inheritance and bequests

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Abstract

The importance of bequests, their role in capital accumulation, and the motivation behind these transfers has long been the subject of debate among economists. Various models of intergenerational transfers yield different predictions about the responsiveness of bequests to changes in incomes of the donors and recipients and thus to the impact public policy. Yet, despite the intuitive appeal of these models, none has proved to be consistent with empirical patterns. This article discusses the alternative theories of transfer behaviour, examines the empirical work testing their predictions, and discusses the role of estate and gift taxes in affecting bequest behaviour.

Keywords

accidental-bequest motive; altruism; annuities; bequest motive; bequests; charitable contributions; consumption smoothing; estate taxation; exchange motive; gift taxation; health insurance; inheritance taxation; inheritances; *inter vivos* transfers; intergenerational transfers; life insurance; marginal utility of consumption; National Longitudinal Surveys (NLS); pensions; savings behaviour; Social Security (USA); succession laws; tax avoidance; transfer taxation; wills

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Fascination with inheritances and bequests began long before economists formalized models of transfer behaviour. Literature and history are rife with examples of the role of inheritances (for example, Shakespeare's *King Lear*). Societies have laws governing bequest behaviour and governments have long employed bequest, gift and/or inheritance taxes (jointly termed 'transfer taxes') as a means of raising revenue. Economists, in turn, have examined the motivation behind bequests and their importance in driving economic behaviours. These transfers have been theorized to play a central role in the accumulation of wealth, the degree of inequality present in a society, and the interactions among generations. This article touches briefly upon several economic dimensions of inheritances and bequests.

Although the focus in here is on inheritances, the distinction between bequests, made at the time of death, and *inter vivos* transfers, made during life, is somewhat arbitrary. Intended bequests may be made prior to death as a means of reducing estate or inheritance taxes, avoiding other legal requirements pertaining to the settling of an estate (such as probate), or alleviating liquidity constraints and

smoothing the consumption of an intended heir. Conversely, resources transferred during life could well have been saved and transferred at death in the form of a bequest. Indeed, much of the literature attempting to assess the importance of bequests in contributing to the capital stock has included the magnitude of *inter vivos* transfers along with bequests in any calculations. Similarly, economic models of the motivation for bequests are generally applicable to *inter vivos* transfers as well. Finally, in many cases, transfer taxes apply to both *inter vivos* transfers and bequests.

In this discussion I focus primarily on bequests but, where appropriate, I draw on the research examining *inter vivos* transfers as well. I use the generic term 'transfers' to refer to either bequests or *inter vivos* transfers. Also, for ease of exposition I occasionally refer to donors as parents and recipients as children. Obviously, bequests are frequently made to non-child heirs, but the use of this terminology makes the discussion less abstract and also accurately reflects the situation for the majority of bequests.

Much of the literature examining bequests has sought to assess the relative importance of inherited wealth and life-cycle savings as components of the existing wealth stock. Estimates of the relative importance of bequests have varied widely. Numerous researchers have put the fraction of wealth due to transfers at 15–20 per cent (see Modigliani, 1988, for a discussion), but some studies argue that the figure is much higher, concluding that transfers account for a large share of wealth holdings (for example, Kotlikoff and Summers, 1981). Although the existing estimates bracket an extremely large range, even the lower figures indicate that these transfers are an important economic phenomenon and crucial to understanding patterns of savings and life-cycle behaviour. Furthermore, inheritances and *inter vivos* transfers can potentially have substantial impacts on the well-being of the recipient, his economic behaviour, and on broader measures of the distribution of income and measures of inequality.

Intentional versus accidental bequests

The importance of bequests and their impact on macroeconomic measures such as saving rates and individual well-being depends to a great extent on the motivation driving the transfer. One school of thought argues that bequests are accidental, the result of an uncertain length of life. Individuals save to finance consumption during their retirement years and whatever wealth remains when they die is bequeathed to their heirs (Davies, 1981). Because they do not know how many years of consumption they must finance and do not want to exhaust their resources prior to death, individuals will typically die with some amount of wealth. Hurd (1987) tests the data for consistency with an accidental-bequest motive. He argues that, if bequests were intentional, one would find that individuals who had a strong bequest motive would dissave at a slower rate than those with a weak bequest motive. As a proxy for the strength of a bequest motive, Hurd uses the presence of children. He finds no difference in rates of spend-down of assets for those with and those without children, and thus concludes that there is no operative bequest motive: observed bequests are the result of an uncertain date of death.

