THE IMPACT OF BEQUESTS ON LIFETIME WEALTH ACCUMULATION: AN ECONOMETRIC STUDY OF TWO GENERATIONS OF RURAL HOUSEHOLDS IN INDIA

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Using retrospective data on bequest receipts and wealth over two generations of rural Indian households, we have estimated the effect of bequest receipts on the lifetime wealth accumulation of recipients. We exploit the availability of data on two generations of the same household by estimating a family fixed effects model that controls for unobserved, intergenerationally-persistent household endowments. Our results suggest an adverse impact of bequest receipts on the wealth accumulation of recipients. This effect is much more negative for the current generation of household heads than for the previous generation, indicating that the disincentive effects associated with bequest receipts have increased substantially over a generation. Such disincentive effects are consistent with the commonly-observed phenomenon of "regression to the mean." The empirical results also show that the positive association between schooling and wealth accumulation has strengthened substantially over the course of a generation, implying rising returns to schooling.

1. Introduction

Although there is a large literature on what motivates parental bequests to children (Tomes, 1981; Blinder, 1973; Menchik, 1979, 1980; David and Menchik, 1980; Kotlikoff and Spivak, 1981; Bernheim et al., 1985), little is known about how such bequests influence subsequent creation and accumulation of wealth by recipients. Yet the relationship between wealth creation and bequests has an important impact on the intergenerational transmission of income and wealth inequality and of poverty.

A priori the impact of bequests on final wealth outcomes is not clear. There are several reasons why bequests might not simply have a one-for-one impact on the wealth of recipients. First, bequests can have a more than one-for-one impact by enhancing recipient productivity at creating new wealth. Second, by having disincentive (behavioural) effects (such as a reduction in labor supply or an increase in consumption) that can reduce future wealth creation or accumulation by recipients, bequests may have a less than one-for-one impact on final wealth.

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Parents seek to minimize the likelihood of the latter event, which is why in modern societies they often "... establish trust funds that limit children's control over resources and thus their opportunities to misuse them" (Pollak, 1987), and in traditional societies parents bequeath their wealth in the form of relatively illiquid assets (such as land). However, anecdotal evidence, as well as the often-observed tendency of "regression to the mean," suggest that the disincentive effects of bequests might not be trivial.¹

Using a unique data set from rural south India, which reports retrospective data on bequests and wealth over two generations, we estimate the effect of bequests on the lifetime wealth of recipients. We exploit the availability on two generations of the same household by estimating a fixed-effects model that controls for unobserved intergenerationally-persistent wealth creation and accumulation propensities. We also test for the intergenerational constancy of the bequest effect on recipient wealth.

2. Theoretical Considerations

Since our objective is not to understand why and how parents make bequests to their children but instead to analyze the effect of bequests already made on the wealth accumulation behavior of recipients, there is little need for a Becker/Tomes-type formal parental utility-maximizing framework. The primary mechanism by which bequests influence recipient behavior is by increasing the recipient's lifetime wealth. Within an intertemporal utility-maximizing model of individual behavior, this increase in full wealth will have several effects, typically of opposite signs.

There will be a full wealth effect on lifetime consumption. Assuming normality of consumption goods, an increase in full wealth will serve to increase the lifetime consumption of a recipient and, assuming no increase in the recipient's wage income, lower his wealth accumulation.

An increase in full wealth brought about by an inheritance will also increase the demand for leisure, and reduce the supply of labor, in all periods (assuming normality of leisure). This will have the effect of lowering the wage income of bequest recipients in each period, which, when combined with the increase in consumption, will serve to lower savings and net wealth accumulation.

However, a recipient may *increase* his productivity, and thereby his lifetime wage income, by investing a portion of the bequest proceeds in himself (viz, in the form of such human capital as health or education). This might be especially true in a traditional society, where farm productivity might be constrained by poor nutrition and health. Strauss (1986) and Deolalikar (1988), among others, have provided convincing evidence to show that the productivity of workers in agricultural activities is influenced strongly by their nutritional and health status. Increased labor productivity and lifetime earnings would have a positive *ceteris paribus* effect on wealth accumulation.

¹For instance, Menchik (1979) found that there was a 25 percent regression to the mean over one generation of wealthy Connecticut households whose probate records could be located. This parameter was obtained as the difference between unity and the elasticity of terminal child wealth with respect to parental wealth (0.759).

