8 cents, and a reduction of 1\$ to the child's income reduces the parental transfer by less than 13 cents.
Cox D., Eser Z., Jiménez E.	9 9	Peruvian Living Standards Survey 1986 2,241 urban hhs from a total of 5,109 hhs	Money transfers flowing from old to young and from	Individuals send 25.9% of the total amount to their parents, 32.9% to their children, 19.7% to other relatives and 14.2 to non-relatives.	Altruism and exchange, as well as the effect of the imperfect	Increased propensity of receiving a transfer if the pre- transfer incomes increase indicating for the exchange hyroothesis.

Table A2.1 Empirical evidence on motives for family transfers

Annex

2.9

			young to old		capital markets.	
Dunn T. A., Phillips J. W.	<b>466</b>	Survey of Asset and Health Dynamics among the Oldest Old in the USA The respondents are aged 70 or older 4,168 families and a total of 15,245 children (only two or more children)	Parent - child relationship Inter-vivos and bequests	24% of parents have made a transfer of 500\$ or more over the past year 20% of parents have made a transfer of 5000\$ or more over the past 10 years 91% of the parents have a witness will	The equality of the parents versus their children in both inter- vivos and bequests	Cash gifts are less frequently given to all children and they are more directed towards poorer children. Parents are most likely to name all children as beneficiaries of trusts, life insurance policies, and wills regardless of income differences among the children
Schoeni F. R.	<b>H 6 6 F</b>	US Panel Study of Income Dynamics 1988 6,202 hhs included Money and time help during last year	Inter-vivos financial transfers between parents, children and other family members	<ul> <li>3.1% of the individuals give a money transfer to their parents/in-laws and 17.6% receive, 5.3% give to their child and 0.9% receive, 1.7% give to their sibling and 1.7% receive, 2.% give to their friend and 1.5% receive.</li> <li>24 % of the individuals give a time transfer to their parents/in-laws and 20.3% receive from them</li> </ul>	The effects of income as a test of the altruism model	Annual earnings appear to be negatively related to monetary assistance received and time assistance given, Individuals in poor health receive more time transfers Some evidence of altruism, but the findings suggest for more motives
McGarry, K.	1662	US Health and Retirement Survey (HRS) and Asset and Health Dynamics Survey (ASET) HRS 6181 hhs and 18874 children over 18 and not living in the same hh ASET 4835 hh and 14249 children over 18 and not living in the same hh	Inter-vivos financial transfers over the past years and bequest from parents to children.	HRS – 28.9% of the families making a transfer to one of the children, and for AHEAD data is 24.6% The probability of leaving a bequest is 55.4%	Atruism	Evidence of altruism driving the inter-vivo transfers (the poorer children are supported more), while the bequests are not strongly related to current child's incomes.
Cigno A., Giannelli C., Furio C. R.	1008	The Bank of Italy survey of hh budgets 1991 24930 individuals and 8188 hhs Cash transfers bigger than 230 ECU to relatives outside the hh during last year	Bequests and inter-vivo between the relatives and friends Parents-	<ul><li>16% % of hhs handed out</li><li>22% of hhs received</li><li>88% of the transfers from parents to children</li></ul>	Altruism Exchange Preference shaping	Altruistic and the simple exchange model appear to be contradicted by the data (very low effect of the donor's earnings and assets) A strategic self-interest model

#### CHAPTER 2

			Children			generates the data cannot be rejected
Cameron L., Cobb-Clark D. A.	1 0 0	Indonesia Family Life Survey 1997 2000 1507 individuals with at least one child over 18	Non-co residing children and their elderly parents	Of the non-co residing parents 70.2% of the women and 66.6% of the men receive transfers From the co-residing parents 52.9% of the women and 48.9% of the men receive transfers	Altruism from the children to their parents	Transfers from non-co residing children to their elderly parents do not seem to be strongly related to parental need. Financial transfers from children are not a substitute for the income support provided by the elderly parent's own labour market work.
Barnet-Verzat C., Wolff F C.	000	Survey completed in 1992 in France on parental investments in children's education 5300 households with at least one child between 2 and 25 years Money gifts over past year	Parents - Children regular and irregular transfers	74% of children between the age of 5 and 25 receive some money 85% of the youth get an allowance	Altruism Exchange Preference shaping (endogenous altruism)	Mixed evidence suggesting diversity in family motivations. Regular allowances are linked to human capital in vestments, whereas irregular transfers fall within the scope of altruistic transfers.
Lillard L., Willis R. J.	000	Indonesia Family Life Survey 1993 7,224 households, individuals over 15 years were asked about their 15years and older children	Parent - child relationship Transfer of money and services between generations	Money transfers from the parent's couple perspective: To all children 43.5% From all children 55.2% Service transfers from the couple's perspective: To all children 6.3% From all children 6.3%	Exchange between money and time Transfers as form of insurance Repayment of education loans	The results are broadly consistent with the idea that money is exchanged for time But the low frequencies of such transfers suggest other motives Parents are more likely to transfer money to children when they are enrolled (suggesting for education loans)
Kohli M., Künemund H.	3005	German Aging Survey 1996 German nationals above age 55 2205 participants Financial gifts care for disabled persons, taking care of children or grandchildren, and instrumental help over the past year	Intergeneratio nal family solidarity	5.7%, of the interviewed have received transfers from parents, parents-in-law, or grandparents, 30.2% have given transfers to kin, 27.2% have given transfers to children or grandchildren, 51.2% have given any kind of support to kin, and 43.8 % have given any	Altruism, exchange, conditionality behind transfers	In general women lean more toward unconditional and less toward conditional giving than men. Evidence suggesting for a complex pattern with a large amount of overlap and interaction among different

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				kind of support to children or grandchildren		motives
Light A, McGarry K.	4005	USA National Longitudinal Surveys of Mature Women and Young Women, 1999 wave. A sample of 3,300 mothers with at least 2 children age 18 or over having or not a will.	Bequests from mothers to their children	1,682 report having no will, while 1,618 claim to have a will and report on the planned redistribution among their children.	Altruistic motives, exchange, and evolutionary motives for unequal giving.	Findings relate strongly the unequal distribution of the bequests among the children with the motives of altruism, exchange or biological evolution. The main determinants of these observed inequalities are poor of mothers, having non- biological children, and if her children's predicted incomes are especially different from each other
Witoelar F.	<b>α 0 5</b>	Indonesia Family Life Survey 1997 2000 6752 households 7152 households	Extended family income pooling mechanisms	n.a.	Income pooling in extended families	Some evidence against income pooling within extended families, both in the static and dynamic settings. But the inter- household ties may be influential in shaping other household decisions
MacDonald M., Koh SK.	0 0 0 7	Wisconsin Longitudinal Study 1992 - 1993 All adult children aged about 50 and their elderly parents. The sample used for the study is 2,653 individuals providing reports for themselves and their parents. Financial transfers over the past year.	Intergeneratio nal transfers of money, and time	3 % of the children have transferred to their parents, 21% of the parents have transferred a financial transfer to their child.	Altruism Reciprocity	Evidence supporting the altruism hypothesis for children to parents' financial transfers, and also exchange hypothesis for children with wealthy parents (transfer of services from children to them). Co-residence and care giving were not responsive to differences in parent's resources.

CHAPTER 2

# Chapter 3. Between Children and Friends: Financial Solidarity of Family and Friends in the Netherlands

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## 3.1 Introduction

In every society individuals transfer money or valuables both to their children and friends. This raises important questions on the extent and interdependency of these financial transfers. If someone gives money to one of his children, is he/she more or less likely to provide money to the other children and to friends? If someone receives money from a child or a friend, is he/she more or less likely to receive from the others; and, is someone who gives at the same time less/more likely to receive from the same person or from others? The analysis of such questions can shed new light on the motives driving people to give to others.

This chapter aims to explore the patterns of financial transfers with children and friends by accounting for the interdependent and simultaneous nature of these relationships. The empirical approach used in this chapter consists of two steps. In the first step, the transfer likelihood is assessed by controlling for the main characteristics of both senders and receivers. In the second step, the correlations between residuals of each pairs of transfers are explored for different sub-groups of the main sample. This allows us to understand whether different inward and outward transfers are substitutes or complements, and whether the simultaneity of such transfers is influenced by factors like gender, age and number of children. The data used come from the first wave of the Netherlands Kinship Panel Study 2004-2005 (Dykstra et al. 2004), and contains detailed information on the individuals' relationships with their children and friends (among other members of kinship).

The investigation of the determinants of giving transfers to children and friends shows that age, education, and wealth are significant determinants. Variables like employment status, marital status, etc, are significant in determining the receipt of financial transfers. Negative shocks such as financial bankruptcy or sudden illness do not have a significant effect on the probability of receiving transfers, suggesting for other motives beyond altruism.

The analysis of the simultaneity of transfers shows as follows. (1) The correlations between transfers to/from randomly selected children 1 and 2 are strong and positive. A similar though weaker correlation is found when comparing giving to children and friends simultaneously. This suggests an individual heterogeneity in the tendency to give. In other words, people, who give to one, are more likely to give to all the others. Parents tend to equalize between times transferred to each of their offspring. The existence of such strong correlations gives more evidence against the altruism hypothesis (stating that parents give more to the needier child). Parents have other reasons to transfer and the analysis shows that they value equality between their children. (2) A similar strong correlation is found between receiving from both children and also receiving from a child and a friend. If respondents are receiving from any of the three selected members they are also more likely to receive from the other two. Although the pattern is similar, the interpretation here is different since now the anchor is passive rather than active. This heterogeneity in inward transfers suggests for certain qualities, or actions performed by the persons receiving transfers. (3) Findings on the 'crowding out' (people turning to children for financial transfers instead of friends) effects are mixed. Generally, people with more children are less likely to transfer to their children and friends, but on the other hand, even for people with higher number of children, transferring to children seems to be positively correlated with transferring to friends. (4) The reciprocity in transfers (positive correlation between giving and receiving to/from the same person) is strong between friends, and almost not existent in transfers between parents and children. Reciprocity is higher for females and declines sharply until it disappears with the increase of number of children.

Generally, the results of the analysis provide evidence for 'warm glow' rather than 'altruism' motives. Transfers are not dependent on specific shocks and there is no strong effect of incomes on transfer's likelihood. People who give to one are more likely to give to others, and the same holds for receiving.

This chapter contributes to the discussion about the motives driving private financial transfers. The body of literature on private financial transfers has been rapidly expanding in the last decades as more researchers have been interested in exploring the rationales behind the functioning of such relationships. In many cases lack of available data has somehow limited the progress, creating a lot of gaps in understanding the motives behind family financial transfers. The empirically based literature up to date is primarily focused on intergenerational relationships and makes a clear distinction between the intervivo transfers and bequests. Generally, bequests are documented to be shared equally among the children, while inter-vivo transfers appear to be unequally distributed and targeted towards the 'needy' members (see also Cox and Fafchamps, 2006). The patterns of financial transfers between non-family members of kinship are far less clear from the empirical studies. Cox, Galasso and Jimenez (2006), is one of the few studies focusing on economic aspects of inter-household transfers. They compared inter-households transfers between 11 developing countries around the world, finding relatively high (yet different) rates of transfers.

Several theoretical arguments have been put forward to explain the motives behind financial transfers, like: the altruism embedded in genetic fitness (Becker 1976; Becker 1981), exchange or 'quid pro quo' (Cox and Rank 1992; Cigno, Giannell et al. 1998), 'warm glow' or 'impure altruism' (Andreoni 1993), crowding out of private transfers by public ones (Andreoni 1993), reciprocity as a social or family norm (MacCormack 1976; Johnson 1977; Osmond 1978), etc. Almost all these motives are investigated primarily based on intergenerational relations and aim to explain the motives behind parent to children (or vice versa) transfers. Nevertheless, other studies have shown that people, in general, tend to substantially interact with friends and other non-relatives. The extent of transfers between them varies depending on the context (Cox, Eser et al. 1996; Schoeni 1997), but generally the evidence suggests for relatively strong ties among them especially in the context of developing countries (Cox, Galasso and Jimenez 2006). But, when individuals give both to family and non-family members would the same motives explaining the intergenerational transfers still hold? Or, will there be more to say about the transfers in this later case? From a theoretical point, the main assumption would be that parents will tend to substitute their transfers to friends with transfers to children, (or 'crowd out' from their friends). To date is not yet known how this is sustained by the empirical data, and how is it different between different individuals. Moreover, would children and friends follow the same pattern when giving to their respective parents or friends? The contribution of this chapter is in exploring the relationship between financial transfers within family members and between friends.

The chapter begins in Section 2 with a review of the theoretical framework explaining motives behind family transfers from both theoretical and empirical literature. Section 3 and 4 discuss the nature of data and the theoretical model used. Results from both steps of the analysis are given in Section 5. Section 6 discusses both the implications of these results and the main findings.

# 3.2 The Theoretical Framework

The economic literature focusing on aspects of financial transfers within the family is dominated by two main arguments: "altruism" and "exchange". The arguments are based on the fact that human beings can take roles of either 'altruistic' or 'selfish/egoistic' unities. The derived consequences from these behavioural profiles serve as a basis for the main economic models of family transfers.

Altruism is originally based on the socio-biological concept of genetic fitness.<sup>15</sup> In economic terms a person is considered to be *altruistic* with respect to another person if his/her welfare depends on the welfare of this other person (Becker 1981). Altruism is primarily observed in parent-child relations. Parents 'care' for wellbeing of their children because they care for transmission of their own genes. Hence, it is really plausible that parents have reasons to behave in an altruistic way towards their children, and that other blood relatives (to a certain degree) behave the same towards each other. Based on this definition, the economic literature describes altruism as a model where donors, i.e. parents, receive utility from their own consumption and also from their receivers' consumption (i.e. children). Altruistic parents will tend to differentiate on the frequency (and amount) of gifts transferred to each child. They will clearly focus their attention on the neediest children.

Many researchers have tried to test whether altruism holds for intergenerational transfers. Most of their findings on inter-vivos financial transfers suggest for altruism motives in parents to children transfers (see McGarry and Schoeni 1995; Dunn and Philips 1997; McGarry 1997; Barnet-Verzat and Wolf 2002; MacDonald and Koh 2006).

Trying to empirically test altruism, Cox (1987) found a positive correlation between financial transfers and wealth of the recipient. This suggested the presence of some other non-altruistic motives. He suggested that donors' utility is not only dependent on the consumption of himself and his transfers' recipients (as the altruism model suggests), but also depends on services received by the recipients. Cox suggested that parents gave financial transfers in exchange for the services rendered (this is widely known as "the exchange" motive). Several later studies have confirmed the same findings (Cox and Rank 1992; Cox, Eser et al. 1996; Lillard and Willis 2002; Light and McGarry 2004; Koh and MacDonald 2006).

Andreoni (1989, 1990) extends the altruism hypothesis to "impure altruism" or the "warm glow" hypothesis. Andreoni argues that people usually contribute to a certain public good (e.g. transfers to children or younger generations by parents if inter-family transfers

<sup>&</sup>lt;sup>15</sup> Simon (1993) states that "... if several groups compete for the same niche, the one having the highest average fitness will survive". Consequently, altruistic behaviour would reduce the person's genetic fitness with the scope of enhancing the fitness of other persons from the same group.

are considered as contributions to public goods) because of two reasons; first, because they simply demand for more of this public good (definied by Becker (1981) as the "altruistic" reason), and second, because they derive utility from their gifts as such. Consequently, Andreoni implies that donor's utility is dependent not only on the total utility of both donor and recipient, but also on the act of giving itself. In this case, the parents do not only care for the well-being of their children, but also feel better realizing that they are giving to their (so perceived) needy children.

While generally, altruism models are primarily based on intergenerational motives, people tend to have also financial interactions with their non-family members of kinship networks. Frequency of these financial transfers seems to differ depending on the general patterns of private transfers and country's profile. Using the US Panel Study of Income Dynamics Schoeni (1997) showed that 2 per cent of individuals in the sample give a money transfer to their friends, and 1.5 per cent of them receive from them. Cox et al (1996) using data from Peruvian Living Standards Survey, found that around 14.2 per cent of individuals exchanged with their non-relatives.

But, is the altruism towards non-family members as strong as the altruism embedded in the shared genes? Cox and Fafchamps (2006) argue that the identification with a kinship group facilitates the feelings of guilt and shame, and this in turn enhances the feelings of caring and altruism among this group. But then, would the same persons behaving altruistically towards their offspring behave the same also towards their non-family kinship members? Would individuals behave altruistically towards all members of their kinship, or would the scarcity of resources constrain them in a strategic allocation of resources among them? Furthermore, if we assume that transfers from anchors are a form of contribution to a public good then it is not clear whether transfers to/from friends decrease as soon as the anchor will experience more transfers from children.

This chapter considers the two "furthest" relations within kinship by comparing transfers with children and friends. The main hypotheses considered here are altruism (people are more likely to give to their neediest children and friends), warm glow (some people are more likely to give to everybody as they associate value to the act of giving), crowding out (people substitute financial transfers to friends with those to children as soon as they have more children), and reciprocity (those who have received tend to reciprocate transfers).

The approach used here consists in checking for the main determinants of transfers from/to the anchor. I also try to get more insights on the complexity of relationships by exploiting the simultaneous aspects of anchors' transfers with every pairs of alters (being this two children or one child and a friend), and by looking at the differences when the number of children changes. I also investigate the degree of 'reciprocity' in transferring, defined as correlation between giving and receiving from the same alter in order to understand more on the behavioural changes.

# 3.3 Data and descriptive statistics

The data come from the Netherlands Kinship Panel Study (NKPS). NKPS is a panel survey designed to get information on the family and kinship ties in the Netherlands. I use

data from the first wave of the survey, collected during 2003 – 2004. The variables include individual characteristics as well as transfer attitudes with selected kinship members. The survey is designed to get as much information on the individual respondents (so called 'anchors'), and the surrounding kinship members. Anchors have provided information on their selected kinship members, including parents, partner, children, siblings, grandparents and grandchildren, non-family members, and other members of the household. These members are referred to as 'alters'.<sup>16</sup> Information on the marital status, number of children, education, and exchanged support, has been reported for at most nine of these 'alters'. The two children (child A and B) are selected randomly from all possible children of the anchor.<sup>17</sup> Friends are defined as persons in regular touch with the anchor and who are important to him/her. They can be; acquaintances, colleagues, neighbours, or people met through a club or society (see also Table A3.2 in the appendixes). Every anchor is requested to select five different friends and then one of them is picked randomly and more detailed information is requested on him/her.

To assess the financial transfers between the anchor and his/her children and friends I use questions on the substantial amount of money or valuable objects (these include irregular and periodical payments) transferred between them during the past 12 months.<sup>18</sup>

## 3.4 Sample population

The survey collects information from individuals between 18 – 80 years old. The full sample includes information on 8161 anchors. Anchors have reported on giving and receiving financial transfers from at most two of the children aged 15 or over and for one friend 18 – 80 years old. Although selection of children in the survey is randomized, the data were reordered for standardization purposes, labelling the oldest child as 'child 1' and the youngest as 'child 2'. Whenever data were provided on only one of them he/she was ordered as child 1. The reordered sample includes 3653 children 1 and 2899 children 2. For financial transfers given to children anchors have reported on both children living inside and outside the household, while for received transfers they report only on children living outside the household. I have decided to not differentiate between these transfers as they mostly deal with adult children (over 15 years old), and I do not suspect any significant differences in determinants of transfer patterns between these two groups.<sup>19</sup> Finally, I have also omitted those observations with missing values for any of the following variables: financial transfers (to or from the children), children's age, and children's sex. The final samples of children 1 and 2 are displayed in Table A3.1 (see appendixes) and includes 3575

<sup>&</sup>lt;sup>16</sup> The 'alters' include (when possible) the partner, mother, father, a randomly selected parent-in-law, a maximum of two randomly selected biological/adopted children aged 15 or over, a maximum of two biological/adopted siblings aged 15 or over, and a randomly selected member of the non-family network (see also: Dykstra P. A., 2005, Codebook of the Netherlands Kinship Panel Study, NKPS Working Paper No. 4. The Hague: Netherlands Interdisciplinary Demographic Institute)

<sup>&</sup>lt;sup>17</sup> Whenever there is only one child, or the anchor did not have any contacts with the other child(ren) during the past 12 months, then this is always labelled as child A.

<sup>&</sup>lt;sup>18</sup> Pocket money given to children living in the the households is not accounted for in these transfers and the information is gathered in a separate section. We do not include these kinds of transfers in our analysis.

<sup>&</sup>lt;sup>19</sup> We have also tried to run the models separately for children living in the household and outside the household and found no big differences between determinants of financial transfers given to these different sub-groups.

children 1, and 2846 children 2 alters for whom anchors have reported on giving financial transfers, and 2792 children 1, and 2145 children 2 on receiving financial transfers.

The information on selected friends is given in Table A3.2 (see appendixes). Out of the main sample I have omitted observations with missing values on financial transfers, and age or sex of friends. The remaining sample consists of 7176 alter friends.

Table 3.1 gives some more detailed descriptive information on the financial transfers or valuable gifts transferred in past 12 months between the anchor and alters (children 1 & 2 and friend) grouping anchors by total number of children

TOTAL N CHILDI ANC	UMBER OF REN FOR THOR	ANCHOR HAS 0 CHILDREN	ANCHOR HAS 1 CHILD	ANCHOR HAS 2 CHILDREN	ANCHOR HAS 3 CHILDREN	ANCHOR HAS 4+ CHILDREN	TOTAL
	Child 1	-	28.65***	25.80***	20.55**	16.40***	23.09
	Ν	-	384	1625	944	622	3575
Anchor giving	Child 2	-	-	26.21***	21.92	17.61***	23.16
financi	Ν	-	-	1408	853	585	2846
al help to <sup>.</sup>	Friend	2.59***	1.30	0.79***	0.55**	0.36**	1.37
	Ν	2315	923	2288	1099	551	7176
	Child 1	-	5.52***	2.64	1.63*	2.11	2.58
Anchor receivi	Ν	-	290	1246	734	522	2792
	Child 2	-	-	1.88	1.77	2.61	2.00
ng financi	Ν	-		1063	622	460	2145
al help	Friend	1.68***	1.19	0.66**	0.82	0.18**	1.05
from :	Ν	2315	923	2288	1099	551	7176

**Table 3.1** Giving and receiving financial transfers to children and friends by *number of total children (as % of the group's total)* 

N – number of observations for each category. Stars indicate whether the mean for each group is significantly different from the total mean (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

The upper part of the table gives information on transfers given by the anchor, while the lower part shows the breakdown of financial transfers received by children and friend (as reported by anchor). As it can be observed, the share of respondents reporting to have received any financial transfers from their children is far less than those reporting to give to their children.

Out of all anchors, 23.1 percent have reported giving at least once during the last year to child 1 and the same share reports giving to child 2. Only about 2.6 percent and 2 percent of the anchors have reported to have received any financial transfers respectively from child 1 or child 2 during the last year. The figures confirm that financial resources flow mainly from old to young generations, reported also from previous studies in different developed countries (Gale and Scholz, 1991; Cox and Rank 1992; McGarry and Schoeni 1995; Altonji et al 1995; etc). The financial transfers between anchors and friends are relatively low (though comparable to those reported from other sources, such as those in US by Schoeni, 1997), and do not vary much across the transfer to different directions (giving and receiving). Out of

7176 respondents, 1.37 percent of them have reported to have given at least once during the last year to their friends, while 1.05 percent of the anchors have reported to have received from them. Incidence of transfers to and from all sources decreases with the increase in number of children.

Table 3.2 gives an overview of positive simultaneous transfers between anchors and any other pairs of alters. The table shows that 17.6 percent of all the anchors reporting on child 1 and child 2 have made at least a financial transfer to each of them during the last year. Simultaneous transfers to/from all others pairs are much lower than this, reflecting also the lower incidence of such transfers to/from these sources (see Table 3.1)<sup>20</sup>

		ANCHOR GIV	'ING FINANCIAL	HELP TO:	ANCHOR REC	EIVING FINANCI	AL HELP FROM:
		Child 1	Child 2	Friend	Child 1	Child 2	Friend
	Child 1	100					
	Ν	3578					
Anchor giving	Child 2	17.55	100				
financial	Ν	2809	2846				
help to :	Friend	0.53	0.29	100			
	Ν	3032	2408	7176			
	Child 1	0.72	0.67	0.08	100		
	Ν	2795	2394	2354	2795		
Anchor receiving	Child 2	0.57	0.70	0.00	0.98	100	
financial	Ν	2114	2148	1819	2045	2148	
help from :	Friend	0.33	0.21	0.26	0.25	0.16	100
	Ν	3032	2408	7176	2354	1819	7176

**Table 3.2** Simultaneous positive financial transfers (as % to the total reported on both sources)

Note: N - number of observations for each category

A first intuitive interpretation of these simultaneous transfers would suggest that anchors are more likely to give to their children than to give/receive from others. Whenever they give to their children they try to equalize both children much more than they would do for the other pairs of relations.

The reasons behind transfers and their simultaneity are investigated further by using predicted residuals from the previous models and also by looking at the complete picture of correlations of these residuals (see section 3.7).

# 3.5 Anchor and Alter Characteristics

The survey provides detailed information on characteristics of anchors. A number of control variables were selected for all anchors based on their availability. They are as follows: age at interview, gender, number of children/siblings, employment status, anchor's

<sup>&</sup>lt;sup>20</sup> Percentages on table 3.2 are dependent on the total number of observations for each cross-transfer and also affected by the incidence of giving and receiving in general for these specific categories.

(and partner) employment incomes and benefits per month, health status and long term illness, household size, educational level, status of enrolment, dummy if the current year is the same year the anchor moves in a new house.

Information on income from employment for both anchor and partner is also collected. The employment income variable was reconstructed based on the information available in the survey. Respondents had the choice to report their income over a month, four weeks, a week, or their average monthly income. For the purpose of this analysis all answers were standardized on monthly basis.

Income from social benefits includes grants for students, social security, unemployment, disability, pension and pre-pension benefits. The benefits are also reported on monthly basis. Table A3.4 in the appendixes gives descriptive statistics on the sources of incomes for anchors with no current partner and for those who reported on their partner. As the table shows, 5856 individuals have reported on incomes for themselves and their partners out of the entire sample. Out of single anchors 47 percent have reported some source of employment and 41 percent have reported to receive social benefits. These numbers compare to 60 percent and 22 percent for those with a current partner. The incomes that partners of anchors earn are also divided between net income from employment and benefits. Consequently, 57 percent of the partners have declared to be employed while the information on benefits received is limited to only on few of them. This is due to the fact that the question is only included in the self-completion questionnaires (filled by the partners) and thus only asked to a smaller number of them. Due to this information is omitted from the models which control separately for each income sources of the households.

The detailed tables for different sub-samples and descriptive statistics for dependent variables are given in Table A3.5 and A3.6. Age of anchor is represented by dummy variables that may differ between sub-samples of interests. Generally, these dummies account for 10 years intervals. Self-reported health status is accounted for through five dummy variables; "excellent", "good", "neither good nor poor", "poor", and "very poor"<sup>21</sup>. In the same way the marital status is represented by five dummy variables: "married", "cohabitating", "widowed", "divorced", and "never married".<sup>22</sup> The same procedure is repeated for the current employment status of both the anchor and the partner. The six employment states accounted for are: "employed"," unemployed", "housewife", "disabled", "pensioner", and "other".<sup>23</sup>

The education dummies are constructed based on a categorical variable indicating the level of education that the individual has already completed. Consequently it distinguishes among three levels of education: lower (if respondent or alter has completed up to elementary school, lower vocational or lower general secondary), secondary (if intermediate general secondary, upper general secondary or intermediate vocational is completed), and

<sup>&</sup>lt;sup>21</sup> We have decomposed the initial categorical health status variable included in the survey as we want to control for the specific role that certain categories of health status play in determining these transfers.

