Intergenerational transfers – accounting, prediction, and motives*

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Abstract

The objective of this paper is to discuss how to measure the role of intergenerational transfers for wealth using cross-national comparable data sets constructed by the Luxembourg Wealth Study (LWS) project. The most obvious use of the LWS data for studying intergenerational transfers is to estimate econometric models that can be used to predict "end of life" wealth. If the original data is of panel type, and it is possible to find the reason why some households exit the survey, it is also possible to account for actual "end of life" wealth. Finally, I believe that the most useful additional information for understanding transfers received is data on whether the individual's/the spouses' parents are deceased and, if so, when and at what ages they died.

Keywords: wealth, bequests, inheritances, *inter vivos* gifts, savings

JEL classifications: C81, D10, D31, D91, H24

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1 Introduction

The first version of this white paper was prepared for the Perugia conference of the Luxembourg Wealth Study (LWS) project in January 2005. The objective of the LWS project is to explore the possibility of constructing cross-national comparable data sets, establishing a network of producers of micro data on household wealth, and the production of guidelines for data producers.[1]

The guidelines for the LWS white papers state that (italics added by me):

> Papers are meant to be broad surveys of *conceptual* and *methodological* issues concerning *wealth measurement*. Papers have to be thought as a guide to the *construction* and subsequent *use* of the LWS data. Suggestions for developments and improvements in wealth data collection are welcome. The different facets of the issue at hand - both at the conceptual and practical levels - are to be discussed and assessed. The papers do not need to provide definite answers and solutions to all problems, but they must have a clear *identification* of all relevant issues, and a *comparative* understanding of different practices.

There is a list of a dozen topics to be covered by the white papers. The present paper belongs under the headline "Origins of personal wealth". It complements work by Giovanni D'Alessio and Romina Gambacorta (see D'Alessio and Gambacorta, 2005).

The objective of this white paper is to discuss how to determine the relative importance of intergenerational transfers (inheritances and *inter vivos* gifts) and own savings for personal wealth.[2] The transfers concern adults living in their own households and not, for example, children still living with their parents. Or to put it differently, suppose that we have cross sections or panels with micro data on individual and/or household wealth: What can we do with the available data? And which additional information might contribute the most for studying the role of intergenerational transfers for wealth in retrospect and in the future?

Parents intentionally, but also unintentionally, make transfers to their children in different ways. There are biological transfers of natural talents

[1] See <http://www.lisproject.org/lws.htm> for basic information about the LWS project.

[2] I do not discuss the institutions of bequest and their empirical relevance in a comprehensive way, an issue to be covered according to the LWS white paper guidelines.

and abilities. Purchases of education and other human capital investments are other ways of making transfers. Parents can also transfer financial and tangible property by bequests and *inter vivos* gifts.

Understanding the determinants of parental property transfers is crucial for a wide range of economic issues. Some of these are the determinants of savings and wealth, the equality of opportunity, the possible effects of fiscal policy, and the optimal design of tax systems.

Parental property transfers are interrelated with *savings and wealth*. Strong transfer motives will affect savings behavior. This concerns saved amounts but also the timing of savings over the life cycle. Second, parental property transfers are also important when discussing *the distribution of income and wealth*. The extent to which wealth is carried over from one generation to the next affects how equal opportunities really are. Parental transfers may also decrease the efficiency of public redistribution by counteracting the intended effects of public transfers. Public policy may, therefore, spread over several generations via the impact on private transfers.

Third, in *macroeconomics*, the Ricardian equivalence predictions, for example about fiscal policy inefficiency, rest on the assumption of dynastic, altruistic, behavior. Finally, there are also *public finance* aspects of parental property transfers. Estates, bequests, inheritances, and *inter vivos* gifts are subject to taxation in many countries. Depending on the transfer motives, these taxes may or may not create excess burdens.