Additionally, the marginal return on wealth might itself increase with the level of wealth either due to the existence of scale economies in income or wealth production or because of capital market imperfections. For instance, if credit markets are imperfect and there are increasing returns to scale in farm production, a wealth bequest may enable a farm operator to acquire a contiguous plot of land and enlarge the size of his farm and thereby exploit increasing returns to scale. Similarly, if a recipient faces a credit constraint due to the lack of collateral, a bequest may increase his access to credit, which in turn may strongly influence his wealth accumulation pattern.

It is likely that the effect of a bequest on a recipient's behavior might also depend upon the donor's motives. An unplanned bequest due to lifetime uncertainty may have a different impact than a Becker-Tomes type bequest designed to reduce the gap between generations or among siblings or a Bernheim-Schleifer-Summers type strategic bequest resulting from a game between parents and children. In fact, in the case of a planned parental bequest, one would need to make a distinction between ex post and ex ante recipient behavior, since a recipient may expect a parental bequest to be made and adjust his behavior accordingly before actually receiving his inheritance. Unfortunately, data limitations prevent us from making such a distinction.

Since the various effects of bequests on recipient accumulation behavior discussed above are of different signs, *a priori* the sign of the bequest effect on wealth accumulation by the recipient is indeterminate. The sign, as well as the magnitude, of this effect can only be determined empirically.

3. Data and Estimation

The data we use are part of the Village-Level Studies (VLS) panel data collected by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in rural semi-arid south India (Singh et al., 1985). A total of ten villages, deliberately selected to represent different agro-climatic zones in semi-arid agriculture, were surveyed regularly in the VLS project over the period 1975-76 to 1984-85. A sample of 40 households (30 cultivating and 10 labor) was selected from each village. Not all of the villages were surveyed during each of the 9 years; some were added half-way into the project, while others were dropped at that time. However, a total of 120 households from three villages were surveyed in each of the 9 years. The VLS data contain detailed information on farm management, income, consumption, time allocation and asset ownership.

It should be emphasized that the ICRISAT VLS sample of households is definitely not representative of rural India or, for that matter, rural south India. The sample villages were selected purposively on the basis of soil quality, rainfall, and other agroeconomic considerations. Within the sample villages, as well, equal representation of different farm-size groups was maintained resulting in an

²To ensure equal representation of different farm size groups, cultivating households were first divided into three strata, with each stratum having an equal number of households. From each stratum, 10 households were selected at random, thus ensuring an equal sampling fraction in each farm size group. For labor households, a random selection was made from those who owned less than 0.2 hectares of land and those whose main occupation or source of income was agricultural labor.

oversampling of households at either end of the distribution (viz., agricultural labor and large farm households).

In 1984, a special survey was undertaken, in which retrospective data on marriage, inheritance, and intergenerational changes in land holding and wealth were collected from the heads of all the sample households. Data were obtained on the year in which the head's parents' property division took place and the value of the parental bequests made to the current head and all his siblings at that time. However, since the regular VLS sample did not include siblings of the head who did not reside in the same household as the head, no other information, such as on their age, schooling and current wealth, is available for such siblings. Hence, we have undertaken the analysis in this paper with bequest, wealth and schooling data on only one child from a household of the previous generation (viz., the current head of a VLS sample household).

In addition, the Retrospective Survey of 1984 obtained information on the bequest received by the current head's father (viz., the former head of household) at the time of his father's property division through specially-designed questionnaires that attempted careful reconstruction of important events in a family's history. We have merged the retrospective data with cross-sectional information for 1984 on the wealth and personal characteristics of current household heads. Note that, although the regular VLS sample includes a total of 400 households, retrospective data on bequests and parental wealth could not be obtained for 89 households. Our analysis is, therefore, based on 311 households for whom complete data are available.³

The basic relation we wish to estimate is:

(1)
$$S_i^g = a_i + bB_i^g + cE_i^g + dA_i^g + eZ_i + \mu_i^g$$
, $g = f(ather)$, $c(hild)$,

where

 S_i^g = total real wealth of the gth (g = father, child) generation of the ith household less real value of bequest receipt (i.e., net real wealth accumulation or lifetime savings);

 B_i^g = bequest receipt in constant prices;

 E_i^g = schooling years completed;

 $A_i^g = age;$ and

 Z_i = other household characteristics, such as caste, village dummies and a dichotomous variable for agricultural households.