<sup>&</sup>lt;sup>22</sup> Due to low number of observations we have grouped together "married" or "cohabitating", and also "widowed" or "divorced" for anchor's partner or for alters.

<sup>&</sup>lt;sup>23</sup> Due to low number of observations we have grouped together "unemployed" or "housewife", and also "disabled" or "pensioner" for anchor or his/her partner.

higher (if higher vocational education, university or other post-graduate course is completed).

Other variables of interest to the analysis are the urbanization of anchor, the distance from anchor to alters, and the country of birth. Urbanization is an index variable which takes values from 1 to 5 depending on the addresses per kilometre squared (from less dense to crowded areas), while distance is represented by the natural logarithm of physical distance in kilometres. Country of birth is a control variable that is used to control for any differences in ethnicity, and which produces better results than the other available alternatives.<sup>24</sup>

The main variables used for alters are: age, sex, level of education, marital status, number of kids, and enrolment status. Additional control variables used for the two alterchildren are; dummy if child is adopted, and a dummy if child is household member. As these relationships are analyzed separately from each other (also for not loosing important information) I have displayed the characteristics of the independent variables separately for giving and receiving and also for each relationship (Table A3.5 and A3.6).

## 3.6 Empirical strategy

The analysis is started by controlling for main characteristics of those who have sent and received transfers. This is done by using a logit model, where transfer occurrence is represented by a binary variable and takes only two values coded 0 and 1, where:

$$y_i = \begin{cases} 1 \text{ if the i-th anchor is sending/receiving a transfer larger than 0} \\ 0 \text{ otherwise} \end{cases}$$
(3.1)

The goal is to identify which of the characteristics of children and friends are important in determining whether he/she gives (or receives) a transfer. Giving the nature of the data, the chapters considers the choice between a logit and an ordinal logit model. The logit model accounts for binary choices (in this case "0" or "bigger than 0" transfers), while an ordinal logit could be used for more than two levels (the data allows also for a distinction between "0", "500 or less" and "more than 500 Euros"). The basic assumption of the ordinal models is the "proportional odds assumption" stating that the relationship between covariates and outcome groups is the same between every outcome categories.<sup>25</sup> Giving the nature of transfers I suspect this assumption to not necessarily hold. Previous research has shown evidence for substantial differences between the decision of giving a transfer (as compared to non-giving) and the decision on the amount given. If this would be true,

<sup>&</sup>lt;sup>24</sup> Very low number of the anchors in the sample has non-Dutch Nationality (1.91 percent out of 8122 reporting), while only 15.18 percent of the sample size report on the ethnic self-identification. We have grouped the nationalities in nine major groups (see also Table A3).

<sup>&</sup>lt;sup>25</sup> Ordinal variables do not establish the numeric difference between data points, but one of the fundamental assumptions of the ordinal probit (logit) regression is that the effects of the covariates  $x_1$ ,  $x_2$ ,...,  $x_{n-1}$  should be the

same for every outcome categories in the logarithmic scale. In other words, this would mean that relationship between the covariates and the outcome groups is the same and does not vary. This is also known as the odds assumption (or the parallel regressions assumption), and sets the basis for having only one set of coefficients for all the possible sets of groups.

covariates explaining the relationship between these two groups will not be the same. The proportional odds assumption is tested for all the models of interest.<sup>26</sup> Results from the tests are displayed in Table A3.7 and show that for five of these relationships the 'proportional odds assumption' does not hold. This supports the idea of diversity between the determinants of how much is transferred. As the primary goal is to explore the determinants for the probability of transferring, the binomial logit model was finally chosen.<sup>27</sup> The models are run for each of the relationships individually, and for both giving and receiving. The transfer occurrence to/from each alters takes the form as below:

$$MT = \begin{cases} 1 \text{ if } \alpha + \beta_1 X_{anchor} + \beta_2 X_{alter} + \varepsilon_{alter} > 0 \\ 0 \text{ otherwise} \end{cases}$$
(3.2)

Where MT refers to the dichotomous variable of transferring any amounts of money or valuables from anchor to his/her alter (and vice versa),  $\alpha$  is a constant,  $\beta_1$  and  $\beta_2$  are vectors of estimated coefficients that correspond to characteristics of the anchor and the alter, and  $\varepsilon$  is a vector of residuals errors having a normal distribution. The 'alter' corresponds either to child 1, child 2, or the friend. The characteristics of the anchor and alters are displayed in Table A3.5 and A3.6, separately for each of the relationships.

The other goal is to explore interdependence of such transfers. For this I want to know to what extent these transfers are correlated to each other. I do this by estimating separately standardized Pearson residuals for each of the logit models which were run previously. Two methods are employed to check the correlations for difference and statistical significance. The first method consists in running the logit model for each of the one-side relationships including the residuals of the other models of interest. This is repeated for all the possible combinations in the data set. In this case the logit model takes the form as below:

$$MT = \begin{cases} 1 \text{ if } \alpha + \beta_1 X_{anchor} + \beta_2 X_{alter1} + \beta_3 \varepsilon_{alter2} + \varepsilon_{alter1} > 0 \\ 0 \text{ otherwise} \end{cases}$$
(3.3)

where  $\beta_3$  is a vector of estimated coefficients corresponding to error terms from previously estimated models, and  $\varepsilon$  is the vector of residuals errors having a normal distribution. Alter 1 and alter 2 correspond to each of the combinations between child 1, child 2 and the friend.

The second method is based on using residuals from each of previously estimated logit models to check for specific pair-wise correlation and statistical significance. The same procedure is repeated for different sub-groups of the main sample in order to further explore the interdependent nature of the transfers and the effect that additional number of children, gender or age has on it.

<sup>&</sup>lt;sup>26</sup> This test uses the result from parallel probit models and tests the difference in coefficients between the models. A significant result indicates for the need of using different models for each pairs of outcome groups.

<sup>&</sup>lt;sup>27</sup> The results for multinomial logit models are also available on request and give similar results both on the main determinants and the interdependency of transfers.

The results from both methods are consistent over the sample, demonstrating also for robustness of such correlations. Only results from the later method are displayed here as these are also easier to interpret.

## 3.7 Empirical results

The relationship between the anchor and children are first analyzed by looking at the main determinants of transfers. For this models for 'outward' (an anchor giving to alters) and 'inward' (an anchor receiving from alters) are run for financial transfers between the anchors and each alters. The control variables for these models are shown in Table A3.5 and A3.6. They are grouped in main groups corresponding to characteristics of anchors like age and gender, number of children, household size, employment status, dwelling, employment incomes, education, marital status, and other (country of birth, and moving in a new house). The models also control for a range of alters' characteristics like; age and gender, education, urbanization, and logarithm of the distance from anchor. The reference categories are given in parenthesis.

Separate models check for the effects of other alternative control variables as financial transfers within the kin members could be also triggered by particular events or shocks. The survey gives information on major shocks happened during last 12 months to anchor or other family members (this information is available only for anchors and children, but not for friends). Having had severe financial problems, and having a severe illness were selected among these shocks. They did not appear to have significant statistical effects on outputs.<sup>28</sup> Therefore, they were omitted from the main models displayed here (models including these variables are shown in Table A3.8 in the appendixes).

#### 3.7.1 The determinants of financial transfers

The results of the models estimating outward financial transfers to child 1, child 2 and friends are given in Table 3.3. Gender coefficients suggest that females are less likely to give (though coefficients show statistical significance only for transfers to friends). The age of anchors influences positively the likelihood of transfers to children and friends (older anchors - especially those more than 65 years - are more likely to give). The effect is statistically significant for transfers to children, which confirms the flow of transfers from old to young generations. On the other hand, aging (for anchors between 45 and 64 years old) influences negatively the likelihood of transfers to friends, but the effect is not statistically significant. The number of anchor's children has a negative effect on the likelihood of giving a financial transfer to both children and friends. This effect is larger especially for transfers to friends. This suggests that giving is less likely when having more children. Unemployed anchors are less likely to give to their alters, but the results are not significant. The unemployment and/or housewife status of anchor's partner also influences negatively the probability of the transfers to both parties (and the results are significant). The wealthier (detached type of house is used as a proxy) and the well-paid anchors are more likely to transfer to both children and friends (both effects are not statistically

<sup>&</sup>lt;sup>28</sup> Other variables we have considered are religious membership and religious practice (visiting church at least a couple of times a year), but neither of them appears to yield any significant results.

significant for friends). The incomes of anchor's partner do not have a statistically significant effect on the likelihood of transfers to both children and friends.

		GIVING	то 01	GIVINO	сто о <b>2</b>	GIVING TO	FRIEND
		Coef.	s.e.	Coef.	s.e	Coef.	s.e.
	Anchor Gender: female	-0.04	0.11	-0.09	0.12	-0.48*	0.27
	(Anchor age less than 35)						
. 1	Anchor age between 35-44	-	-	-	-	0.00	0.33
Anchor:	Anchor age between 45-54	0.29*	0.17	0.28	0.23	-0.26	0.45
Gender &	Anchor age between 55-64	0.49**	0.22	0.28	0.27	-0.58	0.6
Age	Anchor age 65 plus	0.50*	0.28	0.57*	0.33	0.65	0.79
Anchor: Children	Anchor number of children	-0.19***	0.04	-0.11**	0.05	-0.42***	0.14
Anchor household	Anchor household size	-0.02	0.06	-0.26***	0.08	0.08	0.11
	(Anchor employed)						
	Anchor unempl/housewife	-0.11	0.17	-0.22	0.2	0.33	0.44
	Anchor disabled	-0.25	0.25	0.2	0.27	0.26	0.6
Anchor and	Anchor pensioner	-0.06	0.19	0.11	0.22	-0.54	0.71
partner:	(Partner employed)						
employmen	Partner unempl/housewife	-0.38**	0.16	-0.53**	0.21	-0.23	0.74
t status	Partner pensioner/disabled	0.07	0.15	-0.08	0.16	0.74	0.58
	Anchor student	-	-	-	-	-0.16	0.54
	Partner student	-	-	-	-	-0.22	0.88
Anchor:	Anchor currently living in	0.43***	0.1	0.32***	0.11	0.26	0.34
Dwelling	detached house						
Anchor/Par	Anchor's income (ln)	0.09	0.06	0.23***	0.09	0.21	0.2
tner: Empl.	Anchor's benefits (ln)	0.00	0.02	0.01	0.02	-0.02	0.05
income	Anchor's partner inc. (ln)	0.01	0.02	0.02	0.03	0.01	0.1
Anchor:	Anchor Lower Educ.	-0.32***	0.11	-0.2	0.13	-0.29	0.29
Education	(Anchor Intermed. Educ.)						
	Anchor HigherEduc.	0.34***	0.11	0.40***	0.13	0.05	0.27
Anchor:	(Anchor: Married)						
Marital	Anchor: Never married	-0.4	0.33	-1.07*	0.56	0.53	0.35
Status	Anchor: Divorced	0.00	0.16	-0.35*	0.19	0.80*	0.42
	Anchor: Widow	0.19	0.19	-0.14	0.21	1.25**	0.56
Anchor:	Anchor: Current year of moving in the new house	0.33	0.37	0.00	0.43	0.14	0.53
Other	Born in The Netherlands	-0.46**	0.2	-0.41*	0.24	-0.75**	0.35
	Alter gender: Female	0.15*	0.08	0.00	0.09	0.23	0.26
	(Alter age less than 25)						
	Alter age 25-34	0.95***	0.23	0.79***	0.26		
Alters: Ago	Alter age 35-44	0.30*	0.16	0.58***	0.17	-0.42	0.34
& Conder	Alter 45+ (Friend 45-54)	0.42**	0.18	0.19	0.25	-0.7	0.45
& Genuer	Alter age between 55-64					0.19	0.48
	Alter age 65 and older					-1.01	0.67
	Alter currently enrolled	0.11	0.17	0.64***	0.18	0.34	0.45
A 14	(Alter intermed. education)						
Alters:	Alter low education	-0.56***	0.11	-0.48***	0.12	0.22	0.27
Education	Alter high education	0.02	0.11	0.01	0.12	-0.67**	0.29
Alters: Urbanizatio	Alter urbanization (1 low density - 5 high density)	-0.04	0.04	0.05	0.05	-0.17*	0.1

**Table 3.3** Logit estimations of giving financial transfers to children and friends (anchor transferring to alters)

n and distance	Alter – Anchor distance (ln)	0.02	0.03	0.04	0.03	0.06	0.05
	Constant	-1.43**	0.63	-2.39***	0.84	-4.42***	1.71
	Ν	3574	ł	2843	3	7105	
	Log likelihood	-1784	4	-141	3	-459	

Note: Other variables included are: "anchor's health status" (excellent, good, average, bad/very bad), "anchor has long term illness (dummy), "alters marital status" (married/cohabitating, widowed/divorced, single), "alter's number of children", and "alter is adopted child" (dummy). Reference categories are in brackets.

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

Education of the anchor is another factor influencing positively the likelihood of transfers to children (not statistically significant for transfers to friend). Higher educated people are more likely to transfer to their children as compared to the middle and lower educated. This higher probability of transferring may relate to the higher investments in human capital from higher educated parents (Becker 1962). On the other hand, lower educated parents and children are also reported to live nearer to each-other (Kalmijn 2005) and therefore the lower probabilities of financial transfers among them may also relate to the implicit exchange of time and other resources.

The fact that the anchor is born in the Netherlands influences negatively the likelihood of transfers. This suggests that those born in a different country are more likely to give. The models have also checked for specific patterns based on the specific foreign country of birth (see also Table A3.3 for a list of groups of countries) but did not find any particular results between different categories of anchors born abroad.

Female alters (both children and friends) appear to influence positively the likelihood of the transfers from anchor, and the significant results for child 1 sustain this. Relationship between age of alters and transfers to them appears to follow a more complex pattern. Children below 35 years old seem to be more likely to receive transfers than any other age cohorts. Transfers to friends are more likely throughout the first age cohorts but decrease significantly for older friends (65 or older).

Education of alters is again an important factor, though the effect for children and friends is different. Highly educated children seem to be more likely to receive from their parents, while highly educated friends are less likely to receive from their friends. Children enrolment is also positively related to the probability of transfers and appears to be significant, especially for child 2.

Urbanization (measured as number of addresses per square kilometre), influences negatively the likelihood of transfers to friend, while the distance between the anchors and alters does not have any statistically significant influence on the decision to transfer.

Estimation results for receiving financial transfers from alters are given in Table 3.4. Gender coefficients appear to be positive (but not significant) for both children and friends suggesting that female anchors are more likely to receive. The age of anchor does not have a significant effect on the likelihood of transfers from children, but turns to be significant when receiving from friends. Coefficients suggest that younger anchors are more likely to receive as compared to anchors 65 years old or more.

Anchor's number of children appears to influence negatively likelihood of receiving financial transfers, (statistically significant for child 1). This is consistent with the effect of number of children on outward transfers indicating a big influence of the number of children on the likelihood of both giving and receiving. Households with more members are more likely to receive from children (effect statistically significant for child 2).

		RECEIVING	FROM	RECEIVIN	G FROM	RECEIVING	G FROM
	-	CHILD	1	CHILI	D 2	FRIEN	D
		Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
	Anchor Gender: female	0.54	0.34	0.23	0.44	0.5	0.33
Anchor: Gender	(Anchor age less than 35)						
& Аде	Anchor age 35-44	-	-	-	-	-0.57	0.39
ange	Anchor age 45-54	-0.11	0.75	-	-	-1.15**	0.51
	Anchor age 55-64	0.00	0.85	0.28	0.57	-1.51**	0.67
	Anchor age 65 plus	-0.17	0.95	0.32	0.77	-2.99***	1
Anchor:	An abox number of abildron	-0.41***	0.14	0.06	0.14	-0.22	0.15
Children	Anchor number of children						
Anchor		0.36	0.22	0.62*	0.34	-0.01	0.14
household	Anchor household size						
	(Anchor employed)						
Anchor and	Anchor unempl/housewife	1.44**	0.63	0.78	0.86	0.38	0.45
partner:	Anchor disabled	1.42*	0.74	1.41	0.93	0.42	0.6
employment	Anchor pensioner	1.78***	0.67	0.96	0.87	1.51**	0.73
status	(Partner employed)						
	Partner unempl/housewife	-0.36	0.65	-0.06	0.88	0.24	0.65
	Partner pensioner/disabled	0.53	0.42	-0.36	0.6	-0.7	0.8
	Anchor student	-	-	-	-	-0.21	0.64
	Partner student	-	-	-	-	0.51	1.35
Anchor:	Anchor currently living in	-0.38	0.36	_1 28**	0.63	0.09	0.4
Dwelling	detached house	-0.50	0.50	-1.20	0.05	0.07	0.4
Anchor/Partner	Anchor's income (ln)	0.42	0.34	-0.2	0.35	0.06	0.17
Empl income	Anchor's benefits (ln)	-0.05	0.04	-0.08	0.06	0.01	0.05
	Anchor's partner inc. (ln)	-0.09	0.08	0.01	0.12	0	0.09
Anchor	(Anchor Intermediate Educ.)						
Education	Anchor Lower Educ.	0.06	0.32	-0.41	0.4	0.53	0.33
Education	Anchor Higher Educ.	-0.28	0.38	-0.68	0.52	0.14	0.32
	(Anchor: Married)						
Anchor: Marital	Anchor: Never married	1.20	0.84	1.89	1.27	0.06	0.39
Status	Anchor: Divorced	1.29***	0.44	1.25**	0.61	-0.13	0.5
Status	Anchor: Widow	0.55	0.52	0.36	0.68	0.31	0.67
	Anchor: Current year of	0.10	1.07	1.00555	0.74	0.52	0.55
Anchor: Other	moving in the new house	-0.19	1.06	1.99***	0.76	0.52	0.55
	Born in The Netherlands	-0.58	0.58	0.05	0.88	-0.72*	0.38
	Alter gender: Female	-0.17	0.25	-0.04	0.33	0.21	0.29
	(Alter age less than 25)						
Alters: Age &	Alter age 25-34	0.45	0.64	-1.81*	0.99	-	-
Gender	Alter age 35-44	0.00	0.4	-0.07	0.47	0.50	0.39
	Alter 45+ (Friend 45-54)	0.52	0.43	0.04	0.68	1.01**	0.47
	Alter age between 55-64	-	-	-	-	1.46***	0.54
	Alter age 65 and older	-	-	-	-	0.57	0.81
Alters:	(Alter intermediate education)						
	Alter low education	-0.49	0.4	-0.65	0.45	-0.38	0.33

**Table 3.4** Logit estimations of receiving financial transfers from children and friends (alters transferring to anchor)

Education	Alter high education	0.71**	0.29	0.17	0.4	-0.44	0.32
	Alter is enrolled	-	-	-	-	0.04	0.58
Alters:	Alter urbanization (1 low	-0.08	0.11	0.05	0.14	-0 22**	0.11
Urbanization	density - 5 high density)	-0.00	0.11	0.05	0.14	-0.22	0.11
and distance	Alter – Anchor distance (ln)	0.11	0.07	0.02	0.09	0.09	0.06
	Constant	-7.39**	2.95	-4.3	3.02	-3.45**	1.58
	Ν	2731		21	18	7105	5
	Log likelihood	-298		-17	79	-377	7

Note: Other variables included are: "anchor's health status" (excellent, good, average, bad/very bad), "anchor has long term illness (dummy), "alters marital status" (married/cohabitating, widowed/divorced, single), "alter's number of children", and "alter is adopted child" (dummy). \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%. Reference categories are in brackets.

The employment status of the anchor turns to be statistically significant with unemployed anchors having a higher probability of receiving transfers (particularly significant in case of child 1). Instead, employment status of anchor's partner is no longer statistically significant.

Wealthier anchors are less likely to receive from children, but this does not hold for transfers from friends. Indeed, the likelihood of transfers from friends is positively influenced by the anchors' higher incomes from employment (though the effect is not statistically significant). Anchor's incomes do not appear to have a statistically significant effect on the financial help received from children. This suggests for little signs of altruism in these relationships.

Anchor's education does not have a statistically significant effect on the likelihood of received transfers, though it should be noted (once more) that lower educated are more likely to receive from friends than the highly educated. Being born in The Netherlands appears to have a negative effect on the likelihood of receiving transfers from friends, suggesting again for a more frequent pattern of transfers among those with a different ethnic background. Again none of the other ethnic groups appear to have a particular different pattern, even though the effect (when considering all of them together as in here) is statistically significant. Being divorced or moving to a new house increases the probability of transfers from children suggesting for possible motivations of such transfers (e.g. increased needs or possible gifts).

Younger children, fewer than 35 years old, appear to be less likely to receive financial transfers (statistically significant for child 2). Children over 45 years old appear to more likely to receive transfers from anchors. This confirms once more the trend that aging influences positively these transfers. The opposite relation seems to take place in case of friends, where friends are most likely to transfer when they are 55-64 years old.

Education of the children influences (again) positively the transfers to their parents, while their urbanization index and distance from parents do not yield statistically significant results. As it was the case for the outward transfers, the urbanization of friend influences negatively the likelihood of transfers to the anchors. This indicates a lower incidence of financial transfers among friends in the highly populated areas.

Results from both giving and receiving seem to be comparable. They show that transfers are clearly correlated with characteristics of both the giver and the receiver. Usually age, education, employment status, income/wealth, marital status, origin, etc seem to be closely correlated to the probability of transferring.

## 3.7.2 The simultaneity of transfers

This section explores the simultaneity of transfers given and received by anchors accounting for simultaneous transfers to/from each combination of alters. The aim is to identify possible transfer patterns and behaviour changes as the number of alters and characteristics of the anchor vary within the main sample. If the residuals of previous models appear to be correlated with one another, then this will indicate that decisions to transfer are jointly determined. Consequently, there would be reason to believe that the anchor would associate these transfers with a particular cause or 'strategy'.

The total sample is considered first in order to get a general idea about dependency of such transfers. The correlation table is given in Table 3.5 and includes all possible pair-wise coefficients of the correlations. Simultaneous inward or outward transfers with each pairs of alters (e.g. giving simultaneously to both children, or receiving simultaneously from child 1 and friend) appears to be statistically significant in all the cases. The highest values of coefficients are observed when giving to both children (this is consistent with the figures in Table 3.2). The positive correlation coefficient demonstrates a general equalitarian trend of the anchors towards their both children (anchors are very likely to transfer to all of their children).

Receiving simultaneously from both children is also very likely in the sample. The coefficient now is smaller than for outward transfers.

Other interesting trends are also the positive and statistically significant coefficients for inward or outward simultaneous transfers to one of the children and friend. This indicates for a relative homogeneity in giving or receiving, i.e. anchors who give to a child or a friend are also likely to give to others.

Results from Table 3.5 show that although the patterns of simultaneous outward and inward transfers to children and friends are similar, they also differ in the extent they are correlated to each other. When giving, the anchor tends to equalize more between financial transfers to his/her children, while he/she is less likely to receive from both of them. On the contrary, the anchor is less likely to give to both children and friends than he/she is to receive from them (higher correlation coefficients). The reason may simply lie on the motives triggering received transfers. Some of the anchors can be more able than others to attract transfers from different sources.

On the other hand, simultaneity of giving and receiving to/from children and friends suggests for little evidence of a "crowding out" effect that would substitute the role of friends with children. While it is true that people with more children are less likely to transfer to their friends (or children), those who still transfer to their children are also likely to transfer to their friends.

Controlling for age, sex, or amount transferred (less than 500 Euros or more than 500 Euros) does not affect these results. The breakdown of correlations by age suggests that anchors younger than 65 years old are more likely to receive simultaneous transfers from

child 1/child 2 and friends if compared to anchors older than 65. Simultaneous giving to child 1/child 2 and friend is less likely for anchors younger than 65 years and more likely for those older than 65.

		ANCHOR GIV	VING FINANCIA	L HELP TO:	ANCHOR RECE	IVING FINANCI	AL HELP FROM:
		Child 1	Child 2	Friend	Child 1	Child 2	Friend
	Child 1	1.00					
Anchor	Ν	3574					
giving	Child 2	0.68***	1.00				
financial holp to:	Ν	2809	2846				
neip to.	Friend	0.09***	0.08***	1.00			
	Ν	3008	2388	7140			
	Child 1	0.01	0.03	0.02	1.00		
	Ν	2791	2394	2332	2791		
Anchor receiving	Child 2	0.02	0.06***	-0.01	0.42***	1.00	
financial	Ν	2114	2148	1802	2045	2148	
help from:	Friend	0.06***	0.02	0.19***	0.27***	0.10***	1.00
	Ν	3008	2388	7140	2332	1802	7140

Table 3.5 Correlations of residuals from giving and receiving logit models

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

The simultaneous giving and receiving with the same person are also another important aspect of the relationships with children and friends. Such simultaneous transfers would usually indicate for a sense of "reciprocity" between the anchors and alters (paying back what has been received). The results suggest that reciprocal transfers are not really common for anchor-child relationships, but the effect is strong for the anchor-friend relations. In fact, for the anchor-friend relationships the positive and significant coefficient indicates for a relatively high degree of reciprocity. Logically, such reciprocity is something that would be expected as the ties with them are quite different compared to those with closer relatives. But the interest is on how this reciprocity changes when considering different characteristics of the anchors. I first explore how these coefficients reflect the changes in the number of children. Anchors not reporting on any children, those reporting only on child 1 (and the friend), and anchors reporting on both children and the friend are considered separately to capture any differences between these groups.

The coefficients of the correlations are given in Table 3.6 and show a significant decrease of the "reciprocity" for the transfers between anchors and friends. The anchors reporting no children give and receive simultaneously more to friends than those reporting only on child 1, and than those reporting on both child 1 and 2. Figure 3.1 below shows graphically the decrease of such reciprocity in the relationship with friends when number of children reported increases. The figure gives the particular decline in the 'reciprocity' when the number of children for whom the anchor reports increases from zero to two.

With the increase in the number of children, transfers to/from friend become more unilateral in nature. The females tend to be more reciprocal on transfers with respect to their
friend, but with the increase of the number of children they also converge with the trend of the total sample.

		ALL ANCHORS	FEMALE ANCHORS
		Anchor giving financial help to friend	Anchor giving financial help to friend
Anchor has no children			-
Anchor receiving financial help	Corr. Coef	0.264***	0.333***
from friend	Ν	4073	2410
Anchor reports only child 1			
Anchor receiving financial help	Corr. Coef	0.121***	0.212***
from friend	Ν	646	403
Anchor reports on both child 1 & 2			
Anchor receiving financial help	Corr. Coef	-0.004	-0.005
from friend	N	2421	1466

**Table 3.6** Pair wise correlations of residuals from transfer models for number of children and gender of anchor

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

In fact such a decline needs more attention, as this may be also induced by a general decline in the level of transfers when number of children increases. As previously noted, likelihoods of transfers to/from friends decline (in relative terms to the total transfers reported), but the decline in reciprocity is even sharper and this is also confirmed by the correlation coefficients above. Moreover, with the increase in number of children the likelihood of transfers to/from other sources (like other child and friend) decreases as well.