The uncertainty in this accidental-bequest scenario need not arise solely from uncertainty about the length of life, but could stem from a variety of sources: an individual might conserve assets to guard against expenses arising from a negative health shock, the need for long-term care, or uncertainty about returns on investment.

Additional corroborating evidence for the notion of accidental bequest comes from the failure of many individuals to specify a particular distribution of their estates. Although laws in the United States, as in much of the world, allow an individual to distribute his estate in any way he wishes through the use of a will, the use of wills to divide resources is far from universal. An individual who dies without a will is said to have died intestate. In these cases the assets of the deceased are distributed according to the laws specific to the area in which she resided. In the United States, laws differ by state but earmark a large fraction of the estate for a surviving spouse, followed by children, grandchildren and parents, with shares equally divided within kinship category. Although the reliance on succession laws to distribute assets suggests that the individual may not have thought about bequests and therefore does not have a bequest motive, it can also be argued that, if the succession laws mirror (or come close to) the distribution that the deceased would have chosen herself, a reasonable person might forgo the trouble and expense of writing a will and allow the state to divide her assets. Because wills, when they do exist, typically divide estates equally among children, as do succession laws, the failure to execute a will may indeed reflect a satisfaction with the default distribution.

The chief criticism of the notion of accidental bequests is that an individual who is concerned about uncertain future expenses could instead purchase insurance protecting against these expenditures. Insurance against outliving one's assets is available in the form of annuities which guarantee a stream of income for life and eliminate the possibility of dying with unspent wealth; instruments such as health insurance and long-term care insurance can protect against other types of unplanned expenditures. The accidental-bequest motive thus requires that these insurance markets function imperfectly.

Indeed, the potential for annuities to eliminate the possibility of an accidental bequest has been used to test for a bequest motive. If all wealth is annuitized, one has nothing to leave as a bequest. If complete annuitization is not optimal and a bequest is desired, an individual can convert a portion of his annuity income into a bequest by purchasing a life-insurance policy. Thus, life insurance can be used to offset the effects of an annuity. 'Over-annuitization' may not be uncommon; the prevalence of mandatory old age pensions (either public or private) suggests that many workers may retain a substantial portion of their retirement resources in annuities, perhaps more than they would choose. Bernheim (1991) examines the relationship between annuitization, in the form of US Social Security benefits, and the holdings of life insurance and private pensions. He finds that, conditional on lifetime resources, those with a greater Social Security benefits hold more life insurance and somewhat smaller private pensions. This result suggests that these tools are used to de-annuitize wealth and support the notion of an operative bequest motive. Indeed, the extensive life-insurance holdings observed in the population provide prima facie evidence that individuals are sufficiently concerned about the well-being of their heirs that they are willing to reduce own consumption.

Another argument against the accidental-bequest motive comes from the growing literature on *inter vivos* transfers. The large number of *inter vivos* transfers observed in the data are unquestionably intended and suggest that bequests might likewise be intentional.

Motivation for bequests

If individuals intentionally leave bequests, the next question is: why? What motivates an individual to forgo consumption in order to leave assets to his heirs? Several behavioural models have been offered to address this question, but the results of empirical tests remain inconclusive.