For the father of the current household head, all the variables, with the exception of bequest receipt, are measured at the time of division of his property among his children (i.e. at the time of his retirement as household head). For the current head, all the variables, again with the exception of bequest receipt, refer to 1984 (viz., the time of the Retrospective survey). Bequests received by both fathers

³A comparison of the descriptive statistics for the entire sample of 400 households with those for the subsample of 89 households who have missing data suggest that the latter group is not very different from the general sample in terms of major household characteristics (such as current wealth, age of the current head, etc.). Therefore, there is no reason to believe that our analysis based on 311 households is subject to sample selectivity bias.

and sons were evaluated at the time of their respective fathers' property division.⁴ All monetary values are expressed in 1984 constant prices.⁵

Schooling is included as a control variable, as it may be associated with large productivity increases in income or wealth generation. Age is included to analyze the life-cycle pattern of accumulation. Finally, caste affiliation, occupation (viz., agricultural labor), and village dummies are also included as additional determinants of wealth accumulation.

A discussion of the wealth accumulation variables used in estimating equation (1) follows. Data on the total amount of wealth owned by the father of the current household head at the time of division of his property was obtained as the sum of bequests made by him to all his children plus any wealth retained by him for their own use. As mentioned earlier, the Retrospective Survey of 1984 obtained information (based on recall) not only on the bequest received by the then current household head, but also on bequests received by the current head's siblings. In addition, information was obtained on property retained, if any, by the parents in their own names at the time of property division. The dependent variable in relation (1) is formed by taking total parental wealth as defined above and subtracting the bequest received by the father of the current head. This gives us the accumulation of wealth by the father over and above the inheritance he received from his father.

The dependent variable for the son is the total value of wealth owned in 1984 by the household of which he was head (in 1984) less the bequests he received from his father at the time of parental property division. There is a problem in using wealth data for 1984 to calculate the lifetime wealth accumulation by sons. While the wealth variable for fathers is a measure of completed lifetime wealth accumulation (since, by definition, none of the sons were household heads at the time of the 1984 survey), none of the children had completed their asset accumulation period by 1984¹⁰. The average age of a household head in 1984 was only 50 years, which meant that he had another 10.5 years of heading the household (since the average age at which former household heads divided

⁴Since most household heads in 1984 were males, we use the term "sons" and "children" interchangeably.

⁵See text below for the price index used to compute real values.

⁶We also tried including a quadratic term in age to allow for a hump-shape life-cycle pattern of accumulation. However, the coefficient on the squared term was consistently insignificant indicating no significant nonlinearities in the age profile of accumulation.

⁷Sometimes parental property in rural India is divided among the children while both parents are still alive. In such situations, the father ceases to be the head of his household, and typically resides (with his wife) in the household headed by their eldest son. Very rarely do the parents retain any portion of their wealth in their own names.

⁸The bequest received by the father is valued in 1984 prices before being subtracted from total parental wealth at the time of property division.

⁹Generally, the law of equal sharing, not of primogeniture, is customary in rural India. Although extended (or joint) households are common in rural India, quite often households break up at the time of parental property division, with the brothers separating and taking equal shares in the father's property. Although daughters are legally entitled for their shares in parental property according to Hindu law, they rarely claim their portion unless they have no brothers. In a sense, however, a daughter collects her share of the parental property in the form of a dowry that is generally paid at the time of her marriage to the groom's household.

¹⁰Most fathers of current household heads were not living in 1984. Those that were, were residing with one of their children.

their properties among their children and ceased to be heads was 60.5 years). To control for incomplete wealth accumulation by current heads, we include the number of years the current head has been household head as an independent variable in relation (1). In addition, the age of the son in 1984 (as well as the age of the father at the time of his retirement as household head), both of which are already included in relation (1), control for incomplete wealth accumulation by sons.

A major empirical problem is the valuation of bequests received at vastly different points in time in 1984 real values. The value in current prices at time t of a past bequest is equal to

$$p^{t}/p^{t'}\cdot (1+r)^{t-t'}\cdot B$$

where t is the current year, t' is the year in which the bequest was received, p represents the price level, r is the real interest rate, and B is the money value of the bequest receipt. Thus, other things equal, a bequest which was received a long time ago is more valuable than one of the same money value received recently, not only because of generally rising price levels (inflation), but also because more time has elapsed in which the earlier bequest can accumulate compound interest.