Figure 3.1 Reciprocity of transfers between anchor and friend



\* Based on coefficients of pair-wise correlation of the models' residuals for sub-groups of the main sample

This concludes that with the increase of children, the likelihood of transfers to all alters is affected negatively, but simultaneous giving to both children or to children and friend is not affected significantly. On the other hand, what is affected significantly is only the reciprocity in transfers with the friend. Aging influences positively the likelihood of transfers to/from children while younger generations are more likely to send and receive to/from friends. I have tested the effect that aging has on this relationship (by analyzing separately different age cohorts reporting on none or both children) and this appears to be irrelevant to the decline of this reciprocity (see also Table A3.9).

# 3.8 Discussion and Final Remarks

The analysis in this chapter aimed to explore the determinants of financial transfers between individuals and their children and friends. Children and friends were chosen as two of the kin members in different relationships with anchors in question. Individuals have a very direct relationship with their children. This is shaped by different reasons varying from the genetic fitness (as sociobiologists may argue), family existence necessities, family norms, economic dependence and interests, etc. Relationship between anchors and their friends is ruled by different necessities and norms. Many previous genetic or other links related to the existence of the family do not exist in such relationships. The central question naturally asked in this context is to what extent these differences will shape the patterns of financial help and gifts exchanged? This chapter tries to answer this question by looking at the main characteristics of the donor and receiver, and the influence of such characteristics on determining the probability of transferring.

Another aspect of financial transfers is that they are usually made in contexts where the donor has to take simultaneous decisions on whether to transfer or not to multiple members and non-members of family or kinship. Different motives triggering these transfers can take place at the same time for different kin members. Many theoretical approaches manage to explain motivation of these interactions, but when it comes to increasing number of different players the explanations become more difficult and complicated. This approach uses relations of anchors with children and friends to understand more on the simultaneity of transfers. The aim is to understand whether transfers to children and friends are considered as substitutes or complements to each-other. This was also achieved by analyzing co-occurrence of giving and receiving through different sub-groups of the main sample and by looking for possible differences and reasons explaining these differences.

The main findings from the first part of the analysis suggest that selected characteristics of both anchors and alters influence the probability of transferring. In most cases, age, education, number of children and wealth proxies appear to be significant estimators for the outward transfers. On the other side factors like age, employment status, marital status, moving in a new house, etc, are more significant in determining inward transfers.

The analysis of simultaneity of transfers reveals some more interesting facts. Simultaneous giving or receiving to both children and to child 1/child 2 and friend appear to be positively correlated. Giving to both children has the strongest positive correlation, suggesting that parents tend to be 'equalitarian' when transferring to their children. In a sense, this goes against the general altruism model (the needy get more), suggesting for other motives triggering such transfers. The positive correlation between outward transfers to children and friends from the same anchors suggests instead for evidence sustaining a

"warm glow" hypothesis (people tend to give transfers because their utility is also dependent on the act of giving).

Receiving from both children appears to be also significantly correlated (though less than giving). Again, this evidences the general equalitarian pattern in the relationship between children and parents. In this later case, if a child or a friend gives to the anchor in question, the other child is also more likely to give to the same anchor. Although the pattern of giving and receiving is similar the interpretation is different since here the anchor is in a passive rather than active role. The positive correlation here could be indirectly linked with unobserved characteristics of the receiver (e.g. the personal ability to attract transfers from all sources, or certain unobserved events in his/her life).

Correlations of transfers to/from child 1 and child 2 in relation with those to/from the friend show that giving or receiving simultaneously to/from children and friends is also positively associated. The co-occurrence of receiving from 'child 1 - child 2' and 'child - friend' combinations is generally stronger than giving to the same combinations. This suggests that receiving is triggered by possible specific characteristics of the anchor (unobserved here), and whenever this is the case both children and friends are more likely to remit. Whenever the number of children reported is checked for, these effects appear to be even stronger. The evidence on the 'crowding out' hypothesis (claiming the substitution of transfers from friends with transfers from children) is mixed. The results show that anchors are less likely to give to their children and friends when the number of children increases. But, while the simultaneity of given transfers decreases slightly with the increase of number of children, the simultaneity of received transfers increases. This shows that friends take a more helping role when the anchor has more children.

This later statement is also confirmed by the other findings on the 'reciprocity' between giving and receiving (giving and receiving from the same alter). The results sustain a relatively high reciprocity effect for the transfers with the friend, and no significant reciprocity effects for transfers with the children. Reciprocity of transfers with the friend is higher for females and declines sharply for both groups with the increase in the number of children reported. In fact, with the increase in the number of children reported, the corresponding numbers of transfers go down (and this also holds for transfers to/from friends). In fact, the general low incidence of transfers when number of children increases may also affect predicted results. Investigating this, it is concluded that with the increase in number of children reported, the transfers to children and friends are negatively affected, but simultaneous giving to children and friends is not significantly affected. On the other hand, what is affected significantly is only the reciprocity of transfers with friends.

This chapter draws some important conclusions with regard to the family aspects of financial solidarity. It has been shown that in the context of The Netherlands, such transfers do not appear to be driven by altruism. The transfers are directed to both children and they are also likely to be correlated to transfers to friends. Altruism seems to be overtaken by a sense of 'warm glow'. People who give to one are also likely to give to the others. It was also found that people tend to be reciprocal to their friends, but this reciprocity declines sharply with the increase in number of children.

# 3.9 References

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# 3.10 Appendixes

	FINANCIAL TRANSI	FERS TO CHILDREN	FINANCIAL TRANSFERS FROM CHILDRE			
	1 AN	ID 2	1 AN	1 AND 2		
	Anchor giving to	Anchor giving to	Anchor receiving	Anchor receiving		
	child 1*	child 2	from child 1	from child 2		
Child selected is 1-st Child	2939	8	2232	7		
Child selected is 2-nd Child	493	1827	429	1329		
Child selected is 3-rd Child	102	701	91	544		
Child selected is 4-th Child	30	195	29	167		
Child selected is 5-th Child	1	78	1	67		
Child selected is 6-th Child	6	24	6	22		
Child selected is 7-th Child	2	7	2	7		
Child selected is 8-th Child	2	3	2	2		
Child selected is 9-th Child	-	2	-	-		
Child selected is 11-th Child	-	1	-	-		
Total sample	3575	2846	2792	2145		

### Table A3.1 Child 1 and Child 2 selections (reordered)

\* Data reporting on children are reordered so child 1 is always the oldest child. Whenever anchor reports only on one child, this is also ordered as child 1.

Table A3.2 Ways the anchor	has contacted the selected friends in the sample	
J	5 1	

	NUMBER OF SELECTED FRIENDS	IN % TO THE TOTAL
Through work	1208	16,83
Through School or volunteer work	1240	17,28
In the neighbourhood	1551	21,61
Through church	214	2,98
Through sports club	488	6,80
Through other type of club	483	6,73
Through entertainment or party	267	3,72
Through partner	471	6,56
Through friends & acquaintances	557	7,76
Through family	285	3,97
Otherwise	412	5,74
Total	7176	100.00

GROUP OF NATIONALITIES (BY COUNTRY OF BIRTH)		COUNTRIES INCLUDED		NUMBER OF ANCHORS REPORTING
Dutch	The Netherlands			7519
EUROPE AND WESTERN COU	NTRIES			151
	Bulgaria	Hungary	Spain	
	Canada	Ireland	United Kingdom	
	Denmark	Iceland	United States	
	Germany	Austria	Belarus	
	Finland	Poland	Sweden	
	France	Portugal	Switzerland	
	Greece	Russia		
ARAB AND MIDDLE EAST CO	DUNTRIES			37
	Afghanistan	India	Pakistan	
	Algeria	Iraq		
	Egypt	Iran		
LATIN AMERICA COUNTRIES				19
	Aruba	Costa Rica	Peru	
	Chile	Martinique	Venezuela	
	Colombia	Mexico		
AFRICAN COUNTRIES				19
	Congo	Nigeria	Ghana	
	Eritrea	Zambia		
	Kenya	South-Africa		
ASIA AND PACIFIC COUNTRI	ES			14
	China	Singapore	Vietnam	
	Philippines	Sri	South-Korea	
	Papua	Lanka		
	New-Guinea	Thailand		
OTHER COUNTRIES				
Morocco	Morocco			36
Turkey	Turkey			36
Antilleans	Suriname	Dutch Antilles		128
TOTAL REPORTING				7959

# **Table A3.3** The country grouping for the anchors in the sample

**Table A3.4** Monthly incomes reported for anchor and partner

	OBS.*	MEAN	STD. DEV.
MONTHLY INCOMES REPORTED FOR ANCHORS WITH NO PARTNER			
Anchor employed	2305	0.47	0.50
Anchor's monthly income from employment	1016	1540.98	3198.33
Anchor receives benefits	2305	0.44	0.50
Anchor monthly incomes from various benefits	1013	1187.38	3923.56
MONTHLY INCOMES REPORTED FOR ANCHORS WITH PARTNER			
Anchor employed	5856	0.60	0.49
Anchor's monthly income from employment	3148	1554.74	1420.47
Anchor receives benefits	5856	0.22	0.41
Anchor monthly incomes from various benefits	1277	1170.34	2439.98
Anchor's partner employed	5856	0.57	0.49
Anchor's partner monthly incomes from employment	3738	1319.97	1455.45
Anchor's partner receives benefits	5856	0.01	0.11
Anchor's partner monthly amount of benefits	59	656.05	532.93

\* Numbers of observations for variables of incomes from employment (anchor and partner) and amount of benefits vary depending on the share that receives any of these transfers. For the remaining, a dummy is constructed to account for all missing values

		GIVING TO	O CHILD 1	GIVING T	O CHILD 2	GIVING TO	FRIEND
		Mean	s.d	Mean	s.d	Mean	s.d
	Giving financial transfers to Child or Friend	0.23	0.42	0.23	0.42	0.01	0.12
	Anchor Gender: female	0.59	0.49	0.59	0.49	0.60	0.49
	(Anchor age less than 35)	0.00	0.07	0.00	0.02	0.29	0.45
Anchor:	Anchor age between 35-44	0.12	0.33	0.08	0.26	0.24	0.43
Gender & Age	Anchor age between 45-54	0.32	0.47	0.31	0.46	0.20	0.40
	Anchor age between 55-64	0.29	0.45	0.32	0.47	0.15	0.35
	Anchor age 65 plus	0.26	0.44	0.29	0.46	0.12	0.33
Anchor: Children	Anchor number of children	2.62	1.21	2.86	1.17	1.58	1.42
Anchor household	Anchor household size	2.41	1.28	2.29	1.20	2.51	1.34
	(Anchor employed)	0.41	0.49	0.37	0.48	0.58	0.49
Anchor and	Anchor unempl/housewife	0.22	0.42	0.22	0.42	0.17	0.37
partner:	Anchor disabled	0.06	0.25	0.06	0.24	0.05	0.22
omploymont	Anchor pensioner	0.29	0.45	0.32	0.47	0.14	0.35
etatue	(Partner employed)	0.33	0.47	0.30	0.46	0.43	0.49
status	Partner unempl/housewife	0.14	0.34	0.14	0.35	0.09	0.28
	Partner pensioner/disabled	0.21	0.40	0.23	0.42	0.11	0.32
Anchor: Dwelling	Anchor currently living in detached house	0.22	0.41	0.23	0.42	0.17	0.37
Anchor/Partne	Anchor's income (ln)	2.43	3.42	2.24	3.35	3.66	3.60
r: Empl.	Anchor's benefits (ln)	2.64	3.37	2.81	3.42	1.76	2.98
Income	Anchor's partner inc. (ln)	2.74	3.48	2.75	3.47	2.77	3.52
Anchor	Anchor Lower Educ.	0.50	0.50	0.51	0.50	0.33	0.47
Education	(Anchor Intermed. Educ.)	0.24	0.43	0.24	0.42	0.32	0.47
Education	Anchor HigherEduc.	0.26	0.44	0.26	0.44	0.35	0.48
	(Anchor: Married)	0.69	0.46	0.70	0.46	0.54	0.50
Anchor:	Anchor: Never married	0.02	0.14	0.01	0.11	0.29	0.46
Marital Status	Anchor: Divorced	0.15	0.36	0.15	0.35	0.10	0.30
	Anchor: Widow	0.14	0.34	0.15	0.35	0.07	0.25
	Anchor: Current year of moving in the new house	0.01	0.11	0.01	0.11	0.02	0.15
	Born in The Netherlands	0.93	0.26	0.93	0.25	0.93	0.26
Anchor: Other	Anchor student					0.04	0.19
	Partner student					0.01	0.10
	Alter gender: Female	0.50	0.50	0.50	0.50	1.57	0.49
	(Alter age less than 25)	0.32	0.47	0.35	0.48	0.08	0.27
	Alter age 25-34	0.32	0.47	0.37	0.48	0.22	0.41
Altors Ago &	Alter age 35-44	0.25	0.43	0.29	0.46	0.24	0.43
Gender	Alter 45+ (Friend 45-54)	0.11	0.31	0.05	0.21	0.21	0.41
Gender	Alter age between 55-64					0.14	0.35
	Alter age 65 and older					0.11	0.31
	Alter currently enrolled	0.23	0.42	0.24	0.43	0.04	0.19
Altors	(Alter intermed. Education)	0.34	0.47	0.37	0.48	0.29	0.46
Education	Alter low education	0.36	0.48	0.38	0.49	0.28	0.45
Education	Alter high education	0.30	0.46	0.26	0.44	0.30	0.46
Alters: Urbanization	Alter urbanization (1 low density – 5 high density)	1.95	1.65	1.86	1.64	2.65	1.38

Table A3.5 Descriptive state	istics for transfers from a	anchor to alters m	odels (Anchor giving)
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and distance	Alter – Anchor distance (ln)	1.44	1.88	1.42	1.86	1.03	2.18
	Ν	3574		2846		7170	6

		RECEIVING FROM		<b>R</b> ECEIVING FROM		RECEIVING FROM	
		Сни	LD1	Сні	LD 2	FRIEN	ND
		Mean	s.d	Mean	s.d	Mean	s.d
	Receiving financial transfers from Child/Friend	0.02	0.14	0.02	0.14	0.01	0.10
An chan	Anchor Gender: female	0.58	0.49	0.59	0.49	0.60	0.49
	(Anchor age less than 35)	0.00	0.02	0.00	0.00	0.29	0.45
Anchor:	Anchor age between 35-44	0.04	0.18	0.02	0.12	0.24	0.43
Gender & Age	Anchor age between 45-54	0.28	0.45	0.22	0.42	0.20	0.40
	Anchor age between 55-64	0.36	0.48	0.38	0.49	0.15	0.35
	Anchor age 65 plus	0.33	0.47	0.38	0.49	0.12	0.33
Anchor: Children	Anchor number of children	2.67	1.25	2.87	1.19	1.58	1.42
Anchor household	Anchor household size	1.93	0.82	1.78	0.62	2.51	1.34
	(Anchor employed)	0.33	0.47	0.28	0.45	0.58	0.49
Anchorand	Anchor unempl/housewife	0.22	0.42	0.22	0.42	0.17	0.37
nartnor:	Anchor disabled	0.07	0.25	0.06	0.24	0.05	0.22
employment	Anchor pensioner	0.36	0.48	0.42	0.49	0.14	0.35
status	(Partner employed)	0.26	0.44	0.21	0.41	0.43	0.49
status	Partner unempl/housewife	0.14	0.35	0.14	0.35	0.09	0.28
	Partner pensioner/disabled	0.25	0.43	0.29	0.45	0.11	0.32
Anchor: Dwelling	Anchor currently living in detached house	0.22	0.41	0.23	0.42	0.17	0.37
Anchor/Partnor	Anchor's income (ln)	1.98	3.23	1.69	3.06	3.66	3.60
: Empl. Income	Anchor's benefits (ln)	3.11	3.47	3.41	3.51	1.76	2.98
	Anchor's partner inc. (ln)	2.55	3.42	2.55	3.41	2.77	3.52
A]	Anchor Lower Educ.	0.52	0.50	0.53	0.50	0.33	0.47
Ancnor:	(Anchor Intermed. Educ.)	0.22	0.42	0.22	0.41	0.32	0.47
Education	Anchor HigherEduc.	0.25	0.43	0.25	0.43	0.35	0.48
	(Anchor: Married)	0.66	0.47	0.66	0.47	0.54	0.50
Anchor:	Anchor: Never married	0.02	0.12	0.01	0.08	0.29	0.46
Marital Status	Anchor: Divorced	0.16	0.36	0.15	0.36	0.10	0.30
	Anchor: Widow	0.16	0.37	0.18	0.38	0.07	0.25
	Anchor: Current year of moving in the new house	0.01	0.11	0.01	0.11	0.02	0.15
	Born in The Netherlands	0.94	0.24	0.94	0.23	0.93	0.26
Anchor: Other	Anchor student	-	-	-	-	0.04	0.19
	Partner student	-	-	-	-	0.01	0.10
	Alter gender: Female	0.52	0.50	0.52	0.50	1.57	0.49
	(Alter age less than 25)	0.15	0.36	0.17	0.38	0.08	0.27
	Alter age 25-34	0.39	0.49	0.46	0.50	0.22	0.41
Altono Ano P	Alter age 35-44	0.32	0.47	0.38	0.49	0.24	0.43
Condor	Alter 45+ (Friend 45-54)	0.14	0.34	0.06	0.24	0.21	0.41
Genuer	Alter age between 55-64	-	-	-	-	0.14	0.35
	Alter age 65 and older	-	-	-	-	0.11	0.31
	Alter currently enrolled	0.07	0.26	0.09	0.28	0.04	0.19
A 1/	(Alter intermed. Education)	0.25	0.43	0.27	0.45	0.29	0.46
Alters:	Alter low education	0.38	0.49	0.36	0.48	0.28	0.45
Education	Alter high education	0.37	0.48	0.33	0.47	0.30	0.46
Alters: Urbanization	Alter urbanization (1 low density – 5 high density)	2.47	1.47	2.44	1.46	2.65	1.38

	Ν	27	95	21	48	717	6
and distance	Alter – Anchor distance (ln)	1.83	1.93	1.86	1.92	1.03	2.18

 Table A3.7 Approximate likelihood-ratio test of proportionality of odds across response categories1

	NUMBER OF OBSERVATIONS	CHI SQUARED
ANCHOR GIVING FINANCIAL HELP TO:		
Child 1	3574	53.87**
Child 2	2846	28.10
Friend	7140	276.67***
ANCHOR RECEIVING FINANCIAL HELP FROM:		
Child 1	2791	84.64***
Child 2	2148	117.59***
Friend	7140	206.65***

(1) Results using ordered logit (transfers "0", "<500 Euros" and ">500 Euros". A significant test statistics provides evidence that the parallel regression assumption has been violated \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

**Table A3.8** Logit estimations of the likelihood of financial transfers from anchor (anchor transferring to children)

	GIVING TO	O CHILD 1	GIVING	TO CHILD 2
	Coef.	s.e.	Coef.	s.e.
SHOCKS TO ANCHOR'S CHILDREN				
Child has had severe illness in last 12 months	0.28	0.49	-0.18	0.70
Child has had financial problems in last 12 months	0.33 0.73		1.03	0.69
Constant	-1.11*	0.65	0.09	-2.17***
Ν	35	74		2843
Log likelihood	-17	68		-1407

Note: Other variables included are same as in Table 3 & 4. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

			ANCHOR IS	LESS OR EQI	UAL TO 65 YE	ARS OLD		ANCHOR I	S LESS OR EQ	UAL TO 65 Y	EARS OLD ANI CHILD 2	) REPORTS ON BO	TH CHILD 1 &
	I	Child1	Child 2	Friend	Child1	Child 2	Friend	Child1	Child 2	Friend	Child1	Child 2	Friend
	Child 1	1						1					
.U. צ	Ν	2654						2007					
OH:	Child 2	0,63***	1					0,63***	1				
NIA ONV	Ν	1989	2013					1989	2013				
A	Friend	0,08***	0,05**	1				0,06***	0,05**	1			
	Ν	2278	1722	6264				1717	1722	1750			
	Child 1	0,02	0,01	0,04*				0,02	0,01	-0,01	1		
SEC	Ν	1883	1585	1610	1883			1602	1585	1371	1602		
•MC	Child 2	0,03	0,04	-0,01	$0,64^{***}$	1		0,03	0,04	-0,01	0,64***	1	
нв СНС	Ν	1309	1331	1146	1248	1331		1309	1331	1146	1248	1331	
N V	Friend	0'06***	0,03	0,20***	0,36***	0,15***	1	0,05**	0,03	-0,01	0,36***	0,15***	1
7	Ν	2278	1722	6264	1610	1146	6264	1717	1722	1750	1371	1146	1750
			ANCHOI	<b>US MORE TH</b>	AAN 65 YEAR	S OLD		ANCHOR M	ORE THAN 6	5 YEARS OLD	AND REPORTS	S ON BOTH CHILD	1 & CHILD 2
	I	Child1	Child 2	Friend	Child1	Child 2	Friend	Child1	Child 2	Friend	Child1	Child 2	Friend
	Child 1	1						1					
נں. الا	Ν	920						830					
OH:	Child 2	0,80***	1					0,80***	1				
NIA ONV	Ν	820	833					820	833				
A G	Friend	$0,13^{***}$	0,13***	1				0,13***	0,13***	1			
	Ν	730	666	876				658	666	671			
•	Child 1	-0,02	0,06*	-0,03	1			-0,02	0,06*	-0,02	1		
бЕС	N	908	809	722	908			818	809	650	818		
NC NC	Child 2	0,01	0,08**	-0,01	0,21***	1		0,01	0,08**	-0,01	0,21***	1	
евч СНО	Ν	805	817	656	797	817		805	817	656	797	817	
N₩	Friend	0,07**	0,04	$0,10^{***}$	-0,01	0,02	1	0,01	0,04	0,01	$0,10^{**}$	0,02	1
	Ν	730	666	876	722	656	876	658	666	671	650	656	671

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

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# Chapter 4. Children, transfers, and needs: Parental support to children in The Netherlands

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# 4.1 Introduction

Intergenerational support from parents to children is the most common support within the family. Throughout their lives parents support their children with both monetary and non-monetary transfers. The type of support given and the propensity of giving differ based on the characteristics of parents and children (Borghans and Tomini 2010). Children, on the other hand, also tend to be different in their particular needs at a given time. The characteristics of parents and children and the particular needs of the children are therefore the main determinants of the occurrence of these transfers. But, what happens to transfers to one of the children if the parent transfers also to other children at the same time? Will the transfers happen at the cost of reducing transfers to others? Will the parent reduce transfers to the same child for the next years? And, will different types of transfers substitute or complement a particular transfer to this child?

This chapter analyses transfers of monetary and non-monetary support from parents to their children. The aim is to explore the patterns of support given by parents when more than one child is involved or when parental transfers extend over time. For this, characteristics of parents and each child are analyzed by also considering the needs of the other children. The chapter uses Netherlands Kinship Panel Study data for 2005 and 2007 (Dykstra et al. 2004) to explore both the "between-children" (simultaneous transfers given to different children within the same year) and "between-time" (recurrent transfers given to the same child in different years) interdependence of different transfers. These transfers include money/valuables, housework help, odd job help, and advice. The main results showed that in general such parental transfers depend on particular characteristics of parents and children. By exploring the interdependency of transfers was found that: (i) Similar types of transfers are positively correlated both between children (e.g. whenever a parent transfers money to one of the child he is also likely to transfer to the other child) and between years. Financial transfers in particular were the most highly correlated transfers. (ii) Parents seem also to positively associate different transfers with each-other when transferring to the same child. This was the case for transfers like: money and advice, money and household help, household help and odd job help, or advice and interest. (iii) The "exhaustion" effect of parents was evident when checking for the combination of types of transfers given to different children. For example, when a parent gave financial transfers to child 1, he/she was also likely to give advice to child 1 and financial transfers to child 2, but also less likely to give advice to child 2. (iv) The exhaustion effect was not strong for transfers over time to the same child. Parents seem to "care" more about the combination of the transfers given to the child and they manifest less "exhaustion" over the years.

The motives behind inter-vivos transfers from parents to their children may relate to altruism, intergenerational transfer of wealth, or exchange (Arrow 1972; Becker 1981; Bernheim, Shleifer et al. 1986; Cox and Rank 1992; Altonji, Hayashi et al. 1997). Usually, these transfers involve transfers of money, time or other resources and can be complex, especially if multiple children are involved. In fact, many empirical studies have shown that inter-vivos transfers are dependent on children's characteristics and vary over time (Borghans and Tomini 2010). These studies have demonstrated that parents use inter-vivos cash transfers to 'equalize' between their children's' incomes by giving more to those with

lower incomes and less to those with higher (Menchik, 1980; Dunn & Philips, 1997; Jellal and Wolff, 2007). On the other hand, parent's equity concerns towards all children may lead them to transfer to all of them simultaneously. Studies of parental bequests have demonstrated that the amounts of such transfers tend to be generally more 'equally' distributed between the children than the inter-vivos (Light and McGarry, 2004; Berhman and Rosenzweig, 2004).

The evidence coming from inter-vivos and bequests shows that parents have equity concerns towards their children. Parents carefully consider all other children whenever they decide to help any of their children (Bernheim and Severinov, 2003). The altruism theory (Becker 1981; Altonji, Hayashi et al. 1997) suggests that parents may consider the particular need of one child and decide on whether to transfer or not. But when more than one child is involved, parents may also choose to consider the needs of the other child. The timing and the type of transfers to each child will therefore depend on these two dimensions. There exists little evidence on how parents would behave in such circumstances. If parents were to behave in a pure altruistic way, they will try to address particular inequalities arising from particular shocks or needs (e.g. because of particular drops in incomes of one of the children) using compensatory transfers (Hochguertel and Ohlsson 2009). Particular needs of one child will therefore reduce the probability of transferring to the other. If equality concerns were much stronger for the parents they will keep transferring to both children. In this later case, a particular need of one child will trigger transfers to all other children. Theoretical and empirical evidence on this is mixed. Stark and Zheng (2002) argue that in fact parents may choose to mandate non-compensatory inter-vivos to their children (by promoting those children with higher potential) and thus rely on intra-sibling altruism. But, what happens if parents have more than just financial transfers to address their equity concerns? Will the different types of transfers be complements or substitutes of each other? And, how would these transfers interrelate to each other if different children are considered?

The chapter begins in Section 2 with a review of the main theoretical concepts and empirical evidence explaining simultaneous intergenerational transfers to more than one child. Section 3 and 4 discuss the nature of data and the empirical models used. Results from both steps of the analysis are given in Section 5. Section 6 discusses both the implications of these results and the main findings.

## 4.2 The Theoretical Framework

Generally, inter-vivos transfers from parents to children are supposed to be dependent on two main factors: 1) a pre-decided general pattern of giving - previous studies show that in western societies resources mainly flow from old to young generations (Bengtson and Roberts 1991; Cooney and Uhlenberg 1992), and 2) the specific needs that arise during the life course of their children (Barnet-Verzat and Wolff 2002). Many authors argue that parents tend to direct their inter-vivos financial transfers towards children with higher needs (driven by the second set of factors) favouring those children with lower incomes at a certain point in time. Such theory would support the altruism model of the motives for inter-vivos transfers (Becker 1981). Nevertheless, limited evidence exists on how the overall simultaneous transfers of financial resources, services, and general support would vary over time when more than one child is considered. Will these transfers favour more the needy child (supporting therefore the second set of factors)? Would parents tend to be more 'equalitarian' over time between the two (or more) children? And even if they are, do they use the financial transfers in the same way as non-financial transfers? Are these transfers treated as substitutes or complements of each-other?