Perhaps the most obvious explanation for the existence of bequests is that donors are altruistic; they care about the well-being of their heirs. The standard specification of the altruism model (Barro, 1974; Becker 1974) includes the heir's utility as an argument in the utility function of the donor. Formally, the utility of the donor (say, parent), U_p , is written as

$$U_p = U(C_p, U_k(C_k))$$

where C_k is the consumption of the heir (say, child). (Note that this formalization is based on very specific assumptions and thus has implications that may differ from what one might more generally regard as altruistic behaviour in other contexts; Pollak, 2003.) Consumption for p and k depend on the resources of each party prior to the bequest and on the size of the bequest. In this specific formulation the donor will make transfers until the marginal utilities are equalized across arguments of the utility function. Because the marginal utility of consumption is assumed to be decreasing, bequests will increase with the income of the donor but decline with increases in the income of the (potential) recipient. If there is more than one child, the parent will endeavour to equalize the marginal utility of consumption across children. Again, because marginal utility is decreasing in consumption, less well-off children will receive larger bequests. Thus, within a family, bequests will be compensatory and will serve to mitigate inequality.

Alternatively, transfers may be part of an exchange regime wherein the donor reimburses the recipient for specific services or behaviours. A parent compensating a child for providing home health care or simply for paying attention to the parent (Bernheim, Schleifer and Summers, 1985) would be an example of possible exchange-related transfers. In this case the donor's utility function has as its arguments her own consumption and the goods or services 'purchased' from the child. Formally,

$$U_p = U(C_p, S_k)$$

where S_k is a measure of services provided to the donor. The price of the services depends on the price of the recipient's time, with services purchased from highincome individuals being more costly than those purchased from low-income individuals. As the price of the good or service increases, the quantity purchased declines. In this case, then, the parent will be less likely to purchases services from a high-income child and the *probability* of a transfer will decline with the income of the child. However, conditional on purchasing services, the relationship between the transfer and the income of the recipient is indeterminate: the total amount of the transfer, price multiplied by quantity, can either rise or fall with the income of the heir, depending on the relevant elasticities.

Several other models have been discussed in the literature but have received less attention. A 'paternalistic' model argues that parents care not just about the utility of their children but about their actual consumption bundles. In this case a parent might bequeath money to a child through a trust specifying that it be used for certain purposes, such as schooling, or available only at certain ages when the parent believes the child's preferences will more closely mirror her own.

A 'warm glow' model posits that donors receive utility from the act of giving itself and not from the impact the gift has on the utility of the recipient (Becker, 1974; Behrman, Pollak and Taubman, 1982; Andreoni, 1989). Such a model might be relevant in the decision to make charitable gifts, wherein the donor is unlikely to observe the increase in utility accruing to the beneficiary as a result of the donation, yet she derives satisfaction from making the gift.

A good deal of research has attempted to discern which of the models best represents observed behaviour. The models are typically written in a static one-period framework and in such a case testing the altruism model is straightforward. Simple tests of the relationship between the probability and amount of the transfer on the one hand and the income of the potential recipient on the other should reveal a negative relationship: that is, transfers should be compensatory. However, there is a stricter test of the altruism model based on the magnitude of the response to variations in the incomes of the donor and the recipient. Specifically, the model requires that, conditional on transfers being made, an increase of one dollar in the income of the donor, accompanied by a decrease of one dollar in the income of the recipient, must be met by an increase of one dollar in the amount of the transfer (Cox, 1987). This test imposes a strict 'adding up' constraint on the estimated coefficients on the donor's and the recipient's income variables in a regression equation for the amount of a transfer (conditional on a positive amount). In contrast to this strict test of the altruism model, nearly any relationship between income and transfers is possible in an exchange regime. This ambiguity makes it difficult to discredit the exchange model. Not only can the relationship between the income of the recipient and the amount of the transfer go in either direction, but the components of the exchange need not be made coincidently, making it difficult to observe both sides of the transaction in data.

Observed patterns

Although *inter vivos* transfers and bequests appear to be substitutes to some extent, the two forms of giving exhibit strikingly different patterns. *Inter vivos* transfers have nearly uniformly been found to be compensatory, with more going to the less well-off children. This negative relationship between the income of the recipient and the probability and amount of a transfer is consistent with the altruism model, but is also consistent with an exchange regime wherein the donor purchases more services from lower-income heirs. Where the strict test for altruism based on the relationship of the income derivatives (that is, the magnitude of the responsiveness of transfers to changes in the incomes of the donor and recipient) has been applied, however, it has failed decisively, with estimated responsiveness closer to zero than to the value of 1 predicted by the model (Altonji, Hayashi and Kotlikoff, 1997).