Transfer taxes tend to be controversial. During recent years there has been a big discussion in the US and in many other countries about the "death tax", see Gale et al. (2001). In many countries transfer taxes have been reduced or removed.[3]

The heat of the discussion is not, however, in proportion to the tax revenue that these taxes generate. Figure 1 reports the revenue from transfer taxes as a share of GDP.[4] Transfer taxes on average yielded tax revenue corresponding to slightly less than 0.2 percent of GDP in the OECD countries 2000. France is the country with the highest share, 0.6 percent of GDP. Among the LWS countries, the US has the highest share followed by Finland and the UK. There are, however, several non LWS countries in the OECD that also raise comparatively much tax revenue with transfers taxes, for example, Belgium, the Netherlands, and Japan. The differences in tax revenue, of course, depend on both differences in tax rates and in tax bases.

My three main conclusions from the discussion in the paper are:

- The most obvious use of the LWS data for studying intergenerational

[3]Cremer and Pestieau (2003) is a recent survey of the research on taxation of wealth transfers.

[4]The exact numbers are given in Table 1 in the Appendix.

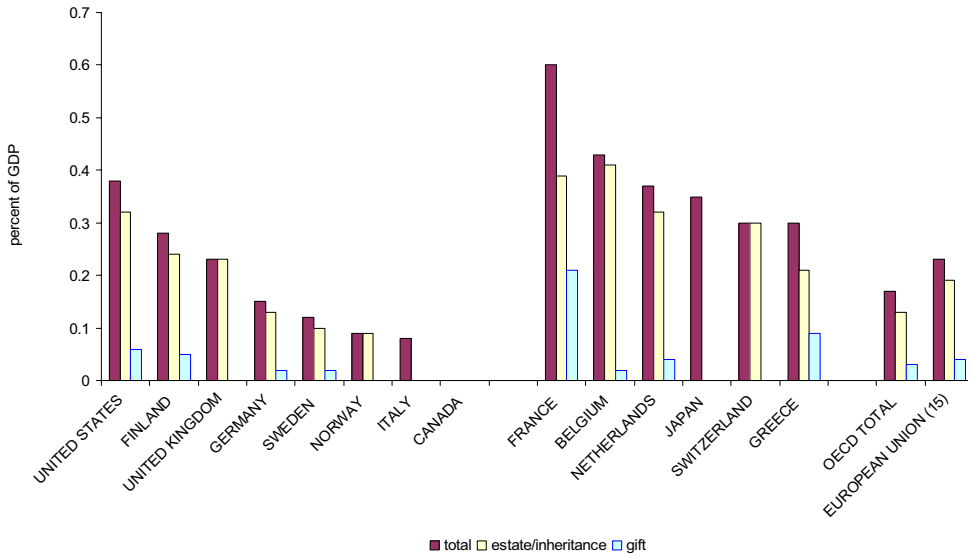

Figure 1: Revenue from taxes on estates, inheritances, and gifts as percentage of GDP, 2000. Source: OECD Revenue Statistics. Note. OECD does not report statistics for Cyprus.

transfers is to estimate models that can be used to compute age-wealth profiles. Combined with (objective or subjective) mortality risks, it is then possible to compute "end of life" wealth. This prediction of the estate gives information of the size of *post mortem* transfers.

- If the original data is of panel type and it is possible to find the reason why some households exit the survey, it is also possible to account for actual "end of life" wealth. As few households exit because of death each year it will probably take some years until the sample sizes will be large enough to draw reliable conclusions concerning actual "end of life" wealth.

- Some of the LWS data sets have information on whether the individual/the household has received inheritances and gifts, other data sets do not have this information. In both cases, I believe that the most useful additional information for understanding transfers received is data on whether the individual's/the spouses' parents are deceased and, if so, when at what ages they died. With this information it is possible to separate individuals/households for which the parental transfers process is over from those for which the process still is going on.