The basic altruism model assumes that utility of the children enters in the utility function of each parent (Becker 1981). The model in the second chapter (see also 2.5.1) indicates that parents with more than one child will take all transfers to their children into account when they have to transfer to a particular one. The decision to transfer or not to that particular child would depend on whether parents see transfers to their children as complements or substitutes. However, this theoretical model assumes that parents can transfer only one type of transfers. The theoretical setting becomes even more complicated when different types of transfers are considered. Parents may also use other source of transfers as complements to financial transfers or as substitutes to them.

Evidence on simultaneous transfers to all children remains mixed. Menchik (1980) and Dunn & Philips (1997) demonstrate that inter-vivos financial transfers tend to be directed towards poorer children, and bequest distributed more equally between all children. Wilhelm (1996) looking at the distribution of bequests and testing for motives of altruism also found that the difference in characteristics between children (like large earnings differentials) have little effect on the equality of bequests. He also mentioned that given the existing empirical evidence gives little hope in determining whether parents have long-term equalization objectives, and therefore are more likely to equalize between their children using complex transfers (including inter-vivos, human capital, or bequests). Jellal and Wolff (2007) modelling the behaviour of altruistic parents reach to the conclusion that parents use inter-vivos for compensating disutility of children (whenever children show observable efforts, like attending education), while bequests are used to equalize children's marginal utility of consumptions (thus if children's incomes are considered, bequests resemble to compensatory transfers, while inter-vivos can be either positively or negatively associated to such incomes).

The equal division of bequests is also sustained by Berhman and Rosenzweig (2004), who investigate the effect of bequests on shaping the behaviour of children. Their findings suggest that bequests are distributed equally among off-springs, and this equal distribution is consistent throughout the income distribution. Such division contradicts with the hypothesis that parents perform compensatory transfers (based on altruistic model) and that this implies that they use different means (e.g. human capital investments) to pursue their strategic objectives and influence children's behaviour.

Light and McGarry (2004) mention that often parents tend to play "favourites" by giving unequally transfers to their heirs. They look specifically at bequests (real estate) and explore questions on the reasons of giving equal/unequal transfers. They analyse the reasons behind transfers of bequests and mention among other motives; altruism (people give transfers according to children's needs), exchange (particular children have been given more than others in earlier relationship), evolutionary (favouring biological children), and equality (children are seen equally).

Bernheim and Severinov (2003) develop a theoretical model where they test the distribution of parent's transfers to multiple children when information is available to all parties. They conclude that transfers tend to be equal when they are observable to all children, and that the same argument could be brought to argue for unequal distribution of inter-vivos transfers.

Stark and Zheng (2002) argue that given the fact that bequests are divided equally between children, there is no any particular reason why inter-vivos transfers should be addressed mostly to the 'needy' child. They argue that there are reasons to believe that altruistic parents rely on altruistic siblings, and that these parent-child relations rely on a web of horizontal and vertical transfers which is extended over their life-times. In fact Borghans and Tomini (2010), investigating the probability of outward financial transfers from Dutch parents to their children and friends, find that transfers between randomly selected children are correlated among them.

## 4.3 Data and Descriptive Statistics

This study uses data from 2005 and 2007 waves of the Netherlands Kinship Panel Study. This is a panel survey exploring the ties and support between family members in the Netherlands. The variables include the characteristics of individuals and their family members (with whom they have been in contact during the last 12 months) as well as measures of transfers with selected family members. The survey is designed to get information on the individual respondents (so called 'anchors'), and the interactions with surrounding family members. Anchors have provided information on their selected family members (referred to as 'alters'), among whose, two of their randomly selected biological/adopted children aged 15 or over (Dykstra et al, 2004). Only variables available both in 2005 and 2007 were selected for the analysis as the interest is primarily on 'parents to children' transfers. These transfers include financial transfers, help with housework, help with odd-jobs, and advice given.

The children of the anchors in the study are chosen randomly from all possible living children of the anchor. Although this selection has been random, the ordering of the children in the survey puts oldest children first in most of the cases (see Table A4.1 in the appendixes). It was suspected that this may have created biases in the analysis especially when the effects of characteristics of the other children are needed to be estimated separately (I refer back to this quality in the empirical approach). For this, children were reordered again using the family identification number.<sup>29</sup> This ensures having a random selection of both child 1 and 2. The randomness of choosing the children and ordering ensures that the results are similar when each of the children is taken as a reference. Given the re-randomization of the children's ordering (and the consequent similar

<sup>&</sup>lt;sup>29</sup> This is done by reordering child 1 and 2 so that in families where the identification number corresponds to an uneven number child 1 (the oldest) is always the first and vice versa. Choosing a random order for sorting the families gives very similar results, but our method allows for replication of the analysis by whoever is interested.

results for both children when the other sibling is considered) only the results using the pooled data for both children are presented here.  $^{30}$ 

The survey gives limited information on the financial amount transferred and on the number of times for other transfers (information on the exact amount of money or quantities of time involved is not available).<sup>31</sup> As the primary goal is to look at the interdependence of transfers, the focus here is only on the occurrence of the different transfers. Concentrating only the occurrence makes such transfers as much quantitatively comparable as possible. This incidence for each of the transfers is denoted by "0" if the parent did not transfer or "1" if the parent transferred. Table 4.1 gives a brief overview of this incidence during 2005 and 2007 for both children. The table shows that transfers of money are less popular if compared to the other transfers (on average about 24 per cent of the parents transfer money to their children in each year), while giving advice is the most popular (more than 80 per cent of the parents give advice to children). Help with housework and odd jobs is less frequent than giving advice but more frequent than financial transfers. Almost 32 and 45 per cent of the parents respectively in each year have helped with housework or odd jobs. The table shows that financial transfers have increased slightly between years 2005 and 2007 (from 23 per cent in 2005 to 25 per cent in 2007) and the same could be said for the advice given (from 80 per cent to 84 per cent). At the same time, help given with odd-jobs or housework has not changed from 2005 to 2007 (though the effect for both is not statistically significant).

YEAR		<b>FINANCIAL</b> <sup>1</sup>	HOUSEWORK	ODD JOBS	ADVICE
05	Yes (Once/twice or several times)	0.23**	0.32	0.45	0.80***
20	$N^2$	5671	4517	4517	5671
04	Yes (Once/twice or several times)	0.25**	0.32	0.45	0.84***
20	Ν	3674	3674	3674	4188
MEAN	FOR BOTH YEARS	0.24	0.32	0.45	0.82

**Table 4.1** Incidence of transfers from parents to children for 2005 and 2007

1- Financial transfers include both transfers smaller and larger than 500 Euros.

2- Number of observations for each category

Stars indicate whether the mean for each group is significantly different from the total mean for both years (\*significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

Table 4.2 gives the incidence of simultaneous transfers to both child 1 and child 2 for each year (only for parents that have two or more children). The data show that when a parent transfers to one child he/she is very likely to transfer also to the other (e.g. 23 per cent of the parents in 2005 transferred money to at least one of the children – from Table 4.1 – and 18 per cent of parents transferred to both Child 1 and 2 – from Table 4.2). From all the types of transfers, advice given to both children is highly simultaneous. Almost 74 per cent of the all parents with two or more children in 2005 have given advice both to child 1 and 2, while 78 per cent of them have reported to have done so in 2007. This may also due to the

<sup>&</sup>lt;sup>30</sup> As the selection of children is randomized in the survey (and we have randomized their ordering) results for models with separate children give similiar results and are available upon request from the authors.

<sup>&</sup>lt;sup>31</sup> The information available for financial transfers includes their magnitude (no transfer, less than 500 Euros, or more than 500 Euros), while for help with housework, odd-jobs, and advice only frequencies (no transfer, once or twice, or several times) are available.

high incidence of advice (see Table 1). Financial transfers or helping with housework appear to be almost at the same levels when simultaneously given to both children (almost 20 per cent of parents with two or more children declare to have given such transfers to both child 1 and 2). Simultaneous transfers seem to decrease with the increase in the number of children (seems that parents cannot cope very well with transferring to many children at the same time), but the effects remain still visible and strong (especially if compared to the total number of parents transferring to any of the children in Table 4.1). The data show an increase in the particular share of simultaneous financial transfers and advice given over the years, whereas there is a decline in the share of simultaneous housework and odd job help given (see also Table A4.2).

SUPP	ORTING BOTH CHILD <b>1 &amp; 2</b> at the SAME TIME	FINANCIAL TRANSFERS <sup>1</sup>	HOUSE WORK HELP	ODD JOBS HELP	ADVICE
	Anchor has 2 children	0.21***	0.23***	0.38***	0.77***
05	Anchor has 3 or more children	0.14***	0.16***	0.28***	0.71***
20	All anchors	0.18	0.2	0.33	0.74
	Ν	5612	4018	4018	5612
	Anchor has 2 children	0.22***	0.23***	0.35***	0.81***
02	Anchor has 3 or more children	0.17***	0.13***	0.26***	0.75***
20	All anchors	0.20	0.18	0.30	0.78
	Ν	3352	3352	3352	4134

Table 4.2 Simultanei	ty of support to ch	ild 1 and child 2 (by	number of total children)
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1- Financial transfers include both transfers smaller and larger than 500 Euros.

Stars indicate whether the mean for each group is significantly different from the total mean for that group (\*

significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

Table 4.3 below gives the figures on recurrent transfers to the same child over different years, i.e. 2005 and 2007. The between-years transfers tend to be recurrent following a similar incidence as the between-children simultaneous transfers. This shows that parents who give to one child are not only likely to give to other children but they are also likely to give to the same child over time. However, the data show that between-years financial transfers are less likely to be recurrent if compared to between-children transfers in Table 4.2 (especially if the number of total children increases). This weaker link of between-years financial transfers suggests for fewer needs as children grow old and/or parents that do not want their children to be dependent on such transfers.

The main control variables include characteristics of parents and children, like: demographic variables of (gender, age cohorts), household information (number of household members, marital status), education, distance from each-other, and health status. Other specific characteristics included for parents are: employment status and employment incomes (for parents and their partners), type of dwelling, etc). The dataset for 2007 also includes information on specific "shocks" to children, i.e. having a sudden or long term illness, bankruptcy, having disabilities, or self-assessments of the health conditions. Unfortunately this information is not comparable to the information that exists for such shocks before 2005. Such information is used separately to test the robustness of the results.

Table 4.3 Recurrence of support to	the same	child in 2005	and 2007	(by number	of total
children)					

Recuri	RENT SUPPORT TO THE SAME CHILD IN 2005 AND 2007	FINANCIAL TRANSFERS <sup>1</sup>	HOUSE WORK HELP	ODD JOBS HELP	ADVICE
	Anchor has 1 child	0.17**	0.22	0.35	0.83***
207	Anchor has 2 children	0.14***	0.22***	0.33***	0.78***
<b>)</b> 5 – 2(	Anchor has 3 or more children	0.10***	0.14***	0.26***	0.70***
200	All anchors	0.12	0.18	0.30	0.75
	Ν	4028	4028	4028	4772

<sup>1</sup>- Financial transfers include both transfers smaller and larger than 500 Euros. Stars indicate whether the mean for each group is significantly different from the total mean for that group (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

# 4.4 Empirical approach

The empirical approach consists in testing for the determinants of the probability of transfers to one child taking into account the need of the other child and the family effects (the heterogeneity in the probability of giving between families). The main goal is to identify how the characteristics and giving to one child will influence giving to the other (or giving to the same child over time).

Figure 4.1 Comparisons of transfers between children and over time



A graphical explanation of these relationships is given in Figure 4.1. The figure shows that the chapter explores both between-children comparisons, i.e. comparing similar types of transfers to child 1 and child 2 within the same year, and also between-years comparisons, (i.e. comparing similar types of transfers to child 1 in 2007 and 2005).

The separate cross-sectional data for 2005 and 2007 are considered first. As mentioned above, the main assumption is that giving to a child is determined by the characteristics of the parent (the parent/family effect), the need of the child (represented by child's characteristics) but also by the need of the other child (particular needs represented by child's characteristics). In order to account for this, the models need to control for the main characteristics of parents and children determining the probability of transfers by also accounting for the need of the other child. This is done by estimating the probability of transfers by also accounting to a child a given transfer in a given year, where transfer occurrence is represented by a binary variable and takes only two values coded 0 and 1. The empirical estimations of such models here use a non-linear estimation of this probability.<sup>32</sup> The positive outcomes are determined as below:

$$Pt_{k1} = \alpha + \beta_1 X_{n} + \beta_2 X_{k1} + \gamma(\beta_2 X_{k2}) + \nu > 0$$
(4.1)

where  $Pt_{k1}$  refers to the dichotomous variable of giving a particular transfer (from the parent) to child 1,  $\alpha$  is a constant,  $\beta_1$  and  $\beta_2$  are vectors of estimated coefficients that correspond to the characteristics of the parent and child,  $X_p$ ,  $X_{k1}$  and  $X_{k2}$  are vectors with characteristics of the parent, child 1, and child 2,  $\gamma$  represents a coefficient corresponding to the aggregate effect of the characteristics of the second child (here referred as the "need" of the second child), and  $\nu$  is a vector of residuals errors having a normal distribution. The sign of the  $\gamma$  coefficient will also determine whether the particular characteristics of the other child will influence positively or negatively the probability of giving to the first child.

A similar approach is used to explore the interdependence of the transfers over the years (giving the same type of transfers to the same child in 2005 and 2007). The probability of giving in 2007 is therefore measured by:

$$Pt_{k107} = \alpha + \beta_1 X_{n07} + \beta_2 X_{k107} + \gamma(\beta_2 X_{k105}) + \nu > 0$$
(4.2)

where Pt refers to the dichotomous variable of transferring a particular of transfer from the parent to his/her child in 2007,  $X_{p,07}$  and  $X_{k1,07}$  are vectors with characteristics of the parent and child in 2007, while  $X_{k1,05}$  is a vector with characteristics of the child in 2005. Again the sign of  $\gamma$  coefficient determines whether the transferring probability is dependent on the previous particular needs of the same child.

The  $\gamma$  coefficient above measures the effect of the need of the other child. However, inter-vivos from parents are also dependent on the probability of giving and different transfers are also interlinked with each-other (e.g. parents who give money to their children

<sup>&</sup>lt;sup>32</sup> Logit or probit models yield very similar results but are far more difficult to run given the specifications of the models. We have also tried running the same models using more information available on the amounts or frequencies (considering financial transfers measured using their magnitude - no transfer, less than 500 Euros, or more than 500 Euros - while help with housework, odd-jobs, and advice measured using their frequency - no transfer, once or twice, or several times). Results are also very similar, but we chose here to present the probabilities as they are more easily interpreted (as compared to categorical variables above) and also comparable across transfers. Other results (not presented here) are available on request by the authors.

may be less/more likely to give help with housework or odd-jobs). The goal consists in also exploring the interdependence of different transfers given to a child within the same year or between different years. This is done by estimating separately the residuals for each of the models which were run previously (step 1). The method consists in running separately the model for each transfer and including the residuals of the other models of interest (estimated separately for each transfer and children – see section 3). This step is repeated for all the possible combinations (between children and years) in the dataset for a particular year (2005 or 2007). Hence, the model takes the form as below:

$$Pt_{k1} = \alpha + \beta_1 X_p + \beta_2 X_{k1} + \beta_3 \varepsilon_{k1} + \beta_4 \varepsilon_{k2} + \nu > 0$$
(4.3)

where  $\beta_3$  and  $\beta_4$  are vectors of estimated coefficients corresponding to error terms from previously estimated models of other transfers,  $\varepsilon_{k1}$  and  $\varepsilon_{k2}$  are vectors of residuals errors for other models estimated for child 1 and 2 having a normal distribution. The sign and statistical significance of such error terms gives the extent of the correlations between different transfers.

In addition, the correlations between giving to the same child in different years are also explored. Here, the model takes the forms as below:

$$Pt_{k_{1,07}} = \alpha + \beta_1 X_{p,07} + \beta_2 X_{k_{1,07}} + \beta_3 \varepsilon_{k_{1,07}} + \beta_4 \varepsilon_{k_{1,05}} + \nu > 0$$
(4.4)

where  $\beta_3$  and  $\beta_4$  refer to vectors of residuals corresponding to error terms form previously estimated models for the same child in 2005 or in 2007,  $\varepsilon_{k_{2,07}}$  is the vector of residuals having a normal distribution in year t (2007) and  $\varepsilon_{k_{2,05}}$  is the vector of residuals having a normal distribution in year t-1 (2005).

#### 4.5 Empirical results

This section gives the main results from the estimation of models as described in section 4. The section discuses first the models accounting for the interdependence of transfers between children (or between years) and then turn the attention to the correlation between different types of transfers.

#### 4.5.1 Transfers and the needs of the other child

Table 4.3 gives results of the models for the probability of transferring in 2005 considering the need of the other child in the same year. The coefficients show how characteristics of the parent and children and the need of the other child influence the probability of transfers (the coefficients for the main control variables are similar when models are estimated for 2007 while the values of the need coefficients are displayed in Table A4.3). Similar models are estimated for the probability of transferring in 2007 considering the need of the same child in 2005. The reduced versions of these models including only the need coefficients are given in Table 4.4 (complete results for the other key coefficients are very similar to 2005 and are available on request from the author).

The results on the main characteristics of children and parents show that female parents are less likely to give financial transfers and help with odd jobs (though this is not statistically significant), but more likely to give household help, and advice. On the other side the main beneficiaries of transfers seem to be female children (the effect is statistically significant especially for household/odd-job help and advice given). The older parents (especially parents older than 65 years) are more likely to give financial transfers and interest, but less likely to help with housework, odd jobs and also less likely to give advice. Younger children, i.e. children younger than 25 years, seem more likely to be the beneficiaries of all the transfers. This suggests that parents help their children especially in their early years of adult life, and also confirms the trend of intergenerational transfers in developed countries evidenced by earlier studies (Rossi and Rossi 1990; Schoeni 1997; Cameron and Cobb-Clark 2001; Kohli, Künemund et al. 2005; Albertini, Kohli et al. 2007).

Wealth and employment income of the parents seem to have a general positive effect on the probability of transfer to children. Wealthy parents are more likely to support their children especially with financial transfers, indicating for possible intergenerational transfer of wealth. Similar trends are also found in other developed countries (Kotlikoff 1988; Lundholm and Ohlsson 2000; McGarry 2001; Ohlsson 2007). Statistically, the effect of income from employment is less significant and some of the times reversely related to the probability of transfers. For instance, higher employment income of parent's partner contributes to lower probability of household help for the child.

Education of both parents and children influences the probability of transfers. Higher educated parents tend to be more likely to transfer, and higher educated children are more likely to receive these transfers. This trend is consistent in both years, showing that higher educated parents invest more time and resources in their children's education. And, since education of the parent is correlated with the education of the child, they are also more likely to transfer more to the higher educated children. This also confirms the findings of Berhman and Rosenzweig (2004) who suggest that parents use compensatory inter-vivos to pursue strategic objectives like investing in human capital. Higher educated parents may also receive more from their children as previous studies have shown (Borghans and Tomini 2010) indicating for a higher intensity of transfers between similar groups.

The excellent health status of the parent does not affect significantly the probability of transfers (except for odd-jobs), while the bad or very bad health status affects especially the help given with housework and odd-jobs. If the child is resident in the Netherlands he/she is more likely to get financial transfers, household help and odd jobs help (though the effect for these last two is not statistically significant). Having children influences positively the probability of helping with housework and odd-jobs, indicating that such help is also child related.

Distance from the parent affects negatively the help received with housework, odd-jobs and also advice, while it does have a positive effect on financial transfers (statistically significant). Parents seem to "compensate" for being away by using more financial transfers (in the absence of frequent help with housework or odd-jobs). However, this effect is not always strong. The lower part of Table 4.3 gives the coefficient for the need of child 2 in 2005. This represents the effect of the combined characteristics of child 2 on the probability of giving to child 1. The results show that there is a strong positive effect for financial transfers. This confirms that whenever child 2 is "in need", the parent is also likely to give to child 1. The results for 2007 are reproduced in Table A4.3 and confirm the same finding. The finding rejects the pure altruism hypothesis sustaining that the parent tend to give to the neediest child. Moreover it demonstrates that financial transfers to children in the Netherlands are to a lesser extent led by the need of the child and may relate mostly to intergenerational transfers of wealth or education investments (the results in Table 4.3 show that enrolment in education affects positively these transfers).

Advice given to one child is also influenced positively by the specific need of the other one (the effect is positive for both 2005 and 2007 but statistically significant only in 2005). As the results show, parents are more likely to give advice to single/divorced younger female children that are highly educated. Such parents seem more concerned about their young children (and probably also think that they need advice at this point). This may also explain why parents are likely to give advice also to the other child when one of them needs it. The need coefficients for help with household or odd-jobs do not follow the same trends as for financial transfers and advice. They are not statistically significant for both 2005 and 2007 and also turn negative (especially for household help). This shows that the need of the second child influences little the help given to the first one. Moreover, as the sign shows, sometime this need will also influence negatively the help given to the other child. The result is logical as such transfers are likely to be driven by specific needs of children (e.g. having young children, or just needing extra help in the kitchen). Parents do not "value" the equality of the children when it comes to such transfers helping the neediest.

Table 4.4 gives the results for the probability of giving to a child in 2007 and the effects of the needs that the same child had in 2005. Estimating the need coefficients for transfers to the same child but in different years gives a different picture. The specific needs that the child had in 2005 do not have any significant effect on the probability of the financial transfers to him in 2007. On the other hand they do have a negative (and statistically significant) effect for household help received. This shows that needing more housework help in 2005 contributes to a lower probability of getting such help in 2007. Parents tend to give less housework to the same child over time. This may relate to the fear that the child will become dependent on such help, or just because such needs are simply temporal needs. The only positive and statistically significant coefficient stands for advice. Contrary to the other transfers, parents seem to relate advice to the past needs of the children. They continue giving advice to their children in 2007 even if they needed it two years ago, in 2005.

#### 4.5.2 Interdependency of transfers

Tables 4.5 gives the results of the models for 2005 including the residuals from the previously run models of the other transfers for the same and for the other child in 2005. Residuals are introduced to compare different transfers given to same or different children. The table shows that there exists a general positive association between the probabilities of transferring certain types of transfers to the same child in 2005 (upper part of Table 4.5).

		FINANCIAL TR	ANSFERS	HOUSEHOI	D HELP	ODD-JOB	S HELP	ADVICE	GIVEN
		Coef	s.e.	Coef	s.e.	Coef	s.e.	Coef	s.e.
	Child: Child 2	-0.005	0.011	-0.001	0.013	0.002	0.014	0.003	0.010
	Anchor: Gender: female	0.003	0.014	0.175***	0.017	-0.093***	0.018	0.069***	0.013
Anchor: Gender &	(Anchor: age less than 45)								
Аде	Anchor: age 45-54	$0.050^{**}$	0.024	0.027	0.050	0.028	0.052	-0.014	0.023
2911	Anchor: age 55-64	0.086***	0.030	0.016	0.053	0.007	0.055	-0.022	0.028
	Anchor: age 65 plus	$0.115^{***}$	0.036	-0.065	0.057	$-0.144^{**}$	0.059	-0.042	0.034
	(Anchor: employed)								
Anchor and	Anchor: unempl/housewife	-0.045**	0.021	0.039	0.027	-0.028	0.028	-0.022	0.020
Dirion and	Anchor: pensioner/disabled	-00.00	0.022	0.006	0.028	-0.007	0.028	0.014	0.021
partitet. amnlosmant status	(Partner employed)								
enipuyment status	Partner unempl/housewife	-0.068***	0.023	0.055*	0.029	0.023	0.030	$0.061^{***}$	0.022
	Partner pensioner/disabled	-0.002	0.016	-0.007	0.019	0.018	0.019	$0.040^{***}$	0.015
Anchow/Doutnow	Anchor:'s income (ln)	0.024***	0.006	0.011	0.00	0.022**	0.010	0.006	0.006
Emal in come	Anchor.'s benefits (ln)	0.000	0.002	-0.002	0.002	0.002	0.002	-0.001	0.002
пири. пооще	Anchor:'s partner inc. (ln)	0.002	0.003	0.001	0.004	-0.004	0.004	0.001	0.003
Anchor: Dwelling	Anchor: : number of rooms	0.008**	0.004	$0.014^{**}$	0.006	0.029***	0.006	0.008**	0.003
	Anchor: Lower Educ.	-0.033**	0.014	-0.006	0.018	-0.069***	0.018	-0.059***	0.013
Anchor: Education	(Anchor: Intermed. Educ.)								
	Anchor: HigherEduc.	0.070***	0.016	0.058***	0.020	-0.003	0.021	$0.040^{***}$	0.015
Anchor: Marital	(Anchor: Married)								
Chapter Chapter	Anchor: Never married	-0.147***	0.051	-0.032	0.076	-0.100	0.079	0.028	0.047
Suatus	Anchor: Divorced	-0.032*	0.017	0.022	0.021	-0.075***	0.022	-0.027*	0.016
	Anchor: Excellent health	0.015	0.017	0.018	0.021	0.051**	0.022	-0.006	0.016
Anchor: Health	Anchor: Good health	-0.008	0.015	-0.001	0.018	0.019	0.018	$0.026^{*}$	0.014
Status	(Anchor: Average)								
	Anchor: Bad/v. bad health	0.009	0.024	-0.074**	0.029	-0.108***	0.030	0.014	0.022
Anchor: Other	Born in The Netherlands	-0.028	0.022	0.040	0.029	0.080***	0.030	0.028	0.021
	Child gender: Female	0.015	0.010	0.085***	0.013	0.077***	0.014	0.035***	0.010
Child: A me and	(Child age less than 25)								
Candar Gandar	Child age 25-34	-0.059***	0.020	-0.000	0.029	-0.078***	0.030	-0.033*	0.019
Activity	Child age 35-44	-0.123***	0.025	-0.074**	0.036	-0.113***	0.037	-0.139***	0.025
	Child 45+	-0.078***	0.030	-0.151***	0.043	-0.273***	0.045	-0.193***	0.031

**Table 4.4** Estimations of the mobability of transfers to child in 2005 (controlling for the needs of the other child in 2005)

# CHILDREN, TRANSFERS AND NEEDS

	Child currently enrolled	0.074***	0.020	-0.005	0.036	0.002	0.037	0.021	0.019
Child: Education	Child low education	-0.068***	0.012	-0.046***	0.018	-0.045**	0.018	0.006	0.011
CIIIIA. EAUCAUOII	(Ch intermed. education)								
	Child high education	0.006	0.012	0.030*	0.017	0.007	0.017	0.061***	0.012
Child. Marital	(Child: married/cohab)								
CIUIU. INIAIIIAI	Child: divorced	0.003	0.029	$0.081^{**}$	0.037	0.045	0.038	0.063**	0.028
Status	Child: never married	0.030**	0.015	$0.051^{***}$	0.019	0.060***	0.020	0.044***	0.014
	Child: Hh member	-0.061**	0.025	-0.966	1.808	-0.632	1.264	0.024	0.024
Child: Other	Child: Resident in Netherlands	0.087**	0.034	0.029	0.050	0.016	0.052	-0.027	0.033
	Child: Number of kids	0.000	0.005	0.025***	0.007	$0.019^{***}$	0.007	0.000	0.005
Child:									
Urbanization and	Child – Anchor distance (ln)	0.005*	0.003	-0.027***	0.004	-0.028***	0.004	-0.004	0.003
distance									
	Coefficient for the need of Child 2 in 2005	0.465***	0.116	-0.051	0.086	-0.047	0.082	0.373***	0.110
	Constant	0.101	0.066	0.021	0.097	0.337***	0.100	0.675***	0.061
	Number of observations	5671		4513		4517	~	567.	
	Adjusted R2	0.074		0.09	2	0.14	0	0.11	~
	Log-Likelihood	-2899.6	9	-2735.	67	-2890.	11	-2508.	07
* significant at 10%; **	significant at 5%; *** significant at 1%. I	keference categoi	ies in bracket	s.					