Perhaps the seminal article testing for the existence of an exchange motive is Bernheim, Schleifer and Summers (1985). In that paper the authors hypothesize that parents hold bequeathable wealth and use the possibility of disinheritance to elicit desired behaviour from their children. The study finds a positive correlation between parental bequeathable wealth and the amount of attention children pay to their parents. Recent work has questioned the empirical results (Perozek, 1998) but the notion of a parent reimbursing a child for the provision of care or other behaviour has some appeal as does the idea of an altruistic parent using bequests to compensate a less well-off child.

Although economists often shy away from directly questioning individuals about their motives, one method of attempting to discern the motivation behind the division of bequests is to ask parents about their intentions. The National Longitudinal Surveys (NLS) included such questions, explicitly asking those respondents who reported that their wills provided for unequal division of their estates why they were allocating their assets in such a way. Light and McGarry (2003) examine this question and find that motives based on altruistic concerns and those based on some sort of exchange were of nearly equal importance.

Despite the predictions of the altruism and exchange models and the compensatory transfers observed for *inter vivos* giving, examinations of both actual bequests and existing wills find that equal division among children is the norm. Some of the first work in this arena found evidence that bequests were compensatory (Tomes, 1981), but other work appeared to contradict this conclusion – for example, Menchik, (1980). More recent studies have found overwhelming evidence that estates are typically equally divided. Wilhelm (1996) uses a sample of US estate tax returns and finds that two-thirds of decedents with two or more children divided their estate exactly equally among the children and three-quarters used a division in which inheritances differed by no more than two per cent from the within-family average. Although Wilhelm's study is necessarily limited to decedents whose estates filed a tax return and who were therefore in the upper tail of the wealth distribution, similar results have been found for the general population. McGarry (1999) examines reports about existing wills for those who are still living and finds that more than 80 per cent of respondents report that their will divides their estate 'approximately equally' among their children.

This equal division is difficult to reconcile with either the altruism or the exchange model, both of which predict a correlation between the income of the recipient and the magnitude of the bequest. This empirical regularity has thus led several authors to propose alternative models of behaviour. Wilhelm (1996) and Bernheim and Severinov (2003) posit that unequal division is costly to parents in that they foresee that such a division could lead to unhappiness on the part of the children/intended heirs. If the difference between the utility obtained through an equal division and that obtained through an unequal allocation is greater than the utility cost (in terms of unhappy heirs) of unequal division, the parent will simply divide her estate equally among her children. McGarry (1999) provides an alternative model wherein the parent's uncertainty about the future incomes of her children lead her to resort to equal division, except in cases where large differences in the future incomes of children are expected.

Transfer taxes

Bequest and inheritance taxes have an extremely long history, dating back thousands of years, and can arouse strong feelings. Historically these taxes have been imposed as a revenue-raising mechanism, often in times of war and as a means of diluting the concentration of wealth (see Johnson and Eller, 2001, for a discussion of the history of estate taxes). In the United States the modern estate tax was implemented in 1916 to help finance the war effort (Joulfaian, 1998). Although the fraction of estates

owing a tax has varied over time, it has typically been small, hovering around two per cent. The future of the estate tax in the United States is uncertain. Under current law the tax is being gradually phased out, to be completely eliminated in 2010 but reinstated in 2011.

The form transfer taxes take varies across countries. In the United States taxes are levied on bequests and gifts, with the tax rate applied, broadly speaking, to the total value of the transfer regardless of how it is divided, although various aspects of the tax code lead to important differences in the cost of the two types of transfers (Jolfaian, 1998). Transfers to spouses and charitable organizations are exempt from tax. Not all governments have used the same approach as that employed in the United States. Many countries instead have enacted inheritance taxes wherein the tax owed depends on the amount received by an individual heir and often on the legal relationship between the decedent and the heir. These different tax bases, and the particular rules governing the evaluation of the transfers, produce varying incentives for the distribution of estates and gifts. However, the specific behavioural responses also depend on the motivation behind transfers. Although uncertainty exists about this motivation and thus about some of the predicted effects, numerous studies have shown that transfers (both inter vivos transfers and bequests) are responsive to tax rates (for example, Bernheim, Lemke and Scholz, 2004; Joulfaian, 2005), and there exist sizable segments of the financial and legal industries devoted to estate planning (that is, reducing estate and gift tax liabilities; see Cooper, 1979, for a fascinating look into methods for tax avoidance).