The paper is structured as follows: I discuss how to account for the im-

portance of intergenerational transfers for wealth in Section 2. Section 3 discusses ways to predict how future intergenerational transfers might affect wealth. The theoretical literature on parental transfers is characterized by different assumptions concerning parents' motives for making transfers. It is necessary to have an idea about the relative importance of the different motives for predictions. Section 4 discusses transfer motives. It is an empirical question to determine which of the motives are most important. Section 5 concludes.

2 Accounting – origins of wealth

There are two main origins of wealth: own savings (life cycle wealth) and transfers from others (transfer wealth). Similarly there two main intended uses of wealth: own consumption and transfers to others. The topic of this section is how to account for the origins of wealth whereas Section 3 discusses how to predict the uses of wealth.

Davies and Shorrocks (1999) is an extensive survey of the research on the distribution of wealth. Following Meade (1964), they discuss an accounting identity for an individual/a household.[5] I have amended the identity slightly:

$$W_t \equiv W_{t-1} + E_t + r_t W_{t-1} - C_t + I_t + G_t^n, \tag{1}$$

where W_t is wealth at time t, E_t is earned income, r_t is the rate of return, C_t is consumption, I_t is inheritances received, and G_t is net *inter vivos* gifts received. Obviously, wealth at death equals the amount bequeathed by the individual/the household. It is a great advantage if it is possible to separate transfers between spouses from other transfers. Stepwise substitution, and assuming zero initial wealth, yields:

$$W_t \equiv \sum_{k=1}^{t} \left((E_k - C_k) \prod_{j=k+1}^{t} (1 + r_j^s) \right) + \sum_{k=1}^{t} \left((I_k + G_k^n) \prod_{j=k+1}^{t} (1 + r_j^{tr}) \right), \tag{2}$$

where I have assumed that the return on own saving, r_j^s, might differ from the return on transfers, r_j^{tr}. There is no distinction here between what people expected (income and transfers) and unexpected windfalls.[6] It is, of course, possible to make such distinction for both own savings and transfers.

If we sum over the whole population, assuming that there are no international transfers, all gifts between people still alive will net out. The only *inter vivos* gifts remaining will be those from people deceased at time t. We have that:

$$\boldsymbol{W}_t \equiv \boldsymbol{S}_t + \boldsymbol{I}_t + \boldsymbol{G}_t^d, \tag{3}$$

[5] Also compare Jenkins (1990).

[6] See also Bertaut and Haliassos (1997).

where $\boldsymbol{W}_t$ is aggregate wealth time t, $\boldsymbol{S}_t$ is the aggregate present value of accumulated own savings, $\boldsymbol{I}_t$ is the aggregate present value of accumulated inheritances, and $\boldsymbol{G}_t^d$ is the aggregate present value of accumulated *inter vivos* gifts from people deceased at time t. It should be noted, however, that if we are interested in studying how transfers motives have affected *inter vivos* gifts, potential information is lost if we do not include gifts from people still alive.

Life cycle wealth and transfers wealth are often calculated as shares of total wealth, but sometimes these wealth components instead are related to income measures such as total lifetime resources. The relative importance of life cycle and transfer wealth may change if the age structure or the wealth distribution changes, even if preferences remain the same.[7]

Kotlikoff and Summers (1981) made direct estimates of life cycle wealth in the US. According to this paper life cycle wealth was 20 percent of total wealth at the most. This result created a lot of discussion and it is, of course, not clear cut how to distinguish between the two wealth components in practice. Modigliani (1988) instead reported direct estimates of transfer wealth corresponding to 20 percent of total US wealth.

Davies and Shorrocks (1999) concludes that bequests accounts for 35–45 percent of aggregate wealth in the US. The recent paper by De Nardi (2004) compares Gale and Scholz (1994)'s estimate of the transfers wealth share of 60 percent for the US with the bequest share (not including *inter vivos* gifts) for Sweden of 50 percent reported by Laitner and Ohlsson (1997).