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	FINANCIAL TH	ANSFERS	HOUSEHO	LD HELP	ODD-JOB	IS HELP	ADVICE	GIVEN
	Coef	s.e.	Coef	s.e.	Coef	s.e.	Coef	s.e.
Coefficient for the need of Child 1 in 2005	0.143	0.174	-0.374***	0.091	-0.001	0.126	0.869*	0.494
Constant	0.437***	0.081	0.119	0.082	0.652***	0.086	0.892***	0.053
Number of observations	4028		402	8	402	8	477	2
Adjusted R2	0.085	10	0.0	8	0.16	9	0.09	5
Log-Likelihood	-2207.	51	-2426	.27	-2526	.20	-1553	.72
All other control weidelice included are the concern as in Tabl	1 2 cimiliantat	100/. ** ciami	9 *** · /05 to taob	to tacoiti ani	10/			

significant at 1%. signiticant at 5%; \*\* All other control variables included are the same as in Table 4.3. significant at 10%; \*\* Giving advice and financial transfers or odd-job help and financial transfers are positively associated (and coefficients appear statistically significant), while coefficients for helping with housework and financial transfers (though positively correlated) do not appear statistically significant. Household help is strongly associated with odd-jobs help, while advice is also positively correlated with all the other transfers. The results are similar if compared with the results in 2007 (see upper part of Table 4.6). This shows that parents use different transfers as complements to each-other (e.g. whenever they give household help they are also very likely to give odd-jobs help, or whenever they give financial transfers they are likely to give advice).

The lower part of Table 4.5 shows that parents also tend to positively associate similar transfers when transferring to different children (e.g. giving financial transfers to child 1 and child 2 in 2005). The highest positive coefficient is for financial transfers, but also advice, housework help, and odd-jobs help are positively associated between the children (and all coefficients are statistically significant). These results demonstrate a strong effect when it comes to between-children equity for similar transfers. If the parent gives a certain transfer to child 1, child 2 is also very likely to get the same type. It seems that, more than for anything else, parents have such "equity concerns" for financial transfers and advice.

Important outcomes in the lower part of Table 4.5 are also the cross-associations between different types of transfers given to different children. Although different types of transfers are positively associated with each other (e.g. giving financial transfers and advice), parents seem to "exhaust" their resources and do not always relate such transfers to each other when it comes to different children. Given the positive correlation between different transfers to the same child and between similar transfers to different children, one would assume that certain combinations of transfers (e.g. financial transfers and advice, or help with housework and odd jobs) to different children would also be positively correlated to each other. The results show that this is not always the case. Parents seem to be less likely to associate financial transfers to child 1 with advice for child 2. In fact, results show that such transfers are negatively associated (and statistically significant). This "exhaustion" effect may be due to two reasons: (1) Parents tend to equalize between the most "direct" and "visible" transfers (e.g. giving financial transfers to both children), but they "substitute away" less visible transfers (e.g. advice), and (2) parents eventually "exhaust" their resources at a given time (e.g. if they give household help to child 1, they are also likely to give household help to the child 2, but they cannot give both household and odd jobs help to both children so they choose to give less help with odd-jobs to child 2). The main combination of transfers between the two children where this "exhaustion" effect is observed are: (1) financial transfers- household help, (2) financial transfers - advice given, (3) household help – odd-job help, and (4) interest shown – advice given.

		FINANCIAL TR	ANSFERS	HOUSEHOLI	D HELP	ODD-JOBS	HELP	ADVICE G	IVEN
		Financial to Ch1 2005	s.e.	Household Ch1 2005	s.e.	Odd jobs to Ch1 2005	s.e.	Advice to Ch1 2005	s.e.
	Financial to Ch1			0.013	0.020	$0.046^{**}$	0.020	$0.112^{***}$	0.017
000 I PI ui uc	Household to Ch1	0.006	0.012	ı	ı	0.327***	0.015	0.073***	0.013
7 u !Y2 uə/ > sta ti i	Odd jobs to Ch1	0.029**	0.013	0.333***	0.015			$0.106^{***}$	0.013
o el sbc 718 705 50	Advice to Ch1	0.099***	0.015	$0.103^{***}$	0.019	$0.148^{***}$	0.019	ı	ı
5 GLS GLS GLS GLS GLS GLS GLS GLS GLS GLS	Financial to Ch2	0.689***	0.012	0.010	0.020	-0.012	0.020	-0.093***	0.017
isa ten ten ten ten ten	Household to Ch2	0.008	0.012	$0.421^{***}$	0.014	-0.150***	0.016	-0.032**	0.013
7 и !Ч] е.ц 30 РИ	Odd jobs to Ch2	-0.006	0.013	-0.154***	0.016	0.498***	0.014	-0.054***	0.013
i	Advice to Ch2	-0.083***	0.015	-0.046**	0.019	-0.077***	0.019	0.623***	0.012
	Constant	-0.004	0.00	-0.005	0.012	0.007	0.012	0.013	0.010
	N	4018		4018		4018		4018	
	Log likelihood	-748.83		-1732.8	88	-1684.(	57	-1013.3	1

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<b>Table 4.7</b> Estimations of giving to children in 2007

			FINANCIAL TI	RANSFERS	HOUSEHOI	D HELP	ODD-JOB	S HELP	ADVICE	GIVEN
			Financial to		Household		Odd jobs to		Advice to	
			Ch1 2005	s.e	Ch1 2005	s.e	Ch1 2005	s.e	Ch1 2005	s.e
	4	Financial to Ch1			0.014	0.016	$0.044^{***}$	0.017	$0.041^{***}$	0.015
ui uc əu	200 1 PI	Household to Ch1	0.015	0.017			$0.415^{***}$	0.016	$0.031^{**}$	0.016
lt 10 nev 205	7 u !Y2	Odd jobs to Ch1	$0.044^{***}$	0.017	0.387***	0.015		ı	0.098***	0.015
o el ebc vig vig	ļ )	Advice to Ch1	0.050***	0.019	0.036**	0.018	$0.121^{***}$	0.019		
9 Z( s19 out . enj	9	Financial to Ch1	0.239***	0.016	0.000	0.016	0.001	0.017	0.028*	0.015
oise 19d 18d 18d	000 I PI	Household to Ch1	-0.003	0.016	$0.168^{***}$	0.015	0.005	0.016	0.018	0.015
цта 10 Ва	7 u !42	Odd jobs to Ch1	-0.006	0.016	0.007	0.015	0.127***	0.016	0.006	0.014
	i )	Advice to Ch1	0.016	0.018	0.009	0.018	0.062***	0.018	0.157***	0.016
		Constant	0.442***	0.123	0.193	0.119	0.535***	0.123	0.837***	0.111
		N	3,54(	0	3,54	0	3,54	3	3,54	0
		Pseudo R-square	0.13	6	0:30	6	0.35	2	0.12	9
		Log likelihood	-1,746.	.18	-1,629	.53	-1,753	.15	-1,377	.41
* significant at 1	)%; ** sig	nificant at 5%; *** significa	int at 1%. ** Other c	ontrol variabl	es included are the	same as in Ta	ble 4.3			

The lower part of Table 4.6 gives the same type of results as Table 4.5, but now comparing transfers to child 1 in 2007 to transfers to the same child in 2005. The results show again that parents are likely to give similar transfers to the same child over time, but the correlations of the transfers are not as high as giving to a different child in the same year. Parents are more likely to give financial transfers than any other types of transfers to the same child over the years. Another likely transfer is also help with housework, while advice, odd-jobs and interest are less likely than this. The exhaustion effect here is less visible when looking at the associations of different transfers. Giving financial transfers in 2005 is positively correlated to giving advice in 2005 and 2007, and more or less the same also holds for relationships between financial transfers and household help, or interest and advice. Parents here seem to care more about the combination of the transfers that they give to the child and they do not seem to substitute away or exhaust their resources.

## 4.6 Discussion and Conclusions

This chapter has analysed the parental support by exploring transfers of money/valuables, housework help, odd-jobs help and advice given to children. The main focus has been on the effect that the transfers to a child have on transfers to the other children (or to the same child over time).

The main assumption was that the pattern of intergenerational support is dependent on both a pre-decided pattern of giving (e.g. financing education or transferring wealth through inter-vivos transfers), and also on the specific needs that arise during children's life course. Parents can choose the type of transfer/support, the timing, but can also choose to support one or more of their children based on their needs. Previous studies have shown that parents consider carefully all of their children before transferring to any of them. The decision therefore depends on the particular characteristics of parents, need of the child but also needs of other children (if any). Moreover, parents may use different types of transfers which complement or substitute each other. The new questions addressed in this context are: To what extent the needs of the other children (or needs of the same child in different years) will influence the probability of transferring money, services or support to one of the children? Will different types of transfers be complements or substitutes to each other?

The approach consisted in exploring both between-children and between-time interdependence of different types of transfers. The models adopted here estimated the probability of transfers by accounting for characteristics of the parent, characteristics of the child but also the total effect of the needs of other children. The same model was then extended to account for the associations/correlations between different types of transfers.

The empirical results have shown that transfers depend on factors like; gender, age, education, wealth/income, distance, health status, but also on marital status of parent and child. It was also found that financial transfers flow mainly from older to young generations confirming the results of earlier studies. Altruism is less likely to be the dominant motivating factor behind intergenerational transfers (see also Borghans and Tomini 2010). Particular shocks to children did not appear to have any significant effect on the probability of transfers suggesting that parents themselves tend to distribute their support upon all their children (contrary to what the altruism model would suggested). Moreover, higher

educated parents seemed more likely to transfer to higher educated children confirming investments of parents in human capital.

The analysis revealed that parents are influenced by other children's needs when transferring to a particular child. Financial transfers to one of the children were positively associated to the need of the other child suggesting that whenever one of the children needs financial help, parents are also likely to help others. In fact, this was also confirmed by the correlations of the simultaneous financial transfers between children as giving money to both of them was the highest correlation among transfers. In the same way, advice given to a child was also positively associated to the need for advice of the other child. Help with household or odd jobs did not show the same strong association (the relation turns even negative for household help) suggesting that such help differs much in patterns from financial transfers or advice.

Results for the effect of the need over the years did not show the same association. The need of the child in 2005 did not seem to have a statistically significant effect on the probability of financial transfers in 2007. The effect turned to be negative (and significant) for household help showing that the need for such help in the previous year affects negatively help in later years. This shows the temporal nature of service transfers (e.g. needed most when having small children).

The analysis of interdependence between types of transfers gave other interesting findings. As expected, different types of transfers to the same child were positively associated, and so were similar types of transfers to different children. Financial transfers were positively associated with advice, household help with odd job help, and advice given with all other transfers. This suggested for a more complementary nature of such transfers. But, different types of transfers, that were positively associated when transferred to the same child, were negatively associated if transferred to different children. This was called the exhaustion effect and linked this to two main factors. The first one is the tendency of complementing only more visible/important transfers (e.g. financial transfers) (Lundholm and Ohlsson, 2000), and substituting less visible ones (e.g. advice). And the second one is an actual exhaustion of resources deriving from not being able to associate all combinations of transfers when simultaneously giving to different children.

The results in this chapter reveal that the pattern of parental inter-vivos transfers in The Netherlands seem to follow more the one reported by other authors on bequests. Parents are very likely to give their children equal chances in getting a similar transfer. This is especially true for financial transfers and (to some extent) also advice. Other types of service transfers (though positively associated when transferred simultaneously) are less dependent on the need of other children. The results lead us to the conclusion that financial transfers are therefore more likely to be triggered by possible intergenerational transfer of wealth and less linked to particular shocks of children. Therefore, policies aiming at regulating such transfers (e.g. fiscal policies promoting the taxing of inter-vivos financial transfers, or policies encouraging informal care given to family members) would have to consider both the association of different types but also their dependence on the needs of other receivers.

## 4.7 References

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# 4.8 Appendixes

	CHILD A RE-ORD	DERED AS CHILD 1	CHILD B RE-ORDE	RED AS CHILD 2
	Anchor giving to	Anchor giving to	Anchor giving to	Anchor giving
	child A1	child 1 <sup>2</sup>	child B1	to child 2 <sup>2</sup>
Child selected is 1st Child	2638	1512	377	1503
Child selected is 2nd Child	447	1171	1908	1184
Child selected is 3rd Child	385	406	439	418
Child selected is 4th Child	118	113	111	116
Child selected is 5th Child	42	40	38	40
Child selected is 6th Child	11	17	19	13
Child selected is 7th Child	7	3	3	7
Child selected is 8th Child	3	5	3	1
Child selected is 9th Child	1	-	1	2
Child selected is 10th Child	-	-	-	-
Child selected is 11th Child	1	1	-	-
N SAMPLE	3653	3268	2899	3284

#### Table A4.1 Reordering of the Child 1 and Child 2

<sup>1</sup> - This is the original order of children as reported in the survey.

<sup>2</sup> - Child 1 & 2 are re-ordered in a random way by first ordering them by age and then re-ordering using the family ID (dividing families in those with even and uneven family ID). Whenever family ID is a even number the oldest child is always the first, and vice versa.

Table A4.2 Simultaneous transf	ers to child 1 an	1d 2 for 2005 and 2007
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YEAR		<b>FINANCIAL</b> <sup>1</sup>	HOUSEWORK	ODD JOBS	ADVICE
05	Yes (Once/twice or several times)*	0.18***	0.20**	0.33***	0.74***
20	$N^2$	5612	4018	4018	5612
02	Yes (Once/twice or several times)	0.20***	0.18**	0.30***	0.78***
20	Ν	3352	3352	3352	4134
MEAN	FOR BOTH YEARS	0.18	0.19	0.32	0.76

<sup>1</sup>- Financial transfers include both transfers smaller and larger than 500 Euros.

<sup>2-</sup> Number of observations for each category

Stars indicate whether the mean for each group is significantly different from the total mean for both years (\*significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%).

			FINANCIAL TR/	ANSFERS	HOUSEHOLD	HELP	ODD-JOBS	HELP	ADVICE G	VEN
			Coef	s.e.	Coef	s.e.	Coef	s.e.	Coef	s.e.
	Coeffeicn 2 in 2007	it for the need of Child	0,503***	0,159	-0,047	0,084	0,081	0,084	0,208	0,137
	Constant		0,451***	860'0	0,100	0,101	0,585***	0,105	0,949***	0,085
1	Number c	of observations	3674		3674		3674		3674	
7	Adjusted	R2	060'0		0,100		0,166		0,078	
1	Log-Likel	ihood	-1958,9	4	-2185,1	3	-2297,	73	-1491,6	2
All other contro	ıl variable	s included are the same as	in Table A4. * sign	ificant at 10%; *	** significant at 5%	6; *** significa	nt at 1%.			
<b>Table A4.4</b> <i>]</i>	Von-line	ear estimations of givin	ıg to children in	2007 with re	siduals of other	· models				
			FINANCIAL TH	ANSFERS	HOUSEHOI	D HELP	ODD-JOB	5 HELP	ADVICE G	IVEN
		I	Financial to Ch1 2005	s.e.	Household Ch1 2005	s.e.	Odd jobs to Ch1 2005	s.e.	Advice to Ch1 2005	s.e.
L.		Financial to Ch1			0.026	0.023	$0.061^{***}$	0.023	0.075***	0.020
stə	200 I PI	Household to Ch1	0.013	0.013			0.409***	0.016	0.063***	0.015
200 Isut	շ պ !Կጋ	Odd jobs to Ch1	0.038***	0.013	0.398***	0.016			0.072***	0.015
h to to to to to to to to to to to to to t	[ )	Advice to Ch1	0.057***	0.015	0.084***	0.020	0.102***	0.020		
o ele to el i no	2	Financial to Ch2	0.716***	0.012	-0.011	0.023	-0.025	0.023	-0.045**	0.020
lebo vig	2007 119	Household to Ch2	-0.005	0.013	0.288***	0.017	-0.083***	0.018	-0.042***	0.015
isəy	у иі ЧЭ	Odd jobs to Ch2	-0.016	0.013	-0.082***	0.017	0.327***	0.017	-0.006	0.015
I		Advice to Ch2	-0.032**	0.015	-0.056***	0.020	-0.013	0.020	0.452***	0.016
		Ν	3352		3352	4	3352		3352	
		Constant	0.558	~	0.34	5	0.41	0	0.279	
		Log likelihood	-547.4	6	-1454	31	-1500	45	-996.4	4

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All control variables included are the same as in Table A4.\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%. \*\*

I
Chapter 5. How has internal migration in Albania affected the receipt of transfers from family and friends?

Paper available as: Tomini F. and J. HagenZanker (2009) "How has internal migration in Albania affected the receipt of transfers from kinship members?", Maastricht University Graduate School of Governance Working Paper No. WP2009/013.

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## 5.1 Introduction

Kinship and friendship networks provide their members with continuous support both in everyday life and in sudden or unforeseen events. In every society, households rely on such networks for economic, social and emotional support. Self-identification with these networks is often a necessary mean for gaining the additional security that they can offer. Migration can therefore be a serious threat to this support and security. As migration relocates family members, splits families and exposes migrants to new people and different cultural practices, it is also likely to affect the kinship and friendship networks and the support received by their members. Two important questions arising from these situations are: How would the structure and intensity of transfers received by relatives and friends change after migration? And, would transfers from friends substitute transfers from family relatives?

The present chapter examines the impact of internal migration on transfers received from family members and friends. The data come from a unique household survey including migrants who moved after the fall of communism in peri-urban areas of the capital of Albania, Tirana. I analyse how internal migration of the households has affected the different transfers received, and to what extent households substitute transfers from family members and friends. The focus is in particular on transfers of money, goods and services received by the household. By looking at transfers received I am also able to control for the effect of migration on the economical and social needs of households. I also check these results comparing them to transfers that the same households give to their family members or friends. Based on previous literature and Albania's particular migration dynamics, the following hypotheses are tested: (1) Financial transfers become more important after migration. (2) After migration, households substitute transfers from family members with transfers from non-family members (such as friends, neighbours, etc).

Internal migration in Albania during the communist regime (1945-1990) was centrally controlled. In fact, permanent relocation was not legally allowed (without prior permission) until 1993, although many people started already moving a few years earlier. With the fall of totalitarian regime in 1991, the country faced severe social and economic challenges. The mass layoffs that followed the shutdown of mines, plants, and inefficient state-owned enterprises created an immense pressure on the labour market. The agricultural land reform of 1991 authorized subdivision of former state-owned land to households based on equitable share basis (World Bank, 2006). In many areas, especially the mountainous ones, this land was insufficient, and moreover the process was accompanied by many difficulties and irregularities (World Bank, 2004).

Being left with few other possibilities, people from former industrial towns or remote villages started migrating either internationally (mainly towards the neighbouring countries, Italy or Greece), or internally (towards the main cities in the coastal area and Tirana). Official data show that almost one in three adults has migrated internally since birth (World Bank, 2007). Internal migrants first occupied former agricultural lands in the peri-urban areas of big cities, which soon developed into major settlements.

Internal migration in Albania is often characterised by relocation of the whole household. Unlike in other former Communist countries, migration is not circular and any future migration would mostly be to an international destination. Earlier studies indicate that internal movers come from all socio-economic backgrounds (De Soto et al. 2002; Cila 2006), and the main motivation behind the relocation seems to be economic, i.e. work-related (Carletto et al. 2004). The qualitative interviews also show that often whole families and even villages relocated to the same area, for environmental, employment or education reasons.



Figure 5.1 Origin districts of surveyed households

Source: Own compilation

This study is based on a unique household survey that was conducted in 2008 amongst internal migrant households living in peri-urban households in Tirana, covering two types of households (households with nuclear and extended families). Figure 5.1 above depicts a map of Albania on which the districts of origin of the surveyed households are marked. It shows that migrant households come from nearly all districts, but especially from the Northern and Central mountainous areas (the darker areas on the map).

For many of these migrant households the impact of migration has been far from successful. Previous studies show that unemployment is very high (Cila, 2005; Hagen-Zanker & Azzarri 2008), and consumption is lower (even though household income may be higher) after migration (Hagen-Zanker & Azzarri 2008). This shows that households are

faced with volatile circumstances and may still be highly dependent on inter-household transfers. It is believed that the success of such migration will also influence the transfers received by other family members or friends (e.g. the receiving financial transfers from family and friends will fall down if the households are better off after migration). Furthermore, the composition of the supporting network may also be affected by internal migration. Households may leave family members behind due to internal migration and many also have family that migrated internationally. At the same time, households are exposed to other migrants coming from all parts of Albania and living in very condensed living conditions. This could also lead to more exchange and interactions with non-family members than before.

This chapter investigates the impact of migration on transfers (money, goods and service transfers) received from family members and friends. The study relates both to the economic analysis of inter-household transfers and the impact of internal migration literature and follows in the footsteps of a few papers that combine the two research areas. Studies focusing on the impact of internal migration on transfers for complete family relocation are limited in number. This literature focuses mainly on demographic changes in the US in the mid 20<sup>th</sup> century. The present study analyses this issue much more thoroughly utilising both qualitative interviews and advanced econometric techniques. Furthermore, the focus is on a transition economy where the role of private transfers is much more important. Internal migration is high in Albania, poverty in peri-urban areas remains wide-spread and state support is low. This makes the investigation of private transfers and their development over time an interesting and relevant research question.

The remainder of this chapter proceeds as follows: Section 2 reviews the relevant literature and gives the reasoning behind the hypotheses. Section 3 describes the data, and gives some descriptive statistics while section 4 outlines the empirical methodology. Section 5 discusses the results, and conclusions are presented in section 6.

# 5.2 Literature Review

Transfers from family and friends can be motivated by many reasons. The economic literature is divided between the two main sets of arguments on such motives: the altruistic motives and the selfish/egoistic ones. The roots of the altruism argument are to found in sociobiological research where an altruistic person is considered someone who gives up own fitness to increase the fitness of others (Hamilton 1964; Trivers 1971). In economics, an altruistic person is considered someone whose utility does not only depend on own consumption, but also on the consumption of their family members (Becker, 1974, Becker 1976). Consequently, an altruistic transfer will be the one triggered by a drop in the utility of one of the family members. The purpose of the transfers is to compensate this utility drop. Altruistic transfers occur mostly between close relatives (e.g. a parent caring about the utility of his/her children). Many economists argue that, even for close relatives, there may be other selfish/egiostic motives triggering the transfers. These motives relate to exchange (Chiappori 1988; Cox and Rank 1992), indirect returns or induced reciprocity (Fehr and Gächter 1998).

Despite the discussion on the various motives, economics and other disciplines agree that motives for transfers to closest family members may differ from motives for transfers to friends. Arguments like altruism are based largely on genetic roots, i.e. a parent is concerned about the transmission of his/her genes across generations, while relationships with friends are mostly based on societal norms of reciprocity (e.g. reciprocal altruism) and common interests. Transfers to friends are believed to be triggered more from nonaltruistic motives like social effects and self-interest (Trivers 1971; Kolm, 2006). But, if transfers to family and friends are triggered by different motives, can they substitute eachother? Can migrant households substitute the support they get from family networks with that of non-relatives and friends?

The degree of helping and resource sharing is a clear and measurable indicator of family solidarity, which can vary over different networks or over time. More specifically, economic relationships between kinship members may be characterized by transfers of money, goods, or services rendered. Bengtson & Roberts (1991) argue that helping and resource sharing is one of the most important aspects of family solidarity. Changes affecting the structures of kinship networks can consequently affect the patterns of resource sharing. People's mobility through migration (and especially rural-to-urban migration) is considered to be an important factor that influences kinship ties (Blumberg & Bell, 1959). Mulder and Cooke (2009), using data from Netherlands Kinship Panel Study show that location of other family members outside the household may impede households from moving (when other relatives live nearby the household), or trigger internal migration (when other relatives live far away).<sup>33</sup>

Whether migration takes place at all is also influenced by the strength of kinship networks. The migration network literature shows how kinship networks help potential migrants to migrate and then find employment, housing etc. at the destination (Goss & Lindquist 1995). Choldin (1973) also emphasizes chain migration and help given to kin to also migrate. Through chain migration social networks may be reproduced in the new community. An important consequence of rural-to-urban migration is that it is usually accompanied by a placement within clusters of kin relatives coming from the same areas (see also Blumberg and Bell, 1959; Hendrix, 1975). This may lead to the preservations of certain relations and habits, and may even contribute to reinforce them. What is clear, is that the decision to migrate internally is both affected by the kinship networks and at the same time affects the relationships within the same networks.

Previous studies have shown that permanent internal migration has pervasive effects on families and kinship networks. Duke-Williams (2009) argues that mobility and migration are key drivers in changes in households. Peoples' mobility contributes to the separation of households and the creation of new households. Blumberg and Bell (1959) argue that rural to urban migration changes the structure of kinship relationships. These changes are a consequence of the "dysfunctionality of the urban setting for a kinship relationship" since urban settings are usually different from those of villages or small towns. The same authors further argue that in urban settings the importance of the family

<sup>&</sup>lt;sup>33</sup> A number of other papers in a recent special issue in Population, Space and Place also highlight the importance of residential location on family ties and support (see Mulder & Cooke, 2009).

and kinship tends to decline, while the residual functions (e.g. visits) may stay intact on the other hand and may become even stronger. In contrast, other studies cited by Blumberg and Bell (1959), show that a good part of rural migrants receive help from friends or relatives when they first move to urban areas.

Litwak's 1960 study in New York concludes that mobility reduced face-to-face contact, but not "extended family identification", i.e. feeling close to the extended family. He finds that over time family contacts are still as likely as before, but that long-term residents are more likely to be in contact with neighbours or belonging to a club. Jitodai (1963) finds that at arrival rural migrants in Detroit have higher rates of contact with their kin, than urban migrants, possibly because rural migrants are followed by their family. Over time contact rates for rural migrants stay more or less stable and those for urban migrants increase, becoming similar to contact rates of natives and of rural migrants. Migration thus did not hinder migrants in keeping in touch with their kin. Wellman et al (1997) also looked at social networks in Toronto in the 1970s. Kinship ties were most likely to remain ten years after the original survey, also for households that moved, while some ties with neighbours were lost for the households that moved. Ruan et al. (1997) look at the changing structure of social networks in Tiajin, China and find that between 1986 and 1993 individuals named fewer kin members as personal ties, while friends became relatively more important. The authors attribute this to changing policies in China that allowed for more residential and occupational mobility, which has some similarities with Albania's situation after 1989.