Despite these findings, and the public sentiment against the tax, several empirical studies have shown that some of the simplest tax avoidance schemes often go unexploited. For instance, in the United States *inter vivos* gifts of less than a given amount in any specific year are exempt from gift tax and can thus be used to 'spend down' a potentially taxable estate. Despite this opportunity, at least half of those whose estates appear likely to incur estate tax do not make such transfers (Poterba, 1998). Numerous hypotheses have been proposed to explain the failure to make 'early bequests', including the fear that the resources will be needed at some future date, the utility obtained from holding wealth, or the mistrust of children and their ability to manage the funds. None of these explanations appears sufficient to explain this behaviour fully.

Charitable giving

Bequests are made not just to individuals but often to charitable institutions. In the United States the tax-exempt status granted to charitable bequests reduces the price of donations to these sorts of organization relative to the price of giving to other non-spousal heirs. Numerous studies have found that the lower tax price substantially increases charitable donations. A recent study by the United States Congressional Budget Office estimates that total charitable bequests would decline by 6 to 12 per cent in the absence of the estate tax, an amount similar to the range of estimates produced by various studies over the years (U.S. Congressional Budget Office, 2004).

Behaviour of heirs

Much of the research assessing the importance of bequests in affecting economic behaviours has focused on the behaviour of the donor, the motivation for the transfer, the response to estate and gift taxes, and the effect of desired bequests on savings behaviour. Less frequently examined is the economic response of the heirs.

From the point of view of the heir, inheritances increase financial resources and would therefore be expected to increase the consumption of normal goods, including leisure. The potential reduction in the labour supply of heirs is often cited as a motivation for a transfer tax (for example, Carnegie, 1962). Despite the theoretical implications, the several studies examining this issue have found relatively small negative effects on earnings of workers (for example, Joulfaian and Wilhelm, 1994). The small responses are not surprising in that the distribution of bequests is extremely skewed, so that for most heirs the amounts received are small relative to their lifetime incomes. Furthermore, as recent work in labour economics has demonstrated, it may be difficult to adjust hours of work on the margin. Indeed, evidence of a negative labour market effect is somewhat larger with respect to whether one participates in the labour force at all (Holtz-Eakin, Joulfaian and Rosen, 1993), suggesting that the length of the working life may be a dimension along which adjustments are more easily made.

Finally, if bequests are fully anticipated, their effect on desired hours of work ought to have been already incorporated into behaviour, and there should be no discernible response at the time the heir receives the inheritance. Thus, only unanticipated bequests or bequests received by previously liquidity-constrained heirs would be expected to spark a change in behaviour. As evidence of the potential importance of liquidity constraints, Holtz-Eakin, Joulfaian and Rosen (1993) find that inheritances can spur entrepreneurial activity.

Conclusion

Bequests play a central role in numerous economic models and as such have long attracted the attention of economists. The strength of the desire to leave bequests and the motivation behind these transfers have direct implications for such fundamental behaviours as life-cycle savings and consumption. From a public policy point of view, bequests affect the accumulation of the capital stock, the distribution of income, and the ties across generations. They also provide a source of tax revenue. Furthermore, estimates suggest that an enormous amount of wealth could be bequeathed in the coming decades, making the issues quite timely.

In attempting to understand the motivation behind bequests economists have offered several theoretical models, all of which have some intuitive appeal. Although no agreement has been reached on the most plausible theory or their relative importance, the recent availability of richer data-sets and the use of administrative records provide some hope that patterns of intergenerational transfers will be better understood. Gaining insight into the motivation behind transfer behaviour will help us to assess the potential impacts of tax policies and public transfer programmes, and to understand more completely the impact of population ageing.

See Also

- altruism, history of the concept
- estate and inheritance taxes
- intergenerational income mobility

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