Since no price indices exist prior to 1960 for the ICRISAT sample villages. we have used the historical price of gold to calculate the value—in constant 1984 prices—of all past bequests and wealth. Despite its apparent arbitrariness, the use of gold prices to deflate (or inflate) nominal values is appropriate for a number of reasons. First, it is the only commodity for which price data are available going back to the last century. Second, after land, gold is the most important form in which rural Indian households have held (and continue to hold) their wealth, largely because of its ease of liquidity and the absence of capital markets. While land is a major asset, land transactions are rare in rural India, with few plots ever changing family hands (Rosenzweig and Wolpin, 1985). Under these circumstances, it is reasonable to expect that the decision to invest in any asset is made by comparing its return to the returns from holding gold. In other words, in the absence of capital markets, the price of gold functions effectively as the real market rate of interest. Third, while the use of the gold price as a deflator may produce a systematic bias in the context of a rapidly growing economy (in which agricultural investment and technological opportunities were changing the price of land and other agricultural assets relative to gold), the region under consideration (viz., semi-arid rural south India) is not only one of the poorest in India, but also one of the most stagnant technologically. Finally, by including the number of years elapsed between receipt of a bequest and measurement of terminal wealth (viz., the number of years an individual was or has been head of his household), we control for any compounding effects of bequest returns that are not captured by movements in the price of gold over time.

The a_i 's in relation (1) are unobserved household endowments that persist over generations. These might include superior health or other hereditary endowments that permit some households to consistently (from one generation to the next) outperform others in generating income and wealth. The fixed effects could also reflect the propensities of some households (say, of certain ethnic back-

grounds) to save more out of given incomes. Finally, the fixed effects might also represent locational advantages (such as regular rainfall or fertile soil) enjoyed by some households.¹¹ The failure to control for these unobserved household effects will result in upwardly biased estimates of b, since better-endowed households are likely to make larger bequests to the next generation and also create and accumulate more wealth in the current generation.

We control for unobserved household fixed effects by differencing equation (1) across fathers and sons:

(2)
$$\Delta S_i = b\Delta B_i + c\Delta E_i + d\Delta A_i + \Delta \mu_i,$$

where Δ is the difference operator (between father and son) (e.g. $\Delta S_i = S_i^f - S_i^c$).

The only problem with equation (2) is that it assumes constancy of the structural parameters (viz., b, c and d) over a long period of time. It is quite likely that parameters, such as the marginal propensity to save and the returns to schooling, have changed substantially over a generation. Fortunately, there is a relatively straightforward way of relaxing this restrictive assumption within a fixed-effects framework. The following equation allows all parameters to vary across fathers and sons:

(3)
$$S_i^g = a_i + a^g + b^g B_i^g + c^g E_i^g + d^g A_i^g + e^g Z_i + \nu_i^g,$$

Differencing equation (3) across fathers and sons yields:

(4)
$$\Delta W_{i} = (a^{f} - a^{c}) + b^{f} \Delta B_{i} + (b^{f} - b^{c}) B_{i}^{c} + c^{f} \Delta E_{i} + (c^{f} - c^{c}) E_{i}^{c} + d^{f} \Delta A_{i} + (d^{f} - d^{c}) A_{i}^{c} + (e^{f} - e^{c}) Z_{i} + \Delta \nu_{i},$$

where Δ is the difference operator as defined for equation (2). The appealing feature of equation (4) is that it not only permits all coefficients to differ across the two generations, but it also allows a direct test of the intergenerational constancy of parameters. The coefficients on the levels variables (for the son) can be interpreted as the intergenerational changes in parameter values, while those on the differenced variables reflect parameters of the wealth equation for the father.¹²

4. EMPIRICAL RESULTS

The variable means and standard deviations are reported in Table 1. Bequests appear to have declined in magnitude (in real terms) over the two generations. On average, current household heads and their fathers inherited approximately similar amounts (Rs. 68,905 and Rs. 64,005, respectively, in 1984 prices) from

¹¹Since there is very little migration in this part of India, locational advantages can persist over generations.

¹²Note that an alternative and *ad hoc* interpretation of relation (2) is that a well-educated son whose father had no formal education is expected to do better (relative to his father's wealth accumulation) than one whose father had the same level of education that he does, since the difference in wealth accumulation behavior between father and son is posited to depend on, among other things, the difference in their schooling levels. Relation (4) relaxes this constraint by postulating that a son's success at wealth accumulation vis-a-vis his father depends not only on the additional education he possesses relative to his father but also on his absolute level of education.