With regard to the type of support received by the households in transition countries, there are few existing studies. Cox, Jimenez and Okrasa (1996) compare family solidarity before and after transition (1987 vs. 1992) in Poland. They find the same incidence of financial transfers in real terms, despite a worse economic situation, so family solidarity is somewhat weaker. Vullnetari & King (2008) describe a growing trend of "care drain" in Albania, namely the effect migration of adult children has on their elderly parents. They depict a pattern of fewer visits (as they mainly refer to international migration) and less care, both by parents (care of the grandchildren) and children (care of their parents). Even though financial transfers from migrant children to parents rise in some instances, they do not make up for the shortfall in physical care. In short, family solidarity weakens as result of migration.

The literature on determinants of remittances focuses on financial family transfers between the migrant and the family left behind<sup>34</sup>. The literature predicts that there are financial transfers from the migrant to the household and wider family left behind due to a wide range of motives ranging from altruism to self-interest. There could also be transfers to the migrant, as part of a co-insurance agreement, for example when the migrant is temporarily unemployed (see Stark, 1991). The remittances literature would predict that there are more financial transfers between the family members after the move than before, since migrants generally migrate in order to remit. Finally the exchange motive would predict a rise in services from the household left behind to the migrants (e.g. taking care of children left behind) simultaneously with a rise in financial transfers from the migrant to the household. Even though in the Albanian case the whole household moves (INSTAT,

<sup>&</sup>lt;sup>34</sup> Remittances are the money transfers which migrants send to their families left behind.

2004), the literature on remittances has some relevance. The motives for financial transfers, for example supporting needy family members, may explain changes in transfer patterns.

In conclusion, it is expected that internal migration influences transfers and support received by family members and friends. The most obvious argument for migration is that migrants move away to improve the living conditions and consequently they become able to remit to those who are left behind. However, in circumstances of massive internal migration characterized by the relocation of the entire household, i.e. the Albanian case, the motives and consequences of migration are not that clear anymore. Relocation in perurban areas (where the unemployment is high and public services are poor) may make migrants more dependent on the received support. Due to longer distances between extended family members and greater financial means due to migration, the importance of financial transfers is expected to grow and importance of services to decrease. Economic theories on the causes of migration and the motivations to remit hypothesize that financial transfers increase after migration (Hypothesis 1). But, how will the received transfers change after migration? Even if family members and friends move together (as it is often the case in Albania), the support received by new friends and acquaintances is expected to weaken the existing kinship networks (Hypothesis 2).

# 5.3 Data and Descriptive Statistics

#### 5.3.1 Data

The survey was administered by Florian Tomini and Jessica Hagen-Zanker, with the assistance of a team of students from Tirana University in April 2008. The sample was selected from the four main neighbourhoods that were populated after 1990 and accommodate a large migrant population. Each of those neighbourhoods has a slightly different migrant population, for example households living in Bathore are more likely to come from the Northern mountainous areas of Albania and are more likely to live in extended families. The selected households were distributed across the areas according to the size of these areas and importance of migrant inflows for these areas, which means that almost half of the sample was collected in Bathore, as this is the biggest peri-urban area and also has the largest migrant population.

By absence of street names and accurate population registers, the sample was quasirandomised by sub-dividing the selected areas into strata of around one km<sup>2</sup> using satellite maps and then randomly selecting houses in selected strata. The sub-sections were then assigned to interviewers, who also marked the exact location of interviewed households on the map. If the selected households did not fit the criteria of being an internal migrant household (11.48%), or refused to participate (25.68%), a neighbouring house was chosen. The positive response rate was 74.32%, and 112 households were interviewed in total. Households which did not provide complete information on the transfers with their family members and friends are omitted from this analysis. Therefore the final sample included 108 households. Table 5.1 below shows the number of households that were selected in each area.

#### CHAPTER 5

Two types of questionnaires were used in the survey. The main questionnaire had 137 questions ranging from information on the main households' demographics, education, employment, income, and migration history to the key section on family solidarity. A total of 26 households were also interviewed in semi-structured interviews using additional qualitative questions.<sup>35</sup>

In the main section on family solidarity, households are questioned extensively about transfers between the main household and a random selection of extended family members and neighbours, who the main household is in regular contact with, both before and after the move. Households were first asked to list all relatives and friends with whom they were in contact with on a regular basis and then the interviewer randomly selected two relatives in each of five broad categories of relatives (i.e. parents, children, siblings, other relatives and friends) by choosing the first two relatives whose first name comes earlier in the alphabet. This was followed by some basic demographic questions on all family and friends. Further questions on the socio-economic characteristics of the relative/ friend and on family solidarity were only asked about the selected relatives.

Households were questioned on the financial transfers, goods and services exchanged both in the last twelve months and before the move. In the latter case, households were divided broadly in those coming before 1997 and those coming after this year.<sup>36</sup> In order to get a similar basis of comparison, migrants moving before 1997 were asked about the transfers during the last 12 months before 1991, and those moving after 1997 about transfers during the last 12 months before 1997.<sup>37</sup> Detailed questions were asked on the type/ amount of the transfer and the frequency for both before and after the move. This chapter only makes use of the data on the receipt of transfers because this allows having more control variables based on household information and also gives a better overview of the effects of migration on migrating households. Data on the amount transferred are not used in this analysis as the retrospective questions for the transfers in the past do not give reliable estimations (the time period from migration can be up to 16 years).

#### 5.3.2 Descriptive Statistics

Table 5.1 first give a short description on the socio-economic characteristics of the sample by the specific neighbourhood the household lives in. Around 96% of the household heads sampled are male and about 90% are married and there are no significant differences per area. Table 5.1 below outlines further characteristics.

<sup>&</sup>lt;sup>35</sup> Only Jessica Hagen-Zanker & Florian Tomini conducted the qualitative interviews. All households questioned by them were asked whether they would be willing to also participate in an open-ended interview that was to be recorded, but not all households agreed. The qualitative interviews were thus based on a sub-section of the main sample.

<sup>&</sup>lt;sup>36</sup> 1997 was chosen both as a chronological milestone and because the turmoil that followed the collapse of the financial pyramids led to an increase in numbers of especially poor migrants to peri-urban areas of large cities.

<sup>&</sup>lt;sup>37</sup> Recalling transfers in the past is tricky at best. Therefore to enable recall, we asked households to give us transfer patterns for a memorable year in the past, either 1990 if the household moved before 1997 or 1997 if the household moved after 1997. 1997 is memorable because of the pyramid savings scheme crisis and 1991 is memorable because it is the year that the Communist system collapsed.

Area	5 Maji	BATHORE	SELITE	SENATORIUM	TOTAL
Age household head (in years)	53.53	49.6	50	52.75	50.93
Education household head (in years)	11.37	10.4	10.93	11.65	10.92
Household head Muslim	0.74*	0.89	0.89	0.90	0.87
Household head Coastal origin	0.05	0.02*	0.25***	0.00	0.08
Household head Central origin	0.63**	0.09***	0.61***	0.45	0.38
Household head North Central origin	0.11	0.22**	0.04*	0.10	0.13
Household head Mountain origin	0.21*	0.67***	0.11***	0.45	0.41
Household is extended family <sup>1</sup>	0.21	0.33**	0.11*	0.15	0.22
Household arrived before 1997	0.37	0.49	0.32	0.45	0.42
Number of household members	4.74	5.87***	4.32**	4.35	5.02
Number of observations	19	45	28	20	112
Income/capita (in Albanian Leks) <sup>2</sup>	16872.81	8049.93***	20053.09***	14325.00	13764.94
NUMBER OF OBSERVATIONS	19	42	27	20	108

 Table 5.1 Household characteristics in the sampled areas

<sup>1</sup>-Nuclear households are defined here as households including only parents and their children, while extended households include parents, children and other family members.

 $^{2}$  – The exchange rate of Euros to Albanian Leks to is 1:0.007

Stars indicate whether the mean for each group is significantly different from the total mean (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%)

Household heads are on average 51 years old and have on average 11 years of education however there are no significant differences between areas. Most household heads are Muslim, but significantly fewer in 5 Maji, a more recent peri-urban area. The data show that household from Coastal origins are significantly strongly represented in Selite, and household from Central origins in 5 Maji and Selite. Both are underrepresented in Bathore, where household are significantly more likely to come from North Central and especially the mountain areas. Most households interviewed are nuclear families (including only parents and their children), but households in Bathore are significantly more likely to live in extended families (including parents, children and other family members). Consequently they also have significantly more family members per household. Households in Bathore have the significantly lowest income per capita and households in Selite are significantly richer. More households arrived before 1997 in Bathore and Senatorium (these were the areas that were first settled), but the difference is not significant.

The survey collects information also on the level of individual kin members and friends the household exchanges with. Kin members are classed into broad categories (parents/parents in law, children, siblings, and more distant relatives) and households are asked whether they have received transfers from these kin. Not all kin the household named, and that was selected, exchanged transfers with the household, as can be seen in Table A5.1 in the appendixes.<sup>38</sup> Specific questions are asked on the receipt of transfers for the past 12 months and for the situation before migration took place. Three types of transfers are analysed: Financial transfers, goods and services.

Table 5.2 compares the incidences of receiving transfers by different kinds of kin and friends.

<sup>&</sup>lt;sup>38</sup> Furthermore these questions were not always completed even for the selected relatives.

TYPE OF KIN THE HH RECEIVES TRANSFERS FROM	PARENTS & PARENTS IN LAW	CHILDREN	SIBLINGS	RELATIVES	Friends	TOTAL
Hh received financial transfer before migration	0.09	0.19**	0.11	0.11	0.13	0.11
Hh received financial transfer in past 12 months	0.19	0.07***	0.18	0.16	0.19	0.17
Hh received goods before migration	0.21	0.26	0.21	0.21	0.33**	0.22
Hh received goods in past 12 months	0.33	0.25	0.27	0.28	0.26	0.28
Hh received services before migration	0.3	0.44**	0.31	0.29	0.4	0.31
Hh received services in past 12 months	0.31	0.19*	0.28	0.25	0.27	0.27
NUMBER OF OBSERVATIONS	71-86	22-34	196-216	107-126	24-106	1064

Table 5.2 Transfer incidences from family and friends

Note: Number of observations varies by type of transfer and period (before or after migration). Stars indicate whether the mean for each group is significantly different from the total mean (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%)

Households were more likely to receive money from their children than from other relatives before migration. Almost 19 per cent of households have reported financial transfers from their children before migration. This has changed after migration. Only 7 per cent of households have reported financial transfers from children in the last 12 months. This can not only be due to children growing up, since households were also significantly more likely to receive money from their children before the move and since the survey also included quite a varied age range of household heads. Households are also significantly more likely to have received services from their children before the move, whereas the data show the opposite pattern in the past 12 months.<sup>39</sup> In the past, the households were significantly more likely to receive more financial transfers from friends, compared to other relatives (not significant). So far, the descriptive statistics do not show a clear network change or change in the transfer mix.

Table 5.3 below shows the transfer frequency from different types of kin. There are no significant differences in the frequency of financial transfers received from different kin members (except for services) for both before and after migration. It is noteworthy however that the average number of financial transfers has increased from 0.34 to 0.6 transfers received per relative. There are also no significant differences for good transfers. However, it is interesting that the average good transfer received from children after migration (2.56 goods per child) is much higher than before (0.7).

The table shows that other relatives are the least important givers of services both before and after migration. Before migration households received significantly more services from siblings and after migration households received significantly more services from parents and children. While services remain by far the most frequent transfer

<sup>&</sup>lt;sup>39</sup> Relatives that were part of the same household before migration are omitted in the analysis so that the extremely high transfers that tend to be exchanged within the same household do not bias our results.

received, a lower average number of services are exchanged after migration (6.65 down from 9.11 services per relative).

TYPE OF KIN THE HH RECEIVES TRANSFERS FROM	PARENTS & PARENTS IN LAW	CHILDREN	SIBLINGS	RELATIVES	FRIENDS	TOTAL
Frequency financial transfer before migration	0.29	0	0.25	0.66	0.04	0.34
Frequency financial transfer in past 12 months	0.5	0.17	0.68	0.42	0.92	0.6
Frequency goods transfer before migration	3.26	0.7	3.5	2.18	2.36	2.89
Frequency goods transfer in past 12 months	3.16	2.56	2.39	1.62	1.26	2.18
Frequency services transfer from before migration	11.26	14.38	10.88*	4.79***	7.93	9.11
Frequency services transfer in past 12 months	8.81*	12.89***	7.08	3.35***	6.73	6.65
NUMBER OF OBSERVATIONS	61-151	18-54	182-407	110-235	25-132	397-987

Table 5.3 Transfer frequency from different types of kin

Note: Number of observations varies by type of transfer and period (before or after migration). Stars indicate whether the mean for each group is significantly different from the total mean (\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%)

# 5.4 Methodology

The aim here is to test the determinants of inter-household transfers and also analyse the impact of migration on transfer patterns. For this the analysis considers the frequency of receiving monetary, goods, and services before migration and in the last 12 months before the survey was administered (therefore after migration)<sup>40</sup>.

The data from before and after migration were pooled, accounting for when the transfer takes place with the migration dummy. To achieve perfect comparability the analyses uses the same variables for before and after migration. When applicable, the variable is adjusted to the period before migration (e.g. age, number of children etc.).

As the transfers occur within a defined limit of time, and the probabilities of consecutive transfers are not dependent on each other, it is assumed that the distribution of transfers' frequencies follows the Poisson distribution. Consequently, the count rate would be calculated as:

$$\mu_i = E(y_i) = \exp(x_i\beta)$$

(5.1)

<sup>&</sup>lt;sup>40</sup> This analysis considers only the receipt of monetary, goods, or service transfers as the primarily interest is in the household factors driving such transfers both before and after migration, and the survey focuses primarily on the characteristics of the interviewed migrant households (less information is collected on the selected relatives). The analysis of transfers given from the migrating households, reproduced in Table 9 of Annex 4, gives similar results, indicating that giving and receiving follow the same patterns after migration.

where,  $\mu_i$  is the expected value of the model dependent on a vectors of covariates,  $\beta$  is a vector of estimated coefficients, and  $x_i$  includes characteristics of receiving household and sending family member or friend. The probability of observing a specific count is:

$$\Pr(Y_i = y_i) = \frac{e^{-\mu_i} \mu_i^{y_i}}{y_i!}, \qquad y = 1, 2, 3, \dots n$$
(5.2)

where, for the  $i^{th}$  count,  $y_i$  is the count.

However, the data show some particularities that do not satisfy this distribution. The over-dispersion in outcome variables is present (variance is greater than mean), and also an expected excess of "zero" values. This excess may be the result of two main reasons:

Random heterogeneity in frequencies of received transfers. In other words, households 'face' the same probability of receiving zero or any other frequency of transfers, but some households receive more zero or 'low count' transfers, and others receive more 'high count' transfers due to idiosyncratic factors or a random bias.

Some households are systematically not receiving transfers because of their characteristics. For example, respondents may have had limited contact with their relatives or friends in the last 12 months before the move.

The standard Poisson model therefore does not satisfy the features of the data. In order to investigate what drives the over-dispersion in the data, different count models were extensively compared. The results of the "negative binomial regression model" (NBRM) were compared to the "zero inflated Poisson" (ZIP) and "zero inflated negative binomial regression" (ZINBR) which use a two stage approach. In the first stage zero and non-zero outcomes are modelled, and in the second stage the remaining counts are modelled according to the standard Poisson (ZIP) or to the negative binomial (ZINBR). Technical details of both these models are discussed in Appendix 1.

First the predicted values of NBRM, ZIP and ZINBR models are calculated and compared (see also section 5.9.1 in the appendixes). Further tests, partially reproduced in section 5.9.1, confirm that a simple Poisson model is inappropriate in this context, having far less accurate predictions than the other models discussed. For all types of transfers, the ZIP model performs better than the standard Poisson, but the predictions are less accurate than NBRM and ZINB. This indicates that transfers "suffer" mostly from an idiosyncratic and random bias rather than inflated zeros. In fact, NBRM and ZINB perform similarly in predicting the probability of counts, providing less evidence on the 'inflated zero' distortion. The chapter therefore discusses the results of NBRM as the model that explains the hidden heterogeneity in the transfers' counts best. For comparative purposes, the results for all combined transfers using NBRM and ZINB are reproduced in Table A5.5 in the appendixes. In fact the results from ZINB regressions for separate transfers are very

close to the NBRM results.<sup>41</sup> The NBRM accounts for heterogeneity among count outcomes. The predicted count probability is:

$$\Pr(Y = y_i) = \frac{\Gamma(y_i + \phi)}{\Gamma(\phi)y_i!} \left(\frac{\phi}{\mu_i + \phi}\right)^{\phi} \left(\frac{\mu}{\mu_i + \phi}\right)^{y_i}, \qquad y = 1, 2, 3, \dots n$$
(5.3)

where, the variance in the predicted counts is increased through a parameter  $\phi^{-1}$  accounting for the suspected (over)dispersion (see also Freese and Long, 2001).

NBRM models were estimated separately in order to check how the support from different members of the network has changed before and after migration. Differences between coefficients are then checked for significance using seemingly unrelated estimation (see also Weesie, 2000).

While the range of control variables included is quite diverse, the survey does not provide information on household income or wealth in the past. These kind of economic indicators are important in explaining differences in transfer patterns, therefore separate models have controlled for them using the present income as a proxy for past incomes. The results are given in Table A5.4.

## 5.5 Empirical Results

The study uses two types of analyses in order to answer whether transfer patterns between extended family members have changed as a result of the move. This section presents first the analysis of the open-ended qualitative interviews drawing some first conclusions from respondents' opinions. The analysis of quantitative data using econometric tools is also discussed in the second part and results are compared to the hypotheses and conclusions from the qualitative analysis.

#### 5.5.1 Qualitative analysis

The open-ended questions are first coded into groups with similar responses for the 19 open-ended questions that were asked. I count how often respondents answered in a similar way and draw conclusions here based on the frequency of certain answers. Annex 2 gives an overview of the questions asked, coding and number of observations for each type of response.

Even if families are separated by physical distance, many claim that their relationship was not negatively affected by this. Many of the interviewed households claimed that they meet their families more frequently than before (8 households). Half of the interviewed households (13) also claimed that their relationship to other family members did not change, with about the same number of households citing an improvement or a worsening of their relationships. While some families talked about relationships and lives having

<sup>&</sup>lt;sup>41</sup> The results of estimated ZINB models show, as we suspected (see reasons explained in the methodology section), that we may have some additional zeros added because of not being in the same district or because of having an extended family. However, the improvement to the overall predicted values is not essential and statistical tests show that both models are comparable. ZINB results for monetary, goods and service transfers are available on request from authors.

become more distant and separate, other respondent explain how the separation itself has made them closer:

"My father often goes to visit them. He has a lot of nostalgia."

"Yes my relationship with them didn't change. The distance can't change the affection we have for each other."

Many households also feel much closer to their families because they shared the experience of moving. Most families moved together with their nuclear, extended family or even the whole village (10 households say this explicitly). This means that their whole solidarity network is replicated in the city. For example one household head explained:

"All our neighbours are blood-related; it's the same big family... All our neighbours here were neighbours there."

Another household told a similar story:

"The village of K., around 16 houses, has moved together to this place. The entire block belongs to the S. family.... The strongest relations we keep with our neighbourhood, the S. families. We are all brothers or cousins up to the fourth degree. We have very good relations."

There are about an equal number of households that claim that they have more/ fewer friends or contacts with neighbours. Many households are thus still exchanging with the same people.

While family relationships thus often remained close, the type of transfers exchanged between household members changed. Despite the high unemployment which almost all respondents name as their greatest problem, in general households benefited financially from the move (see also Hagen-Zanker & Azzarri, 2008). The financial transfers are becoming more important. This allows them to give and receive more financial transfers (3 out of 5 households say they receive more financial transfers). At the same time less help is needed, than in an agricultural setting (4 out of 5 households say that they receive less services). Many respondents pointed out this shift from services to financial transfers:

"To be realistic, if I would have to help everyone I would have to give up my day of work, so the help is more limited to monetary terms and not physical anymore."

"At that time you needed some help to work the land. Now you need more financial help."

"Yes with money now and in the past with work."

One respondent even declared that financial solidarity replaces social solidarity to some extent:

"Economic relations are better now. Affective relationships are less good. When you get a bit richer you grow apart a bit."

The exchange of goods remains in between financial and service transfers. The statements confirm that certain kinds of good transfers, i.e. food products, have become

less important. This is because households now grow and collect less food than in rural areas and are therefore less able to give food products, as these respondents explain:

"Here we buy all things in shops. There is no reason to ask your neighbour for something because the shop is there. Before it was different, we exchanged more goods."

"We help each other less because now we don't own agricultural land, so we have fewer products to help each other."

"Yes, there [referring to village of origin] the people can help more than here because they have cows, grow vegetables etc."

Even though migration seem to have some small effects on the relatives that households choose to exchange transfer with, a preference for known relatives remain mostly unchallenged. Furthermore financial transfers are now more important than in the past.

#### 5.5.2 Econometric results

Table 5.4 below gives the results from the NBRM for financial, goods and services received. Table A5.5 in the appendixes gives the regression results for all transfers combined. The data from before and after migration are pooled, accounting for when the transfer takes place with the migration dummy. To achieve this, the study uses the same variables for both before and after migration.

The tests at the bottom of Table 5.4 (and in Table A5.4 and A5.6) measure whether the NBRM model is the appropriate model to use in this context. The results in Figure A5.3 show what the actual and predicted mean count for all transfers is for each of the models and the difference (how much the prediction diverges from the actual count). The Pearson test is a chi-squared test of independence and also indicates how close the predicted count is to the actual count. The tests show that generally the NBRM model is one of the models predicting the best results. In Table 5.4, the likelihood ratio Chibar squared statistic allows us to see if the NBRM should be used instead of standard Poisson. The very low values of the probability suggest over-dispersion, and therefore the use of NBRM is appropriate.

The variable of interest "transfer after migration", which is a dummy variable ("0" for the transfers before migration, and "1" for the transfers after), is highly significant for all transfers combined (see Table A5.5) and the separate transfers. This shows that all types of transfers have changed significantly after migration. The paragraphs below discuss the different types of transfers.

For receiving financial transfers, the variable of interest "transfer after migration" has a strong significant effect, indicating that financial transfers have become more frequent after migration and confirming the qualitative analysis and Hypothesis 1. This means that for a given transfer partner and all other parameters being equal, financial transfers are received 0.3 more frequently by an average household after migration.<sup>42</sup>

<sup>&</sup>lt;sup>42</sup> Marginal effects are not reproduced here and can be requested from the authors.

#### CHAPTER 5

#### Table 5.4 Frequency of the receiving transfers: Results from NBRM

	FINANCIAL	TRANSFERS	GOOD TR.	ANSFERS	SERVICE TR	ANSFERS
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Main regression						
TRANSFER AFTER MIGRATION	1.01***	0.32	-1.08***	0.26	-1.00***	0.28
Relative parent	0.05	0.61	1.28**	0.54	-1.09*	0.6
Relative child	-0.51	0.86	2.10***	0.64	0.48	0.67
Relative sibling	0.25	0.41	0.73*	0.37	-0.81*	0.42
Relative other	-0.26	0.47	0.02	0.38	-1.83***	0.45
Friends						
Age hh head (now/ before migration)	-0.03**	0.01	-0.02*	0.01	-0.01	0.01
Gender hh head (female)	1.35**	0.64	-0.91	0.64	-0.27	0.82
Education years hh head	-0.04	0.06	0.08**	0.03	0.08*	0.05
Hh head's religion Muslim	1.00*	0.52	0.99**	0.43	0.28	0.48
Hh head's religion Catholic, orthodox, or						
other						
Hh head's origin Central	-0.65	0.54	0.5	0.44	0.91*	0.5
Hh head's origin North-Central	-0.24	0.61	0.32	0.53	0.57	0.58
Hh head's origin Mountain	-0.73	0.54	-0.5	0.47	0.25	0.51
(Hh head's origin Coast)						
Hh extended family (now/ before	0.27	0.20	0.40**	0.27	0 (1**	0.20
migration)	0.37	0.29	-0.60**	0.27	-0.61**	0.28
Number of children hh (now/ before	0.15	0.15	0.07	0.13	0.25***	0.12
migration)	-0.15	0.15	-0.06	0.12	0.35***	0.13
Years since migration	-0.06*	0.04	0.05**	0.02	0.01	0.03
Age relative/ friend (now/ before	0.02	0.01	0	0.01	0.01	0.01
migration)	0.02	0.01	0	0.01	-0.01	0.01
Gender relative/ friend	-1.30***	0.29	-0.06	0.26	0.34	0.27
Education years relative/ friend	0.07	0.05	0	0.04	-0.09**	0.04
Hh & relative/ friend same religion	-0.58	0.58	0.13	0.52	-0.37	0.65
Hh & relative/ friend live in same	1 1 5***	0.22	0.26	0.20	1 1 7***	0.20
district (now/ before migration)	1.15***	0.32	0.26	0.29	1.17***	0.29
Constant	-2.19	1.66	0.25	1.33	2.84*	1.51
Ln alpha	2.18***	0.13	2.16***	0.08	2.36***	0.07
Number of observations	88	2	88	0	872	7
Log pseudo likelihood	-613.47		-1564.72		-1128.67	
P- value Chi <sup>2</sup>	0.0	0	0.00		0.0	0
Pseudo R <sup>2</sup>	0.0628		0.0198		0.0323	
LR Chibar <sup>2</sup>	1276	.72	1500	.00	6017	.65
P-value Chibar <sup>2</sup>	0.0	0	0.0	0	0.0	0

Note: Frequency of transfers refers to the number of times the transfer has been received in the past 12 months/ before migration. Reference categories are in brackets. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Figure 5.2.a shows the predicted frequencies of financial transfers by age, for those transfers before and for those transfers after migration. The figure confirms that financial transfers are more frequent after migration, at all ages. The difference is especially large for younger household heads, which seem to be getting more frequent financial transfers on average.

The dummy variables for the relatives show that friends give money more frequently than parents, children, or other relatives, but less frequently than siblings. However, this effect is not significant for any of the relatives.

The other dummy variable, "gender of household head", has a positive effect on the transfers received (female headed households receive more frequently) and "gender of

relative" has a negative effect (women relatives gives less frequently). This does not necessarily show that women tend to give less frequently, but rather that transfers may be explained by the particular situation of the households. Most of the female headed households happen to be in financial difficulties either because of the loss of the main breadwinner (e.g. widow headed households) or are in vulnerable situation due to the informal and unstable labour market.<sup>43</sup> Households that moved before 1997 seem to receive monetary transfers less frequently than others. This can be explained by the "relative success" that these households have in financial terms due to more stable and better paid jobs (see Hagen-Zanker & Azzarri, 2008). Most other control variables are significant and the coefficients have the expected signs.



Figure 5.2 Predicted frequency of receiving transfers by age, for transfers before and after migration

Source: Own compilation

Coming to goods, the variable of interest "transfer after migration" is highly significant and negative. More specifically, for a given transfer partner and all other parameters being equal, an average household after migration receives 1.9 less frequent good transfers. Based on the informal interviews it appears that this pattern is driven by changes in the nature of goods that are exchanged. Before migration, the goods that were exchanged consisted mainly of food and agricultural products, which are exchanged

<sup>&</sup>lt;sup>43</sup> Albanian society preserves patriarchal norms where the men are always declared as the head of the household, and therefore male headed households make up for most of our sample.

repeatedly. After migration, food is exchanged less frequently as people grow less of it in peri-urban areas. However, people now exchange gifts on special occasions, like birthdays, maybe due to changing cultural practices and more financial wealth from migration. These kinds of transfers take place non-frequently. Figure 5.2.b shows the predicted frequency of good transfers by age, for those transfers before and for those transfers after migration. The figure shows very clearly that good transfers are lower at all ages after migration. Interestingly, the difference in the predicted frequency between before and after migration is lower for older household heads.