I will focus on how to measure transfers wealth in the rest of this section. But before doing this I would like to point out that there is a danger in measuring one of the components and then assuming that the residual is a measure of the other component. The residual is a measure of what we don't know, not what we know.

2.1 Survey based accounts of wealth transfers

One possible source of information for measuring transfer wealth are retrospective survey questions about historic wealth transfers. These questions can be asked donors as well as donees.

Some of the LWS data sets have information on inheritances and gifts received. This is the case for Canada, Cyprus, Germany, Italy, and the US. The data sets from Sweden and the UK do not have this information. It is not clear to me if there is information on transfers received in the data sets from Norway and Finland.

I do not have access to the exact survey questions of the LWS data sets so my examples of retrospective survey questions will come from other surveys.

[7] Wealth inequality in the US and Great Britain is discussed in Banks et al. (2000) whereas Jappelli and Pistaferri (2000) discuss wealth accumulation in Italy. Sabelhaus and Pence (1999) study the impact of cohort effects on wealth using US data.

The comparison is also interesting in itself. My example of survey questions on *the donee level* is from the 1998 wave of the Swedish "Household market and nonmarket activities"-survey (HUS). The data set is rich concerning property transfers.[8] All adult members of the interviewed households were asked:[9]

```
VAR 426 RECEIVED GIFT PP711 Loc 954 width 1
MD=0 or GE 9
PP711 (IF ANSWERED QUESTIONNAIRE - CODED 1 OR 2 AT RR04)
Have you or anyone else in your household received a gift
worth at least 1,000 SEK or equivalent value?
```

There is not only have information about the number and size of *inter vivos* gifts and inheritances, we also know from whom the transfer came; parents, relatives, or someone else. This makes it possible to isolate transfers from parents to children. The questions concerns all transfers ever received. A problem is that it is not possible to determine if it is the respondent, the spouse, or someone else in the household who has received the transfer.

The example of survey questions on *the donor level* is from the US "Health and Retirement Study" (HRS). In the first wave of HRS, respondents were asked the following question:

```
1504    E35.    (Not counting any shared housing or shared food,)
11504           Have you [and your (husband/partner)] given (your
                child/any of your children) financial assistance
                totaling \$500 or more in the past 12 months?
                [IMPUTED]
        ------------------------------------------------------------

                [DEFINITION:  By financial assistance we mean giving
                money, helping pay bills, or covering specific types
                of costs such as those for medical care or
                insurance, schooling, down payment for a home, rent,
                etc.  The financial assistance can be considered
                support, a gift or a loan.]
```

The definition of financial assistance is broad and might include payments that may not be considered as inter vivos gifts in a more narrow sense, for example schooling expenditure and loans.

[8] Klevmarken (2004) discusses the relative importance of inheritances and gifts for total net worth and wealth inequality using this data. Nordblom and Ohlsson (2003) use this data set to estimate gift and inheritance models.

[9] The inheritance question is analogous.

It is, for obvious reasons, more difficult to ask retrospective questions about bequests. The HRS has, however, done exit interviews with a surviving spouse or child to, among other things, provide information about the disposition of assets after death.

These surveys questions suggest the considerable problems of definitions, measurement, etc that arise when one tries to measure transfers. I will give three examples of problems that may arise:

- Some transfers are the results of insurance within the family. Such transfers are as likely to go from child to parent as in the other direction. In the longer run these transfers should net out. It would be somewhat strange to classify these transfers as transfer wealth.
- It is common in many countries that transfers go directly from grandparents to grandchildren. Transfers taxes, for example, may give incentives to parents to pass on inheritances directly to their children. It is obvious that survey questions of the above types might have problems to correctly pick up these kinds of transfers where three generations are involved (Arrondel and Masson, 2001).
- It is difficult to distinguish parents' human capital investment in their children from *inter vivos* gifts.