Table 1

Variable Dictionary: Rural Indian Households, 1984

| Variable | Mean | Std. Dev. |
|---|-----------|-----------|
| Current head of household: | | |
| Total wealth (1984 prices) in 1984 ^a | 53,925.0 | 73,665.0 |
| Value of bequest received | 68,905.0 | 144,513.0 |
| Wealth accumulated up until 1984 over and above bequest receipt | -14,623.0 | 139,491.0 |
| Year of becoming household head (also the year of father's property division) | 62.0 | 13.0 |
| Schooling years | 2.4 | 3.2 |
| Age in 1984 | 50.0 | 12.0 |
| Father of current household head: | | |
| Terminal wealth (1984 prices) at the time of property division | 94,550.0 | 168,722.0 |
| Value of bequest received | 64,005.0 | 112,994.0 |
| Lifetime wealth accumulated over and above bequest receipt (1984 prices) | 30,171.0 | 119,070.0 |
| Schooling years | 1.0 | 2.3 |
| Age at the time of property division | 60.5 | 10.3 |
| Number of observations | 311.0 | |

^aAll values are in 1984 prices. See text for the deflator used.

their parents.¹³ However, while fathers of current heads converted their inheritance of Rs. 64,005 into a terminal wealth stock of Rs. 94,550 on average (reflecting net wealth creation of Rs. 30,545) during their tenure as household heads, their sons on average eroded the real value of their inheritance to Rs. 53,925 (reflecting net wealth depletion of Rs. 14,980) in approximately 22 years as household heads.

To estimate equations (1) and (3), we have pooled the data for fathers and sons. For equations (2) and (4) we have differenced all variables (except village dummies, occupation and caste) across fathers and sons within the same household. Parameter estimates of equations (1) and (2) are reported in Table 2, while those of equations (3) and (4) are shown in Table 3. We first discuss the OLS estimates, and then indicate how the differenced estimates are different.

The pooled restrictive (equation 1) estimates suggest strong positive effects of age, schooling and high-caste affiliation, but a negative effect of bequest received, on lifetime wealth accumulation. The coefficient on bequest is estimated to be -0.56, indicating that, bequest recipients reduce their own lifetime wealth accumulation by Rs. 0.56 for every additional rupee inherited. Thus, their total lifetime wealth increases by only Rs. 0.44 for every additional rupee they receive in bequest.

On allowing the parameters of the accumulation equation to vary across generations (equation 3), a sharp difference in the accumulation behavior of fathers and sons is observed. In particular, while the effect of inheritance on own wealth accumulation was only -0.08 for household heads of the previous generation, the effect for their sons is as large as -0.87 (=-0.08-0.79). There thus appears to have been a sharp increase in the disincentive effects associated with

¹³All values referred to hereafter are in constant 1984 Rupees. Also, the discussion of bequest and wealth values below relates to the mean characteristics of the sample.

TABLE 2

LIFETIME REAL WEALTH ACCUMULATION BY CURRENT HOUSEHOLD HEADS AND THEIR FATHERS: POOLED OLS ESTIMATES, RURAL INDIA, 1984

| | Equation with Assumption of: | | |
|---|--|--|--|
| - Independent Variable | Identical Parameters for Fathers and Sons | Varying Parameters for Fathers and Sons | |
| Intercept | -61,867.1 | -103,162.62 | |
| | (2.2) | (2.6) | |
| Dummy for son | | 84,008.23 | |
| | | (1.7) | |
| Number of years as head × Dummy for son | -1,001.77 | -22.66 | |
| | (3.4) | (0.1) | |
| Age | 1,618.31 | 1,782.73 | |
| | (4.7) | (3.5) | |
| Age × Dummy for son | | -1,109.41 | |
| | | (1.6) | |
| Schooling years | 7,066.70 | 6,927.99 | |
| | (4.5) | (2.9) | |
| Schooling years × Dummy for son | | 1,031.44 | |
| | | (0.4) | |
| Bequest received | -0.56 | -0.08 | |
| • | (16.9) | (1.8) | |
| Bequest received × Dummy for son | | -0.79 | |
| • | | (13.0) | |
| Dummy for high caste | 53,646.84 | 46,004.24 | |
| | (3.9) | (2.6) | |
| Dummy for high caste × Dummy for son | | 3,724.22 | |
| | | (0.2) | |
| Dummy for medium high caste | 17,576.24 | 892.43 | |
| | (1.2) | (0.1) | |
| Dummy for medium high caste × Dummy for | | 22,685.70 | |
| son | | (0.9) | |
| Dummy for medium low caste | 5,048.44 | -4,860.31 | |
| - | (0.4) | (0.3) | |
| Dummy for medium low caste × Dummy for | | 14,481.48 | |
| son | | (0.6) | |
| Dummy for agricultural labor household | 29,680.94 | 48,563.62 | |
| | (1.1) | (1.4) | |
| Dummy for agricultural labor household× | | -31,235.28 | |
| Dummy for son | | (0.7) | |
| R-Squared | 0.37 | 0.54 | |
| K-Squared F-Ratio | 22.98 | 22.46 | |
| Number of observations | 675 | 675 | |