Looking at the relatives that give goods to the household it can be noticed that family relatives are generally more important givers of goods than friends (not significant for "Relative other"). The variable "Education years of household head" has a positive and significant effect showing that the most educated (and therefore those with higher chance of success in the labour market) receive goods from their kin members more frequently. Extended family households receive goods less frequently since they have stronger links with persons within their own household (the survey only measures inter-households transfers).

Finally, for service transfers, the main variable of interest "transfer after migration" is strongly significant and negative. This means that for a given transfer partner and all other parameters being equal, there are 5.2 fewer service transfers received by a given household after migration. The results that less goods and services and more financial transfers are received by households confirm Hypothesis 1. These results are not surprising given our qualitative interviews: Relatives that are often also internal or international migrants are now much more able to give financially due to better-paid employment and have less time to spend on other transfers (such as services) due to increased distances and a different employment structure.

Figure 5.2.c shows the predicted frequency of service transfers by age, for those transfers before and for those transfers after migration. It shows clearly that service transfers were higher before migration, at all ages. A slight decrease is observed in the difference between "transfers before migration" and "transfer after migration" at higher ages, but to a much lesser extent than for financial transfers and goods. This might be explained by the fact that service transfers are probably much less affected by behavioural changes and that living close by (which are controled for in the regression) affects the transfer of services much more.

Coming to relatives, again it can be observed that all relatives (except children) are significantly less important than friends in terms of frequency of service transfers. Again this is suspected to be a consequence of migration and it is confirmed by running models separately for before and after migration (see discussion below). Education of the household head again has a positive effect on frequency of services (confirming the same trend noticed for the goods). The number of children also has a positive effect suggesting that most of services exchanged are also related to child minding activities. As expected, living in the same district has a strong positive effect. This confirms previous studies (e.g. Mulder & van der Meer, 2009) that highlight the importance of geographical proximity for

receiving service support. The other variables have the expected signs and are generally significant.

Of course transfers are not mutually exclusive; therefore a new NBRM regression estimates the probability of having a certain frequency of transfers by including the combination of transfers.<sup>44</sup> The results are included in Table A5.5 in the appendixes and strongly confirm the previous findings. The increased monetary transfers after migration have been associated with the decrease in goods and services and therefore the overall effect of migration is the decline in the combination of transfers (Figure 5.2.d). This is an interesting result. Apart from the above arguments explaining the decline of both goods and services, this is also attributed to the increasing value placed on individuality and independence after migration, a comment that was often brought up by respondents in the qualitative interview stage.

Friends transfer more frequently than parents, siblings (not significant) or other relatives, but less than children. Migration may have played a role in this (see Hypothesis 2), and therefore this aspect is investigated further.

Table 5.5 gives differences in coefficients for relatives as compared to friends estimated in separate NBRMs for before and after migration and measures whether this difference is significant.<sup>45</sup> Control variables used are the same as in Table 5.4.

Transfers from siblings and more distant relatives have become relatively less important (negative and significant difference in coefficients) after migration, if compared to friends. The same holds for parents (though difference is not significant). However, transfers from children have not declined in frequency, even though this result has to be treated with caution as children have a low number of non-zero observations (see Table A5.4 in the appendixes).

The results are further confirmed for transfers of goods, where the positive and significant difference of coefficients for children shows that they are transferring more frequently after migration. On the other hand, part of the role of transfers from other members of kinship is superseded by transfers from friends (however, results are not significant).

The same trend is also confirmed for service transfers where most of the differences in coefficients for the family members are significant (not significant only for transfers from children). The effects are stronger for these transfers given their particular characteristics (physical distance is essential in delivering frequent services to relatives).

Generally, all the above results confirm that after migration transfers have shifted towards particular members of kinship or friends. Transfers from children and friends become increasingly important after migration, especially for services, while the effects are not always significant but consistent. The findings indicate that some change in the network takes place after migration, thus confirming Hypothesis 2.

<sup>&</sup>lt;sup>44</sup> The frequencies of separate transfers (financial, goods and services) are summed to calculate the total number of transfers received.

<sup>&</sup>lt;sup>45</sup> The results are estimated using "seemingly unrelated estimation" procedure (Weesie, 2000).

	F T	INANCIA RANSFEI	AL RS	Goo	DD TRANS	FERS	Serv	ICE TRAN	ISFERS	AL	L TRANSFI COMBINEI	ERS D
	Before migr.	After migr.	Diff. (after - before)	Before migr.	After migr.	Diff. (after - before)	Before migr.	After migr.	Diff. (after - before)	Before migr.	After migr.	Diff. (after - before)
Parent	2.67	1.41	-1.26	2.02	0.94	-1.08	1.02	-1.23	-2.25**	1.26	-0.17	-1.43
Child	-15.15	-0.6	14.55***	0.16	2.75	2.59**	1.25	1.13	-0.12	1.24	1.23	-0.01
Sibling	3.29	0.52	-2.77***	1.15	0.25	-0.9	0.96	-0.94	-1.9***	1.06	-0.51	-1.57***
Other	2.32	-1.11	-3.43***	-0.45	-0.2	0.25	-0.56	-2.13	-1.57**	-0.41	-1.44	-1.03
(Friends) (Other variables	(+)	(+)		(+)	(+)		(+)	(+)		(+)	(+)	
included)*	1.02	0.41	7 20**	1 4 4	0.24	1 70	2.27	1.2	2.07	2 01	0.02	1.00
Constant	-1.03	-8.41	-7.38**	-1.44	0.34	1./8	3.37	1.3	-2.07	2.91	0.92	-1.99
Ln alpha	1.73***	1.92***		2.28***	1.72***		2.21***	2.36***		1.86***	1.52***	
Ν	340	542		345	535		346	531		356	524	
Log- likelihood	-167	-416		-484	-610		-731	-820		-860	-1188	
P-value Chi2	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
Pseudo R2	0.1490	0.0863		0.0352	0.0726		0.0184	0.0316		0.0208	0.0351	

**Table 5.5** Frequency of receiving transfers before or after migration: Results from NBRM and tests of differences in coefficients

Note: Frequency of transfers refers to the number of times the transfer has been received in the past 12 months or 12 past months before migration. The dummy for transfers from friends is the reference category for transfers received from all other family members. All other control variables included are the same as in Table 5.4 (The variable "Transfer after migration" does not apply here). \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

An additional explanatory variable that is likely to affect transfers received is income or wealth of the household. As explained above, this control variable is not included in the main model, as household's income before internal migration is not reported. However, to measure the effect of income and to safeguard that the results are not strongly affected by this omission, the models control for wealth by using current per capita income (see Table 5.4 in the appendixes). First, the signs, statistical significance and size of the noteworthy regressors are not affected much by controlling for income. This strengthens the previous results. Second, income has the expected negative effect on financial, goods and services transfers received (but not significant), which shows that the better off households receive fewer transfers.

# 5.6 Conclusions

This analysis in this chapter is based on a unique survey amongst internal migrant households in peri-urban Tirana, Albania conducted in April 2008. Internal migration to peri-urban areas of major cities is a wide-spread phenomenon in the country. This movement is often characterized by whole family relocation. The analysis has been focused particularly on the change of patterns of transfers and the reliance on family members after relocation through internal migration. For this, three main transfers are considered, i.e. financial transfers, goods, and services. The changes in receiving patterns both at the current moment and before migration are investigated separately for all these transfers. By exploiting both a quantitative survey and additional qualitative interviews, the analysis showed that the combination of transfers that households receive has changed after migration, shifting towards more frequent financial transfers (hypothesis 1) and also changing the composition of the family network on which the migrants rely upon (hypothesis 2).

The first hypothesis relates to the effect of migration on the receiving of different transfers, looking at the intensity of receiving a certain transfer. Financial transfers seemed to be more frequent after migration, indicating that households received financial transfers more frequently after migrating. While the effect was positive and significant, its marginal effect was smaller than for other types of transfers. On average, households received 0.3 financial transfers more after migration from a given relative (ceteris paribus). The shift towards financial transfers seems logical: After migration households are more in the need of financial transfers than before. Previous studies (e.g. Hagen-Zanker and Azzarri 2008; Cila 2006) confirm that unemployment is high amongst internal migrant households and that living costs have increased compared to living in rural areas (e.g. having to pay for water). Living in these highly populated and informal peri-urban areas where the role of the state is weaker and poverty rates are higher than the inner city (Zezza et al., 2005), increases vulnerability and dependency of households on private financial transfers from family and friends. While one of the migration effects is expected to be improvement of financial inflow, the higher vulnerability of these households may explain why financial transfers were received more frequently after migration.

The change in frequency of transfers of goods received after migration is also interesting. The frequency of receiving goods has decreased after migration, and households received 1.9 transfers of goods less on average from a given family member (ceteris paribus). This is a big drop in goods received and based on the qualitative interviews it appears that this pattern is driven by changes in the nature of goods that are exchanged. Before migration, goods exchanged were mainly food and agricultural products, which are exchanged repeatedly. After migration, food is exchanged less frequently as people grow less of it in peri-urban areas. However, they exchange gifts on special occasions, like birthdays, more often, maybe due to changing cultural practices and more financial wealth from migration. These kinds of transfers take place non-frequently.

Finally, the results show that households received service transfers less often after migration. On average a household received a service 5.2 times fewer services from a given relative (ceteris paribus). This is logical, as services require proximity of transaction partners and migration is likely to have split some of the family networks. This is reinforced by the result that service transfers are more likely and frequent, if the household and kinship member live in the same district. Furthermore households and kinship members that have also migrated internally are probably less able to give services due to lack of time, brought about by volatile employment and more time spent on job search.

The second hypothesis focused on the shift of transfers between family members and friends. When examining all transfers combined, the results showed that after migration the role of transfers received from family members had decreased if compared to transfers from friends. With the exception of children, transfers from friends were the only one increasing in relative terms to transfers from all other family members. This is somewhat surprising given the qualitative analysis, which revealed that the whole extended family networks and even villages moved together, and which also showed that households had a very conservative attitude towards strangers. Transfers from friends rise in importance compared to those from parents, siblings and other relatives, but the effect is not always significant. The results show that to some extent friends supersede siblings for financial transfers, and both siblings and other distant relatives for services. This may be related to the nature of such transfers. Financial transfers are less personal, which may explain the rising importance of friends in providing these transfers, despite the conservative nature of internal migrant households. On the other hand, distance is an essential condition determining the frequency of service transfers. In conclusion, the analysis evidences some changes in the family network households rely on, but no complete transformation. The increasing support from friends and the decreasing support from sibling or more distant families indicates that individuals may substitute some of the transfers received by relatives for transfers from friends. However, our results show that friends can not substitute for closer relatives (i.e. children and parents). This is consistent with earlier results of the analysis in this thesis (see also Chapter 3).

The above conclusions are drawn on a small-scale household survey in a very specific context. Whether the results on the continuing reliance on family members are generally applicable is yet to be proved. In the Albanian case, whole families and even villages relocated permanently. Due to the specific nature of Albanian internal migration and the conservative nature of the migrants, transfer networks stayed closely integrated. This is very different in other internal migration contexts (e.g. China, where only one family members moves). Different patterns of migration are likely to affect the continuation and strength of pre-migration networks.

The other main conclusion, the shift to financial transfers after migration is probably even more pronounced in other migration contexts. Migration makes family members more physically distant, and thus less able to exchange goods and services. Furthermore migration towards (better) paid employment allows people to exchange more financial transfers.

The continuing and high levels of private support to migrant households are valuable in a transition context, where poverty is wide-spread and state support is low. The findings suggest that in absence of public mechanisms, migrant households resort to private transfers for financial resources. This chapter has shown that both receiving and giving financial transfers increase after internal migration. However, it is questionable whether these financial resources are an adequate and sustainable source. Moreover, the findings have shown that services and goods transfers received by households decrease after migration. The government should have a stronger role in replacing such family support, for example by providing public social services for such households.

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# 5.8 Annexes: ZIP and ZINB models

The first stage of both the ZIP and ZINB model determines whether the count is zero/non-zero, and the second stage is used to model the actual magnitude of the count. The final outcome therefore is determined by two separate probabilities as below:

$$\Pr(Y_i = y_i) = \pi_i f_1(y_i) + (1 - \pi_i) f_2(y_i) \qquad i = 1, 2, 3, ... n$$
(5.4)

where,  $\pi_i$  is the probability of a zero count in the transfer/non-transfer model,  $f_1(y_i) = I_{\{0\}}(y_i)$  and  $f_2(y_i)$  is the probability density function of the Poisson distribution (as in equation 2). Given this, the probability of observing a certain count using a zero inflated model would be:

ZIP: 
$$\Pr(Y_i = y_i) = \begin{cases} \pi_i + (1 - \pi_i)(\exp(-\mu_i)) & \text{for } .y_i = 0\\ (1 - \pi_i) \frac{\exp(-\mu_i)_i^{y_i}}{y_i!} & \text{for } .y_i > 0 \end{cases}$$
 (5.5)

**ZINBR:** 
$$\Pr(Y_i = y_i) = \begin{cases} \pi_i + (1 - \pi_i) \left(\frac{\phi}{\mu_i + \phi}\right)^{\phi} & \text{for.} y_i = 0\\ (1 - \pi_i) \frac{\Gamma(y_i + \phi)}{\Gamma(\phi) y_i!} \left(\frac{\phi}{\mu_i + \phi}\right)^{\phi} \left(\frac{\mu}{\mu_i + \phi}\right)^{y_i} & \text{for.} y_i > 0 \end{cases}$$
 (5.6)

where,  $\mu_i$  is again the expected value of the model  $(\log(\mu_i) = x_i'\beta)$ , while  $\pi_i$  is also dependent on covariates determining the overrepresentation of 'zero/non-zero' values  $(\log it(\pi_i) = z_i'\psi)$ . Similar control variables are used both for the 'inflation' and the outcome probability models as this helps in identifying the possible roles of variables explaining the earlier 'inflation' model.

# 5.9 Appendixes

# 5.9.1 Descriptive statistics

Table A5.1 Transfers received before and after migration

	BEFORE MIGRATION (LAST 12			AFTER MIGRATION (LAST 12 MONTHS			
	MON	THS IN 199	1 OR 1997)	FRC	OM THE INTE	RVIEW)	
	No	Yes	% yes/ total	No	Yes	% yes/ total	
FINANCIAL TRANSFERS							
Parents & parents in law	46	5	9.80%	70	15	17.65%	
Children	10	0	0.00%	30	4	11.76%	
Siblings	130	33	20.25%	170	45	20.93%	
Relatives	99	9	8.33%	110	14	11.29%	
Friends	26	1	3.70%	84	20	19.23%	
Total	311	48	359	464	98	562	
% no(yes)/ total	87%	13%	100%	83%	17%	100%	
GOOD TRANSFERS							
Parents & parents in law	37	15	28.85%	52	33	38.82%	
Children	7	3	30.00%	20	14	41.18%	
Siblings	117	49	29.52%	150	61	28.91%	
Relatives	92	17	15.60%	104	20	16.13%	
Friends	17	8	32.00%	79	25	24.04%	
Total	270	92	362	405	153	558	
SERVICE TRANSFERS							
Parents & parents in law	33	20	37.74%	54	30	35.71%	
Children	4	6	60.00%	21	13	38.24%	
Siblings	98	66	40.24%	156	58	27.10%	
Relatives	86	23	21.10%	109	15	12.10%	
Friends	17	10	37.04%	69	35	33.65%	
Total	238	125	363	409	151	560	

# **Table A5.2** Codified results from the qualitative interviews

|--|

APPROXIMATE RESPONSE	NUMBER OF OBSERVATIONS
More frequent	8
Less frequent	6

Question H4.1 How did the move to Tirana change your relations with other people (including family

APPROXIMATE RESPONSE	NUMBER OF
	OBSERVATIONS
Feel closer	7
Feel same	13
More distant	6
Family moved as well	10
(physically closer)	10

APPROXIMATE RESPONSE	NUMBER OF OBSERVATIONS
(Interact) more with friends	5
Same	4
Less	6

Question H4.4 Can you describe the kind of support you receive from others? How is this different to the past, before you moved?

APPROXIMATE RESPONSE	NUMBER OF			
	OBSERVATIONS			
Receive more support	6			
Receive same support	5			
Receive less support	5			
A PROVINCE TE DECRONCE	NUMBER OF			
APPROXIMATE RESPONSE	OBSERVATIONS			
More financial support	3			
Same financial support	0			
Less financial support	2			
	NUMBER OF			
APPROXIMATE RESPONSE	NUMBER OF OBSERVATIONS			
APPROXIMATE RESPONSE	NUMBER OF OBSERVATIONS 0			
APPROXIMATE RESPONSE More goods Same goods	NUMBER OF OBSERVATIONS 0 1			
APPROXIMATE RESPONSE More goods Same goods Less goods	NUMBER OF OBSERVATIONS 0 1 6			
APPROXIMATE RESPONSE More goods Same goods Less goods	NUMBER OF OBSERVATIONS 0 1 6			
APPROXIMATE RESPONSE More goods Same goods Less goods APPROXIMATE RESPONSE	NUMBER OF OBSERVATIONS 0 1 6 			
APPROXIMATE RESPONSE More goods Same goods Less goods APPROXIMATE RESPONSE	NUMBER OF OBSERVATIONS 0 1 6 			
APPROXIMATE RESPONSE More goods Same goods Less goods APPROXIMATE RESPONSE More services	NUMBER OF OBSERVATIONS 0 1 6 			
APPROXIMATE RESPONSE More goods Less goods APPROXIMATE RESPONSE More services Same services Same services	NUMBER OF OBSERVATIONS 0 1 6 			

## 5.9.2 Measures of fit between different count models

**Table A5.3** *Sum of predicted and actual mean count of the tested models for frequencies of all transfers* 

	ACTUAL MEAN COUNT	PREDICTED MEAN COUNT	DIFFERENCE	PEARSON
PRM	0.788	0.597	0.852	8959.342
NBRM	0.788	0.804	0.109	41.762
ZIP	0.788	0.614	0.234	4409.25
ZINB	0.788	0.801	0.105	41.056

Note: PRM stands for Poisson regression, NBRM stands for Negative Binomial regression, ZIP stands for Zero-Inflated Poisson regression and ZINB stands for Zero-Inflated Negative Binomial regression.

Figure A5.1 Residuals of the tested model for frequencies of all transfers



Note: PRM stands for Poisson regression, NBRM stands for Negative Binomial regression ZIP stands for Zero-Inflated Poisson regression, and ZINB stands for Zero-Inflated Negative Binomial regression.

# 5.9.3 Alternative specifications

	FINANCIAL TRANSFERS		GOOD TRANSFERS		SERVICE TRANSFERS	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Main regression						
Transfer after migration	0.97***	0.33	-1.28***	0.26	-1.04***	0.28
Relative parent	-0.05	0.62	1.35**	0.55	-1.08*	0.6
Relative child	-0.39	0.87	1.80***	0.67	0.48	0.68
Relative sibling	0.24	0.42	0.86**	0.38	-0.79*	0.42
Relative other	-0.32	0.47	0.05	0.39	-1.87***	0.45
Age hhh (now/ before migration)	-0.03**	0.01	-0.03**	0.01	-0.01	0.01
Gender hh head	1.30**	0.64	-0.97	0.64	-0.35	0.81
Education years hhh	-0.04	0.06	0.07**	0.03	0.08*	0.05
Income per capita- in logs	-0.08	0.17	-0.32*	0.17	-0.02	0.17
Hhh's religion Muslim	1.04**	0.52	0.78*	0.43	0.32	0.47
Hhh's origin Central	-0.64	0.54	0.17	0.44	1.00**	0.49
Hhh's origin North-Central	-0.24	0.61	-0.03	0.54	0.62	0.58
Hhh's origin Mountain	-0.7	0.57	-0.84*	0.5	0.36	0.52
Hh extended family (now/ before migration)	0.31	0.29	-0.52*	0.27	-0.69**	0.28
Number of children hh (now/ before migration)	-0.13	0.16	-0.07	0.13	0.36***	0.14
Hh moved before 1997	-0.07*	0.04	0.08***	0.03	-0.01	0.03
Age relative/ friend (now/ before migration)	0.02	0.01	0.00	0.01	-0.01	0.01
Gender relative/ friend	-1.29***	0.3	-0.18	0.26	0.39	0.27
Education years relative/ friend	0.07	0.05	0.02	0.04	-0.09**	0.04
Hh & relative/ friend same religion	-0.61	0.6	-0.03	0.54	-0.33	0.65
Hh & relative/ friend live in same district (now/ before migration)	1.18***	0.33	0.20	0.29	1.15***	0.29
Constant	-1.35	2.47	3.75	2.33	3.16	2.29
Ln alpha	2.16***	0.13	2.12***	0.09	2.30***	0.08
Number of observations	843		843		838	
Log pseudo likelihood	-602		-1073		-1539	
P- value Chi2	0.0	0	0.00		0.00	
Pseudo R2	0.0624		0.0356		0.0208	

<b>Table A5.4</b> Frequency of the receiving transfers:	Results from NB	RM including income
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Note: Frequency of transfers refers to the number of times the transfer has been received in the past 12 months/ before migration. "Transfer after migration" is a dummy variable that is one for the observations for the period after migration. Income is current income per capita, logged. Base for relatives (friends), religion (other religions), household origin (Coast). significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

	NBRM		ZIN	В
-	Coef.	s.e.	Coef.	s.e.
Main regression				
TRANSFER AFTER MIGRATION	-0.71***	0.2	-1.03***	0.22
Relative parent	-0.22	0.42	-0.01	0.41
Relative child	0.70	0.48	0.93**	0.46
Relative sibling	-0.36	0.3	-0.42	0.28
Relative other	-1.23***	0.31	-0.89***	0.34
Age hh head (now/ before migration)	-0.01	0.01	-0.02*	0.01
Education years hh head	0.18	0.51	0.39	0.5
Hh income/ per capita, in logs	0.09***	0.03	0.09***	0.03
Hh head's religion Muslim	0.53	0.33	0.45	0.32
Hh head's origin Central	0.68*	0.35	0.88***	0.33
Hh head's origin North-Central	0.43	0.41	0.56	0.39
Hh head's origin Mountain	0.02	0.36	0.16	0.34
Hh extended family (now/ before migration)	-0.46**	0.20	-0.18	0.20
Number of children hh (now/ before	0.21**	0.10	0.25**	0.10
Hh moved before 1997	0	0.02	0.23**	0.10
Age relative/ friend (now/ before migration)	-0.01	0.01	-0.02**	0.01
Gender relative/ friend	0.06	0.19	-0.05	0.19
Education years relative/ friend	-0.06**	0.03	-0.05*	0.03
Hh & relative/ friend same religion	-0.25	0.45	-0.19	0.42
Hh & relative/ friend live in same district (now/ before migration)	0.88***	0.21	0.48**	0.23
Constant	2.21**	1.03	2.55**	1.00
inflate				
TRANSFER AFTER MIGRATION	-	-	-4.12***	1.47
Relative parent	-	-	1.18	2.01
Relative child	-	-	0.40	2.63
Relative sibling	-	-	-1.10	1.35
Relative other	-	-	2.55	1.82
Age hhh (now/ before migration)	-	-	0.00	0.03
Education years hhh	-	-	-0.07	0.09
Hh extended family (now/ before migration)	-	-	2.62***	0.8
Number of children hh (now/ before migration)	-	-	0.28	0.32
Hh moved before 1997	-	-	-0.06	0.08
Age relative/ friend (now/ before migration)	-	-	-0.06**	0.03

**Table A5.5** Frequency of receiving all types of transfers combined: Results from NBRM andZINB

Gender relative/ friend			-0.48	0.65	
Education years relative/ friend	-	-	0.07	0.15	
Hh & relative/ friend same religion	-	-	0.49	0.99	
Hh & relative/ friend live in same district (now/ before migration)	-	-	-4.00***	1.46	
Constant	-	-	1.94	2.7	
Number of observations	860		860		
Number of zero observations	-		455		
Log pseudo likelihood	-207	4	-2039		
LR Chi2	86.7	9	86.06		
P-value Chi2	0.00		0.00		
McFadden's R2	0.02	0	0.037		

Note: Frequency of transfers refers to the number of times the transfer has been received in the past 12 months/ before migration. Base for relatives (friends), , religion (other religions), household origin (coast). significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

	FINANCIAL TRANSFERS		GOOD TRANSFERS		SERVICE TRANSFERS	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Main regression						
TRANSFER AFTER MIGRATION	0.82**	0.33	-0.97***	0.23	-0.98***	0.29
Relative parent	1.71***	0.58	1.16**	0.45	0.87	0.57
Relative child	0.57	0.71	2.08***	0.56	0.26	0.65
Relative sibling	0.42	0.41	0.89***	0.32	-0.24	0.4
Relative other	-0.56	0.43	0.17	0.34	-1.83***	0.45
Age hhh (now/ before migration)	0.01	0.01	-0.02	0.01	-0.01	0.01
Gender hh head	-0.86	0.9	-1.35**	0.66	0.6	0.76
Education years hhh	0.04	0.05	0.07*	0.04	0.05	0.05
Hhh's religion Muslim	1.52***	0.52	1.20***	0.39	0.29	0.5
Hhh's origin Central	0.17	0.52	-0.65	0.41	0.34	0.49
Hhh's origin North-Central	0.39	0.61	-0.93*	0.48	0.37	0.58
Hhh's origin Mountain	-0.41	0.54	-1.36***	0.43	0.15	0.49
Hh extended family (now/ before migration)	0.17	0.32	-0.65***	0.24	-0.58*	0.3
Number of children hh (now/ before migration)	0.2	0.13	0.02	0.10	0.08	0.13
Years since migration	0.05	0.04	0.08***	0.02	0.10***	0.03
Age relative/ friend (now/ before migration)	-0.01	0.01	0.00	0.01	-0.02*	0.01
Gender relative/ friend	-0.89***	0.28	0.01	0.22	-0.09	0.26
Education years relative/ friend	0.01	0.05	-0.00	0.03	-0.00	0.04
Hh & relative/ friend same religion	-1	0.66	-0.05	0.50	-0.29	0.66
Hh & relative/ friend live in same district (now/ before migration)	0.25	0.31	0.71***	0.25	0.88***	0.28
Constant	-1.58	1.72	0.64	1.37	1.07	1.5
Ln alpha	2.28***	0.10	1.89***	0.08	2.36***	0.07
Number of observations	880		868		867	
Log pseudo likelihood	-847		-1351		-1567	
P- value Chi <sup>2</sup>	0.00		0.00		0.00	
Pseudo R <sup>2</sup>	0.033	3	0.0327		0.0323	
LR Chibar <sup>2</sup>	2867.	73	6789.35		6017.65	
P-value Chibar <sup>2</sup>	0.00		0.00		0.00	

# Table A5.6 Frequency of giving transfers to relatives and friends: Results from NBRM

Note: Frequency of transfers refers to the number of times the transfer has given in the past 12 months/ before migration. "Transfer after migration" is a dummy variable that is one for the observations for the period after migration. Base for relatives (friends), religion (other religions), household origin (Coast). \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

# 6.1 Main findings

Private transfers to family members and friends have been studied for a long time in social sciences. The identification of the main motivations behind such transfers has been in the focus of different disciplines. Several models have been developed to explain why people transfer to their relatives and friends. However many aspects of such transfers remain largely unknown. This study presents important advancements in two of them: (i) how do people choose between transferring to different family members or friends, and (ii) are transfers to different members related over time and space. The study advances the understanding of the interdependent nature of private transfers by providing new evidence on three main aspects. First, by understanding whether transfers with relatives and friends substitute each other. Empirical evidence shows that transfers with friends cannot substitute for transfers with children or other close relatives. Second, by showing that transfers to certain family members depend on the needs of the other ones. Transfers to a particular member of family are dependent on the needs of other family members and also types of support given to them. Third, by showing how external circumstances or events affect the type of support received and the relative role of transfers from family members and friends. Events like the household migration enhance the relative role of friends and also make financial transfers more important than others.