From my own experience using different data sets when studying bequests, inheritances, and *inter vivos* gifts, I would like to point out some questions that are important to include.[10] This will partly be a wish list, it is a different question which information that one realistically can obtain in the short run.

- Which are the birth years and death years of your parents?
- Have you ever received an inheritance/an *inter vivos* gift (given an *inter vivos* gift)?
- How many?
- When?
- From whom (to whom)? Spouse, parents, grandparents, children, other relatives, others.
- How much, value when received before and after transfer taxes?

[10] I have benefited a lot from discussions with John Laitner on how to formulate survey questions on intergenerational transfers.

- Repeat all questions above for the spouse.

Some of the LWS data sets have some of this information, other data sets do not have any of this information. In both cases, I believe that the most useful information for understanding transfers received is data on whether the individual's/the spouses' parents are deceased and, if so, when at what ages they died. With this information it is possible to separate individuals/households for which the parental transfers process is over from those for which the process still is going on.

It might be possible to obtain the data on the first question from registers. In any case, it is probably easier to obtain survey responses on whether parents are alive than responses on transfer amounts. Questions about transfers might induce non-response are often plagued by recall bias.

2.2 Register based accounts of wealth transfers

Estate records is one possible source of register based accounts of wealth transfers. In Sweden estate records used to first be archived at the district courts and then at the regional archives. Since some years back the estate records are kept by the National Tax Board, and also in electronic data bases. The National Tax Board is responsible for the national registration since the separation of the Church of Sweden from the State 1991. The obvious problem with estate records is that there is only information about bequests and not *inter vivos* gifts.

Inter vivos gifts can be captured by *tax registers* provided that there is a gift tax, that the amount is taxable, and that the tax is not evaded. In Sweden the National Tax Board keeps the registers of wealth and transfers taxes. But from 2005 there will no longer exist any transfers tax registers simply because the inheritance tax and the gift tax have been repealed.

3 Prediction – future uses of wealth

3.1 Subjective predictions – survey based

One possible source of information for predicting transfer wealth are prospective survey questions about future wealth transfers. These questions can be asked donors about transfers intended (planned) to be made. It is also possible to ask potential donees about transfers expected to be received. As far as I understand, there is no information in any of the LWS data sets about intended and expected transfers.

The example of survey questions trying to capture intended/planned transfers of *donors* is from the second wave of the HRS-survey.

```
W5844   C10a.   What are the chances that you [or your (husband/
                wife/partner)] will leave an inheritance totalling
                \$100,000 or more?
                [NOTE: Include properties and other valuable items
                as well as money here.]
```

Hurd and Smith (2001) use HRS to compare anticipated bequests according to the above question with actual bequests according to the exit interviews done by HRS. Anticipated and actual bequests might differ in a systematic way if the perceived mortality risk by the individual differ from the objective mortality risks. Hurd and Smith (2002) and Gan et al. (2004) discuss the implications of this for bequests (compare also Hamermesh and Menchik, 1987).

I have two examples of survey questions about transfers that *donees* expect to receive. The first is from the HUS-survey.

```
VAR 399 INHERITANCE

SS348 Is it likely that you (or your spouse or partner) will
receive an inheritance sometime in the future that would be
large enough to make a substantial difference in your financial
situation?
```

There is a similar question in the 1984 wave of the US Panel Study of Income Dynamics (PSID). It is:

```
V10949   'WTR XPCT TO INHERIT'

K157.  What about future inheritances--are you fairly sure
that you (or someone in your family living there) will inherit
some money or property in the next ten years?}
```

There is, to my knowledge, no research on how accurate the expectations on transfers to be received are. Katarina Nordblom, Göteborg University, and I have designed a research project where we intend to compare expected transfers with the actual outcomes. We also plan to compare the subjective transfer probabilities, as measured by survey questions of the above type, with more objective predictions based on estimated econometric models.

3.2 Objective predictions – model based

Starting with donors, it is possible to estimate direct models for the amounts bequeathed and the amounts given using samples of micro data. The estimated models can then be used to predict the transfer behavior of other samples.

But there is also an indirect way of estimating the amounts bequeathed. The starting point here is to estimate wealth models using samples of micro data. Next, the age-wealth profiles can be predicted for the original sample or other samples. Combining these profiles with estimated (objectively or subjectively) mortality risks will then give estimates of wealth at the end of life which is the amount bequeathed.[11] The LWS data sets probably have their most obvious use for this kind of models.

It is also possible to estimate direct models for the amounts inherited and the amounts received as *inter vivos* gifts using samples of micro data. Predictions of inheritances and gifts for other samples can then be done using the estimated models.

4 Transfer motives

Economic theory has an important role in suggesting explanatory variables for the transfer and wealth models. Most of these variables capture various personal characteristics of the donor and the donee.

There are, however, different hypotheses about transfer motives in the literature. The transfer motive will, of course, affect the uses of wealth. If there are strong bequest motives, for instance, wealth will be higher than otherwise, at least at older ages of the donor.

The empirical models can be used to test theories about transfer motives. The models can also be used to predict future transfers. The question is: How will knowledge of transfers motives help us in predicting? One example is that theory suggests that transfers are increasing in the income of donors. This is also confirmed in the empirical literature. From this it is possible by to conclude that transfers can be predicted to increase if aggregate income is expected to grow.

But theory might also suggest how estimated relationships might change when things that have been constant start to change. Let us think about the following example. Theory suggests that absence of annuities markets will increase (accidental) transfers. The empirical literature has had problems to test this simply because there is so little variation in the availability of annuities. Still, we know that the development of more advanced annuities markets probably will decrease (accidental) transfers.

[11] Altonji and Villanueva (2003) use this approach to estimate the amounts bequeathed whereas they estimate direct models for the amounts given.

I will start this section by discussing how motives affect total transfers. I will then go on to discuss what theory says about the timing of transfers, that is the choice between *inter vivos* gifts (early transfers) and bequests/inheritances (late transfers).

4.1 Motives suggested in the literature

There are several theories suggesting different motives for intergenerational transfers. Most of these deal with bequests from parents, which are the most common property transfers. Bequests may be accidental but there are also altruistic, exchange, egoistic, biological (evolutionary), and risk–sharing motives suggested in the literature.[12] *Inter vivos* gifts, on the other hand, are never accidental.[13]

Altruism. This is the Becker (1974) and Barro (1974) framework. Consider an altruistic parent who has several children. The parent cares about her own lifetime consumption and the children's lifetime consumption possibilities. The parent will try to equalize the consumption possibilities of the children.[14] Higher lifetime income for a child relative to the siblings reduces the lifetime transfers received. Higher lifetime resources for the parent leads to more transfers to all children. Similarly, higher lifetime income for a sibling also increases the lifetime transfer to a child.

What matters are the total resources of the other people in the family, not the distribution within the family. A child will only get more if family lifetime resources increase. The altruistic model generates an adding–up condition. If the parent gains a dollar in permanent income while a child loses the same amount in permanent income, a one dollar gift will restore the initial optimal allocation of resources.[15]

Sometimes parents want to make negative (reverse) transfers. There is often, however, a non–negativity constraint making this impossible. Instead the parent is forced into a corner solution with no transfers, see, e.g., Drazen (1978). As pointed out by, e.g., Laitner (1997) this becomes more likely the higher child resources compared to parents' resources and the lower the degree of altruism.

There are also models with two–sided altruism where a child also cares about the parent's utility. This will create a strategic game between the parent and the child.

Exchange. Bernheim et al. (1985) and Cox (1987) present versions of the exchange model. In this model, the parent does not care about the

[12] See Masson and Pestieau (1997) for an overview of different bequest motives and their implications.

[13] Laitner (1997) surveys the literature on intergenerational transfers.