# 6.1.1 Why do people support family and friends and what is the role of economics?

Selfishness and altruism are the two most discussed motivations explaining support given to family and friends. Apart from self-interest (tit for tat strategy), giving to others is motivated by sentiments, moral obligations, and societal norms. These motivations may explain why in certain circumstances individuals tend to behave prosocially (e.g. offer help, comfort, share resources or cooperate) even though this is mainly intended to benefit others. It is argued that altruism is only a subset of the motives triggering prosocial behaviour. The other motives are often classified as non-altruistic ones.

Altruistic acts are intended to benefit others and decrease people's lifetime fitness (or wealth). Sociobiologists go as far as to call altruistic behaviour "...a self-destructive act intended to benefit the others" (Wilson 1975). Altruistic behaviour is usually triggered by strong sentiments. Affection, sympathy, empathy, compassion and pity are among these sentiments. Not all of them apply similarly to family members or friends. For instance affection is mostly related to strong positive sentiments (e.g. love) and applies only to people who are very closely related (mainly the closest family members). In economics such altruism is also known as "egocentric" altruism. Gary Backer's altruistic parent, for example, has the utility of the child already embedded in the own utility function. From an economical perspective this benevolent parent enjoys the added utility of his/her child by enjoying the pleasure that the child derives from the added consumption of the transfer received. Altruism can also be triggered by norms and values or by moral principles (e.g. impartiality or universalization). Models like the one on 'reciprocal altruism' developed by Robert Trivers (1971) can apply also to non-relatives and friends.

Non-altruistic behaviours, on the other hand, are triggered by normative motivations (e.g. moral obligations or values that do not necessarily lead to altruistic actions), social effects or simply self-interest. In economics, these motives correspond to what is called the "egoistic" behaviour. In political science this is known as the tit-for-tat strategy, and coincides with other theories on reciprocal behaviour in game theory (Fehr and Gächter 1998). This view was used to explain some extensions of the "egocentric" model of altruism like the exchange of goods for services (Cox 1987), or the strategic bequest motives (Bernheim, Shleifer et al. 1986).

Despite their controversial nature, the different motives for private transfers are not necessarily exclusive of each-other. For example, it is quite difficult to find real world examples of transfers motivated exclusively by pure altruism. Often, giving to relatives or friends is linked to both altruistic and non-altruistic motives (e.g. giving to a child may be motivated by parental altruism but can also relate to non-altruistic motives such as the sense of duty, traditions, cultural norms, or simply exchange of money for services). From an empirical and policy point of view it is not only important to identify the dominant motives, but also to measure their overall effect on the transfers to a particular relative or friend.

Economics has continuously borrowed concepts like altruism, and reciprocity to explain the economical processes behind private transfers. The number of journal articles and books in economics trying to develop models and test empirically the altruistic motives has grown rapidly in the last decades. But, accepting and understanding such motivations is only the first step. Motivation theories help in understanding better the 'why' of the private support. While this is certainly important, a further step will be to understand "when" do people transfer and to "whom". Economics tools are certainly helpful in understanding how do real world people decide to whom to transfer when they have to transfer to different family members or friends. This would require a better understanding of the supply side of the transfers. Economic models can certainly explore whether people tend to see transfers to relatives and non-relatives as complements or substitutes, or whether money, services and other support will be used as complements or substitutes to each-other. It is also important from an economic and policy perspective to see how will people adapt their transfers to family and friends over time or when faced with relocation of their household as a consequence of migration.

By considering the economics behind private transfers, especially when multiple family members and friends are involved in giving and receiving, this study helps in understanding more on the motives for individual transfers and also in understanding the dependency of transfers between family members or friends. Moreover, it also helps in understanding how external circumstances or events (e.g. migration) would influence such interdependence. This is particularly important considering the possible substitution of private support by public transfers or services (and vice versa). As mentioned in Chapter 1 many developed countries are trying to stimulate private support (e.g. help with childcare from elderly parents) in order to increase labour participation. As shown in this thesis this would inevitably affect not only the support exchanged between two particular members but also the support exchanged with all other family members and friends. Parents will try to equalize their transfers throughout their children but they may reduce less visible transfers due to the 'exhaustion' effect mentioned in Chapter 4.

#### 6.1.2 Parents between children and friends

The discussion on the interdependence of support to relatives and friends leads inevitably to the question on how would the transfers to children (the closest members of the kinship) relate to transfers to non-relatives? Altruism motives are thought to be stronger in transfers to children (involving sentiments like love or affection, and also linked with the arguments of kin selection), while transfers to friends are ruled mostly from societal norms, moral values and other non-altruistic motives. However, individuals have to take simultaneous decisions on whether to transfer or not to children and/or friends while at the same time they may receive from them.

Empirical findings using the NKPS data (chapter 3) show that selected characteristics of both the giver and receiver influence the probability of transferring. The findings confirm the trend that the intergenerational transfers in the developed countries flow from the old to young generations (e.g. parents transferring part of their wealth to their children). Transfers to friends are far lower in incidence, and are more common for the younger ages.

The trends of simultaneous transfers to/from children and friends are certainly interesting. Simultaneous giving or receiving to both children or to children and friends appear to be positively correlated. Simultaneous giving to all children has the highest correlation coefficient, confirming that parents who give to one child are also likely to give to the others. In a sense, this goes against Becker's 'egocentric' altruism model which sustains that the needy get more (Becker 1981). Additional motivations should be involved in motivating transferring to children. The positive correlation between giving to both children and friends supports Andreoni's (1989) 'warm glow' hypothesis (people do not only give transfers because the utility of others is embedded in their utility function, but also because their own utility is dependent on the act of giving).

The 'crowding out' hypothesis (claiming the substitution of transfers from friends with transfers from children) is not supported by empirical findings. Checking for the number of the children does not influence these correlations. The simultaneity of given transfers decreases slightly with the increase in number of children but simultaneity of the received transfers increases. This shows that friends are less likely to give when the number of children increases (and this also holds for the children), but in return they are more likely to get.

Transfers with friends show a high degree of reciprocity (giving and receiving from the same individual) which is not evidenced for transfers with children. The effects for the subgroups show that reciprocity of transfers with the friend declines sharply for both genders when the number of children increases.
#### 6.1.3 Parental transfers and children needs: Giving to compeers

Parental support to children is the most common type of support in the family. Parents give monetary support, help with every day activities or give advice to their children. Such support depends on parental characteristics, particular needs of children at a given time, and as this study shows, it may also depend on the needs and support given to the other children. Chapter 4 uses transfers of money, help with housework, help with odd jobs, and advice are considered for parents transferring to more than one child. Results on financial transfers have shown that parents are very likely to transfer to all of their children and that financial transfers do not explicitly depend only on an emergent need of children. There exist instead a series of factors/variables that can trigger such transfers. The empirical analysis of transfers of housework help, odd jobs help and advice show that they are also very likely to be positively associated among different children. Transferring to one of the children is in most cases associated with similar transfers to the other ones (e.g. a parent helping with odd jobs child 1 is also very likely to also help child 2). This implies that transfers depend also on the characteristics of the other children. Empirical findings suggest that there is also a strong positive association between different types of transfers to the same child (e.g. giving money and advice, giving odd job help and housework help, etc).

The number of children seems to reduce the probability of transfers suggesting that parents with many children exhaust their resources of money or time. The overall effect of other children's characteristics (here called the need) has a positive influence on financial transfers and advice received by the children. This confirms again that parental financial transfers and advice to children are not exclusively driven by altruism. Whenever, a child 'needs' money or advice the parent is very likely to the other siblings as well. This goes against the altruism hypothesis (the neediest get more). However, this effect does not seem to affect all types of transfers. The need of the other child does not have a statistically significant effect for help with housework and odd jobs (the effect even turns to be negative for household help). This shows that transfers of services are more likely to be driven by individual needs of particular children (e.g. having young children, or just needing extra help in the kitchen). Such transfers are also often influenced by the physical distance between parents and children. Given this, parents are more likely to play "favourites" between their children.

The results show that although parents are likely to associate different types of transfers together when transferring to the same child, they do not always do this when transferring to different children. Parents simply seem to "exhaust" their resources. They seem to be better in equalizing between the same types of transfer to different children or to the same child over time, but they fail to "keep up" when it comes to different types of transfers given to different children. This is what is called here the 'exhaustion effect'. This effect may be due to the fact that parent tend to care more about visible effects of their transfers and their "reputation" (see also Lundholm and Ohlsson, 2000), and/or exhaust their financial and time resources.

The findings of chapter 4 reconfirm that parental altruism is not the only motive behind financial help or advice, and that parents consider more than the needs of one child. The 'exhaustion' effect warns that parents may give up their "equalitarian" attitude when the transferring puzzle becomes more demanding.

#### 6.1.4 Transfers and migration: Support from family and friends

The next thing explored in this study is the effect of external circumstances or events on the interdependent transfers to family and friends. This is in particular interesting considering the process of internal migration of the whole household in the context of transition economies. The analysis in chapter 5 is based on a unique survey amongst internal migrant households in peri-urban Tirana, Albania conducted in April 2008. The survey collects data on migrants that have moved in the periphery of the capital (Tirana) after the fall of the communist regime. Three main transfers were considered: financial transfers, goods, and services. The main effects of migration on these transfers were suspected to be: (i) a change in the composition of transfers received by the migrant households favouring mostly financial transfers, (ii) an increase of the importance of transfers from friends.

Moving towards the peripheries of bigger urban areas has not always yielded the expected outcomes for the migrating households. Unemployment in these areas is generally high amongst internal migrant households and living costs increase if compared to living in rural areas. Poverty rates in the peripheral areas of Tirana are higher than the inner city (Zezza et al., 2005, Carletto, Davis et al 2004), and the weak role of the state increases vulnerability and dependency of households on private financial transfers from family and friends. While one of the migration effects is expected to be improvement of financial inflow, such circumstances may seriously undermine this and increase the need for cash of the households. On the other hand, migration affects the kinship supporting networks and exposes the households to new acquaintances. Transfers from friends may become more important within such supporting network aiming to substitute some of previously received transfers.

Empirical results from chapter 5 show that the composition of transfers received changes after migration. Money transfers are more frequent after migrating, while frequency of goods and services received decreases. The shift towards financial transfers seems logical. Migration makes family members more physically distant, and thus less able to exchange goods and services. Furthermore migration towards paid employment allows people to exchange more financial transfers.

Results show that migration has increased the relative support received from friends. The differences in financial transfers received before and after migration are negative for all relatives (with the exception of children), showing that transfers from friends are becoming increasingly more frequent than before migration. Friends rise in importance compared to parents, siblings and other relatives, but the effect is not always significant. The results also show that friends supersede more distant relatives for financial transfers, and also siblings and other distant relatives for services (though the results are not statistically significant). Despite these changes, financial and goods transfers from parents and siblings still remain more frequent than transfers from friends.

The relative increase in transfers from friends after migration, especially for financial and service transfers, shows that migration may affect the role of relatives within the supporting network. However, there is no strong evidence to suggest that transfers from friends substitute transfers from family relatives.

These findings are really important in understanding how households cope with a changing environment when migrating internally. The high levels of private support to migrant households are valuable in a transition context, where poverty is wide-spread and state support is low. Financial transfers become increasingly important to these households, especially in absence of public mechanisms. However it is questionable whether these financial resources are an adequate and sustainable source. The decreasing goods and services received after migration also call for a stronger role of public policies in replacing such family support. Studies show that coverage with public services or childcare institutions is worse than in other parts of Tirana (Cila 2005). The provision of such services would bring the households in peri-urban areas in comparable position with other households located in Tirana, and would help them to engage more in job-seeking activities.

#### 6.1.5 Can the support from family and friends substitute each other?

The literature on the motives for private support gives relatively different arguments on the motivations for transfers to family and friends. The empirical findings throughout the chapters of this thesis also suggest that such transfers are considered differently by the individuals. Regardless from the context of the country, people tend to have a stronger relationship with the closest relatives (e.g. children, parents or siblings). This is also reflected in the transfers and support exchanged with them. The results show that parents are an important source of financial transfers to their children. They also tend to transfer to all of their children. But, the results show also that transfers to children (or other family members) are also positively associated with transfers to friends. People who give to one are also likely to give to others.

The empirical findings of this thesis do not sustain a substitution effect between the closest relatives and friends. Friends may take a greater role in giving when the household migrates internally towards highly populated urban areas but transfers with other children, parents and siblings remain very important. On the other hand, the crowding-out effect from transfers to/from friends when the number of children increases is not visible. However, the likelihood of transferring to children or friends declines and the reciprocity of the transfers with friends also declines. Parents with many children seem to 'exhaust' their resources much faster than others, and this would certainly mean they are more vulnerable to the availability of financial resources or time.

## 6.2 Suggestions for further research

This thesis highlights several implications for future research on the interdependence of support given to family and friends. The data and methods used throughout the chapters serve as a very good basis for further work in this direction. A couple of recommendations and suggestions are presented below.

The thesis has benefited immensely from the richness and novelty of the NKPS data. In fact, such data set offer a quite comprehensive source of information on the relationships between kinship members and friends. The data set gives the possibility to explore characteristics of both givers and receivers and also allows measuring the interdependence of such giving and receiving to multiple members of the kinship and friends. Such study could benefit further if it would allow having more information on the exact amounts of financial transfers exchanged or the quantity of time involved during the services or support rendered. This would give an extra dimension and allow accurate measuring of the hypotheses on the motives for private transfers.

Particular shocks (e.g. bankruptcy or sudden illnesses) are certainly important in checking the determinants and motives for private transfers. NKPS has started in 2008 to give more detailed information on such shocks. The availability of such information over the years would also help for a consistent analysis based on such indicators.

This thesis has shown that support to children is not only dependent on particular needs/characteristics of the child but also on needs/characteristics of the other children. This implies that even the altruistic parent will carefully consider the situation of all children when deciding to support any of them. The particular characteristics that make the child or the parent look "needy" in the eyes of the other benefactors are not always observable to the eyes of the researcher. This would certainly require more attention in the future as will probably also signal the failure of the welfare systems to cope with particular needs.

The multidimensionality of intergenerational transfers is another aspect considered in this thesis. Economic or social policies targeting the wellbeing of families need to consider transfers of money but also services and social or emotional support. For example unpaid care to elderly members provided by their children is substantial in many western countries (Komter, 2002). An extension of the empirical work in this thesis would also be to look at the interdependent nature of such transfers when having to consider other members of family.

The association between different support types shows that individuals are interested in more than the financial transfers. Transferring to family or friends is neither a onetime event nor independent from other types of transfers given/received. Incorporating these aspects in the altruistic models of giving would probably be the next challenge for the economists in this field.

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## Samenvatting

Mensen hebben altijd hun familie en vrienden gesteund. Dergelijke steun manifesteert zich in de transfers van geld, goederen en diensten, wederzijds advies enzovoort. De inhoud en de intensiteit van deze transfers verschilt per land en soort relatie, maar de rol van dergelijke transfers is belangrijk in alle samenlevingen. Er zijn veel factoren die de omvang van particuliere transfers beïnvloeden, bijvoorbeeld financiële restricties, geografische afstand, communicatiedrempels, enzovoort. Maar, nog belangrijker, de steun aan een bepaald familielid of vriend hangt samen met de omvang en de aard van de steun die aan andere familieleden of vrienden wordt gegeven.

Het primaire doel van dit proefschrift is een verkenning van de onderlinge afhankelijkheid van particuliere transfers en steun die verleend wordt aan familieleden of vrienden, maar ook om de effecten van bepaalde gebeurtenissen, bijvoorbeeld van migratie, op deze onderlinge afhankelijkheid beter te begrijpen. De analyse richt zich op particuliere transfers van inkomen, goederen, diensten en advies tussen gezinsleden en tussen vrienden. De empirische analyse bouwt voort op bestaande theorieën over de motivatie van particuliere transfers. Deze motivatietheorieën gaan over het "waarom" van particuliere steun. Hoewel dit een belangrijke vraag is voor het begrijpen van particuliere transfers en steun, blijft de belangrijke vraag van "wanneer" en aan "wie" mensen transfers maken. Hoe kiezen mensen tussen het maken van transfer aan familieleden en/of vrienden, en hoe zijn deze transfers afhankelijk van familieleden, tijd of ruimte?

Dit proefschrift introduceert instrumenten uit de economische wetenschap om te analyseren of transfers aan familie en vrienden elkaars substituten of complementen zijn, en om zo de onderlinge afhankelijkheid tussen dergelijke transfers te onderzoeken. Verschillende situaties worden onderzocht door middel van huishoud-survey-data uit verschillende landen, namelijk Nederland en Albanië. De onderzochte situaties zijn financiële transfers naar kinderen en vrienden, diverse transfers tussen verschillende kinderen, en transfers van familie en vrienden voor en na migratie.

Hoofdstuk 2 van dit proefschrift verkent de belangrijkste motieven voor particuliere transfers en ondersteuning. Handelingen zoals het helpen, troosten, delen en samenwerken zijn meestal gedefinieerd als prosociaal gedrag wanneer ze bedoeld zijn om anderen te helpen. Academische disciplines verschillen van opvatting over de rol van altruüstische en egoïstische motieven voor dergelijke prosociaal gedrag. Altruüsme verwijst naar gedrag dat er op gericht is anderen meer te helpen dan zich zelf, of naar gedrag dat ten koste gaat van de eigen levenskansen van een actor en juist voordelen biedt voor een of meerdere ontvangers. Niet-altruüstisch gedrag kan worden geïnitieerd door normatieve motieven, sociale effecten, of gewoon eigenbelang (egoïsme). Altruüstische en nietaltruüstische motieven sluiten elkaar niet uit en zijn niet noodzakelijkerwijs in tegenstrijd met elkaar. Ondanks deze uiteenlopende motieven, blijven mensen echter economische en sociale steun geven aan hun familie en vrienden. Maar wat als mensen moeten kiezen tussen transfers aan verschillende familieleden en vrienden?

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Hoofdstuk 3 onderzoekt of financiële transfers van en naar familieleden en vrienden gerelateerd zijn. De discussie over de wederzijdse afhankelijkheid van steun aan familieleden en vrienden leidt onvermijdelijk tot de vraag hoe transfers met de naaste familieleden (kinderen) zich verhouden tot transfers met niet-verwanten (vrienden). Is er een grotere kans dat mensen hun vrienden steunen, als ze minder steun aan hun kinderen geven? Of hebben mensen die geld ontvangen van één relatie ook een groter waarschijnlijkheid om geld te ontvangen van andere relaties? En, verandert hun relatie met vrienden als mensen kinderen hebben? De analyse in dit hoofdstuk gebruikt de Netherlands Kinship Panel Study (NKPS) voor 2005 en richt zich op de waarschijnlijkheid om geld en andere zaken van waarde te geven aan twee aselect gekozen kinderen en een aselect gekozen vriend. De bevindingen suggereren dat het geven aan of ontvangen van kinderen en vrienden positief gecorreleerd is. Het gelijktijdig geven aan beide kinderen heeft de hoogste correlatiecoëfficiënt, waaruit blijkt dat ouders die aan een kind geven ook aan de anderen geven. Dit is in tegenspraak met Beckers 'egocentrisch' altruïsmemodel dat voorspelt dat de behoeftigen meer ontvangen (Becker 1981). Er spelen dus ook andere motieven bij het geven aan kinderen. De positieve correlatie tussen het geven aan zowel kinderen als vrienden ondersteunt Andreoni's (1989) 'warm glow' hypothese (mensen geven omdat ze tegelijkertijd ook nut ontlenen van deze handeling). In tegenstelling tot ouder-kind-relaties vinden we een sterke neiging tot reciprociteit tussen vrienden, waaruit blijkt dat transfers aan vrienden anders zijn. Transfers aan vrienden nemen niet significant af met een groter aantal kinderen, maar de reciprociteit van transfers neemt wel sterk af als mensen meer kinderen hebben.

Hoofdstuk 4 presenteert een nieuwe aanpak om de "behoefte" van een bepaald familielid te meten en daarmee rekening te houden bij de analyse van de motieven achter transfers. Bij de transfers die hier onderzocht zijn gaat het over financiële steun, huishoudelijk hulp, klusjes en advies. Gekeken wordt naar de hulp die ouders geven aan twee van hun kinderen. De studie maakt gebruik van NKPS-data voor 2005 en 2007 om zowel de samenhang tussen kinderen als tussen jaren van verschillende transfers te onderzoeken. De correlatie van de verschillende transfers wordt geanalyseerd met een focus op het effect dat transfers aan een kind hebben op de waarschijnlijkheid van transfers aan het andere kind of dat transfers in het ene jaar hebben op de waarschijnlijkheid van transfers in het andere jaar. De positieve invloed van de behoefte van de andere kinderen op financiële transfers en door het kind ontvangen advies bevestigt dat dergelijke transfers niet uitsluitend gedreven zijn door altruïsme. Als een kind geld of advies nodig heeft, is het zeer waarschijnlijk dat een ouder dit ook aan de andere broers en zussen geeft. Dit is in strijd met het altruïsme hypothese (de behoeftige krijgt meer). Echter, de transfers van diensten blijken meer gedreven te zijn door individuele behoeften van bepaalde kinderen (bijvoorbeeld het hebben van jonge kinderen, of gewoon het nodig hebben van extra hulp in de keuken). De analyse laat ook zien dat de neiging van ouders om kinderen te steunen sneller "uitgeput" raakt bij transfers aan meerdere kinderen. Ouders hebben de neiging om dezelfde soorten transfers aan verschillende kinderen of aan hetzelfde kind in verschillende jaren gelijk te trekken, maar het lukt hen niet om dit vol te houden als het gaat om verschillende soorten transfers die aan verschillende kinderen gegeven worden. Dit wordt hier het "exhaustion effect" genoemd. Dit effect zou toegeschreven kunnen worden aan het belang dat ouders hechten aan de zichtbare gevolgen van hun transfers en hun "reputatie" (zie ook Lundholm en Ohlsson, 2000), en/of de beperkingen van hun financiële middelen en beschikbare tijd.

Hoofdstuk 5 richt zich op de analyse van veranderingen in de structuur van transfers over de tijd, als huishoudens migreren naar de periferie van grote steden (interne migratie). De studie onderzoekt welke invloed de migratie van hele huishoudens heeft voor de transfers van familie en vrienden die zij ontvangen. Hoewel migranten zullen verwachten dat hun financiele situatie zal verbeteren als gevolg van de migratie, blijken de kansen op succes van deze gezinnen in deze nieuwe agglomeraties toch laag te zijn, waardoor de behoefte aan financiële steun groot is.. Aan de andere kant beïnvloedt migratie de ondersteunende verwantschapsnetwerken en krijgt het huishoudens nieuwe kennissen in de nieuwe omgeving. Transfers van vrienden zouden belangrijker kunnen worden binnen een dergelijk ondersteunend netwerk, en zouden een aantal van de eerder ontvangen transfers kunnen substitueren. Zou de samenstelling van de door de migrantenhuishoudens ontvangen transfers veranderen? Of zouden de transfer van vrienden de transfers van familieleden vervangen? De studie maakt gebruik van data uit een unieke enquête onder interne migranten in Tirana (Albanië) om de door migrerende huishoudens ontvangen transfers van geld, goederen en diensten te onderzoeken. De empirische analyse toont aan dat de aard van de ontvangen transfers en het transfernetwerk na migratie veranderd zijn. Huishoudens ontvangen na migratie in het totaal minder overdrachten, maar de frequentie van financiële transfers gaat omhoog. Vrienden worden na migratie belangrijker, en substitueren de transfers van broers, zussen en andere familieleden.

De empirische bevindingen van dit proefschrift laten zien dat het geven van particuliere transfers, ongeacht de motieven, sterk van de omstandigheden afhangt. Ongeacht de context van het betreffende land hebben mensen de neiging om een sterkere relatie met hun naaste verwanten te hebben (bijvoorbeeld kinderen, ouders, broers of zussen). Dit blijkt ook uit de transfers en ondersteuning die met hen uitgewisseld wordt. De resultaten tonen aan dat ouders een belangrijke bron van financiële transfers aan hun kinderen zijn. Zij hebben ook de neiging om transfers aan al hun kinderen te maken. De resultaten laten echter ook zien dat de overdracht aan kinderen (of andere familieleden) ook positief geassocieerd zijn met transfers aan vrienden. Mensen die aan een van deze partijen geven, geven waarschijnlijk ook aan de andere.

De empirische bevindingen van dit proefschrift ondersteunen niet de hypothese dat er een substitutie-effect tussen de naaste verwanten en vrienden bestaat. Vrienden kunnen een grotere rol spelen in het geven wanneer een huishouden intern migreert naar dichtbevolkte stedelijke gebieden, maar transfers met kinderen, ouders, broers en zussen blijven heel belangrijk. Aan de andere kant is ook geen crowding-out effect van transfers van/naar vrienden zichtbaar als het aantal kinderen toeneemt. De kans van transfers aan kinderen of vrienden neemt echter af, net zoals de reciprociteit van de transfer met vrienden. Ouders met veel kinderen blijken hun middelen veel sneller uit te putten dan anderen, wat duidelijk aantoont dat ze kwetsbaarder zijn voor de beschikbaarheid van financiële middelen over de tijd.

### Biography

Florian Tomini was born on 15 April 1977 in Tirana, Albania. He studied Business Management at Faculty of Economics, University of Tirana, (Albania) and also graduated with a Master's degree in Social Protection Financing from Faculty of Economics and Bussiness Administration, Maastricht University (The Netherlands). During his academic career Florian has held several teaching postions. He has taught Statistics for Economics and Management at University of Tirana (Albania) and also Health Economics courses at Maastricht University (Faculty of Health Medicine and Life Sciences).

As a professional, Florian has worked for two consecutive years (2003-2005) as a Junior Professional Associate with The World Bank (Human Development Sector) and was assigned to Albania Country Office. His job involved the supervision of the implementation of The World Bank investment projects as well as budgetary support policy loans (PRSPs). During this time Florian has played a key role in the preparation of the economic reports for health, social, and education sectors in Albania. Lately, he is working as Short Term Consultant for the World Bank and is involved in policy reforming of the social protection sector in Albania.

Florian joined Maastricht Graduate School of Governance in 2005 as a PhD research fellow. His work on the interdependency of private transfers has resulted in several working papers and articles and has been presented on varying academic conferences (such as annual meetings of European Economic Association 2009 and 2010, European Association for Labour Economics 2009, European Population Conference 2010, etc). Part of his research has been published or has been submitted to international refreed journals.

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