[14] The stronger the parent's altruism the more the parent wants to equalize.

[15] Altonji et al. (1997) and Laitner and Ohlsson (2001) test this derivative condition. McGarry (2000) stresses that the condition does not necessarily apply to current income.

consumption possibilities of the children. Instead she values the attention of the children more than services otherwise purchased in anonymous markets. Suppose a parent obtains such attention in proportion to the amount she gives to each child. Higher income of the parent will tend to result in more gifts (more attention purchased from the children), but also more own consumption.

Since the opportunity cost of each child's time is increasing in his income, the implicit price the parent will have to pay for attention will tend to be increasing in the child's income. The probability that the parent makes any purchases at all will, therefore, be decreasing in child income.

Given that the parent makes purchases (transfers), the impact of the children's incomes on total spending is, however, ambiguous. Suppose that the price elasticity is low because there are no close substitutes to the services of a particular child. The amount will then be increasing in the child's income. If, on the other hand, the price elasticity is high, the amount decreases in the child's income.

Transactions costs—in the form of travel or travel time costs—suggest that children living closer to their parents need relatively lower compensation. Parent's poor health may mean higher demand for attention or higher compensation payments.

Egoism, warm glow. In another frequently used model (e.g. Blinder, 1974; Andreoni, 1989; Hurd, 1989), a parent derives utility from the amount it gives (joy of giving or warm glow) but not from the utility the child actually derives from the resulting transfer. This is sometimes called the egoistic model.

Compared to the altruistic model, there are no differences of the effects of the parent's income. The models differ in the implications of children's incomes. Transfer behavior according to the egoistic model is not affected by the incomes of the children.

Biology, evolution. Cox (2003) argues that parents make transfers to promote the survival of their genes. Variables that capture this desire—e.g., demographic variables—will affect transfers, even controlling for income.

This would give parents a motive to give more to biological children than adopted and step children. Mothers are more likely to give than fathers because of paternity uncertainty.[16] Maternal grandmothers are also more likely to give than paternal grandmothers and grandfathers. Children with children of their own will also probably get more. It is, however, an open question if parents give priority to actual grandchildren or potential grandchildren. Daughters would get more than sons because of the paternity uncertainty of the grandchildren.

Risk-sharing, uncertainty, insurance. Transfers within families are also

[16]See Argus and Peters (2001) for an economic paper on the effects of paternity uncertainty.

discussed in the literature on risk sharing within families. Intra-family transfers may be the result of informal insurance arrangements within the family in situations when insurance markets are missing or when insurance markets are affected by adverse selection and moral hazard. Usually these transfers compensate for temporary rather than permanent income losses. Kimball (1988) and Coate and Ravallion (1993) discuss risk sharing in the absence of insurance markets. Kotlikoff and Spivak (1981) study how families provide substitutes to annuities from insurance markets.

Suppose households cannot insure because of imperfect markets for annuities. And suppose that there is no risk-sharing within the family. Instead households have to save for a long retirement. If they die young, their unused resources become accidental bequests. If they live a long time, they may die with little or no estate. The accidental model of Davies (1981) is a version of the life–cycle model. Friedman and Warshawsky (1990) report rather ambivalent support for the model.

4.2 *Inter vivos* gifts or bequests?

Parents can make transfers during their lifetime—*inter vivos* gifts. An alternative is to bequeath, thus making the transfer *post mortem*. Why gifts and not bequests?

Early, gifts. The existence of liquidity constraints may make parents choose gifts rather than bequests (Bernheim et al., 1985). It is difficult for children to borrow against future inheritances because of imperfect markets and asymmetric information.

Late, bequests. Parents may, on the other hand, choose to postpone transfers as long as possible for strategic reasons (Cremer and Pestieau, 1996). The motivation for this is to provide the right incentives to study and work for the children.

There are also papers assuming that the actions of a selfish child affects the income of an altruistic parent. In the model of Bruce and Waldman (1990) *inter vivos* gifts and bequests are substitutes in the following sense:[17] If *inter vivos* gifts are large enough there will be no bequests. The parent is, however, in a second best situation. If the parent only bequeaths a selfish child will, on the one hand, act so as to maximize the total income of the family.[18] But he will, on the other hand, save too little the first period expecting the parent to bequeath the second period. This is the Samaritan's Dilemma. If the parent instead chooses only to transfer *inter vivos* during the first period, the child will choose to save an efficient amount. The problem is that the child will not act as to maximize total family income

[17] See also Lindbeck and Weibull (1988).

[18] The Rotten Kid theorem, see Becker (1974), says that if all family members receive gifts from an altruistic parent, it will be in the interest even of selfish family members to maximize total family income. See also Bergstrom (1989).

during the first period. Instead it will be a Rotten Kid maximizing its own income at the expense of the parent. There can thus be an efficiency trade off between *inter vivos* gifts and bequests.

The existence of gift, estate, and inheritance taxation may also affect the choice between gifts and bequests by creating incentives for tax avoidance. Nordblom and Ohlsson (2004) find that transfer taxes may increase bequests at the expense of *inter vivos* gifts compared to a situation without transfer taxes.

5 Conclusions

The objective of this white paper is to discuss how to determine the relative importance of intergenerational transfers (inheritances and *inter vivos* gifts) and own savings for personal wealth when we have cross sections or panels with micro data on individual and/or household wealth. What can we do with the available data? And which additional information might contribute the most for studying the role of intergenerational transfers for wealth in retrospect and in the future?

My three main conclusions from the discussion in the paper are:

- The most obvious use of the LWS data for studying intergenerational transfers is to estimate models that can be used to compute age-wealth profiles. Combined with (objective or subjective) mortality risks, it is possible to compute "end of life" wealth. This prediction of the estate gives information of the size of *post mortem* transfers.

- If the original data is of panel type and it is possible the reason why some households exit the survey, it is also possible to account for actual "end of life" wealth. As few households exits because of death each year it will probably take some years until the sample sizes will be large enough to draw reliable conclusions concerning actual "end of life" wealth

- Some of the LWS data sets have information on whether the individual/the household has received inheritances and gifts, other data sets do not have this information. In both cases, I believe that the most useful additional information for understanding transfers received is if the individual'/the spouses' parents are deceased and, if so, which years they died. With this information it is possible to separate individuals/households for which the parental transfers process is over from those for which the process still is going on.

Unfortunately, the LWS data sets cannot shed so much light on *inter vivos* gifts. Some of the data sets have information on gifts received. In

these cases it is possible to estimate direct models of gifts received. But age-wealth profiles cannot be used for indirect estimates of amounts given while this is possible to do for bequests. In some sense, the LWS data sets are like estate records giving information about bequests but not gifts.

Appendix

Table 1: Revenue from taxes on estates, inheritances, and gifts as percentage of GDP, 2000.

	total transfer taxes	estate and/or inheritance taxes	*inter vivos* gift taxes
LWS countries:			
United States	0.38	0.32	0.06
Finland	0.28	0.24	0.04
United Kingdom	0.23	0.23	0
Germany	0.15	0.13	0.02
Sweden	0.12	0.10	0.02
Norway	0.09	0.09	0
Italy	0.08	n.a.	n.a.
Canada	0	0	0
OECD countries with the highest shares:			
France	0.60	0.39	0.21
Belgium	0.43	0.41	0.02
Netherlands	0.37	0.32	0.04
Japan	0.35	n.a.	n.a.
Switzerland	0.30	0.30	0
Greece	0.30	0.21	0.09
EU 15	0.23	0.19	0.04
OECD, total	0.17	0.13	0.04

Source: OECD Revenue Statistics.
Note. OECD does not report statistics for Cyprus.

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