Note All variables, with the exception of bequests, are measured in 1984 for sons and at the time of parental property division for fathers. For more precise definitions, see text. A full set of village dummies were also included, but their coefficients are not reported owing to space considerations.

bequests over the course of a generation. Estimates of equation (3) also indicate that the slope of the age profile of wealth accumulation is much flatter for sons than for fathers. Thus, holding other factors constant, sons do not seem to save as much with age as their fathers did.

The primary effect of controlling for unobserved household endowments (that are assumed to be invariant across generations of the same household)

Table 3

Lifetime Real Wealth Accumulation by Current Household Heads and their Fathers: Differenced Estimates Across Fathers and Sons, Rural India, 1984

| | Equation with Assumption of: | | |
|--|--|--|--|
| Independent Variable | Identical Parameters for Fathers and Sons | Varying Parameters for Fathers and Sons | |
| Intercept | 21,251.77 | 17,028.91 | |
| - | (1.0) | (0.3) | |
| Son's number of years as head | 535.08 | -400.41 | |
| | (0.7) | (0.7) | |
| Difference in age | 1,174.21 | 610.24 | |
| | (1.8) | (0.9) | |
| Son's age in 1984 | | 28.21 | |
| | | (0.0) | |
| Difference in schooling years | 105.53 | -100.3 | |
| | (0.0) | (0.0) | |
| on's schooling years | | -5,628.25 | |
| 2,7 | | (1.8) | |
| Difference in bequest received | -0.74 | -0.16 | |
| | (14.9) | (2.7) | |
| Bequest received by son | | 0.92 | |
| 4 | | (13.5) | |
| Dummy for high caste | | -3768.00 | |
| , , | | (0.2) | |
| Dummy for medium high caste | | -19,091.70 | |
| J | | (0.8) | |
| Dummy for medium low caste | | -12,573.10 | |
| - | | (0.6) | |
| Dummy for agricultural labor household | | 2,0052.93 | |
| - 0 | | (0.6) | |
| R-Squared | 0.42 | 0.70 | |
| F-Ratio | 56.34 | 33.79 | |
| Number of observations | 311 | 311 | |

Note: All variables, with the exception of such time-invariant household characteristics as caste and agricultural labor occupation, are differenced across fathers and sons. Further, all variables, with the exception of bequests, are measured in 1984 for sons and at the time of parental property division for fathers. For more precise definitions, see text. The coefficients on the differenced right-hand variables can be interpreted as the relevant parameters for fathers, while those on the levels variables (for sons) can be interpreted as the change in parameters over the two generations. To obtain the relevant parameters for sons, the coefficient on the levels variable has to be subtracted from the coefficient on the respective differenced variable. See relation 4. A full set of village dummies were also included, but their coefficients are not reported owing to space considerations.

(equation (2)) is to reduce the magnitudes of almost all estimated coefficients. This is a standard result of differencing (or fixed-effects estimation techniques), and suggests that the unobserved household endowments, such as superior health or other hereditary factors and locational advantages (such as regular rainfall of fertile soil), are positively correlated with the included variables like bequests and schooling.

As in the case of the pooled OLS estimates, the household-differenced estimates of the flexible form (equation (4) of the wealth accumulation equation differ substantially from those of the restrictive form. In particular, while the restrictive form estimates indicate an effect of bequests on own wealth accumula-

tion of -0.74, the flexible form suggests this effect to be -0.16 (significantly different from zero) for household heads of the previous generation and -1.08 (=-0.16-0.92) (significantly different from zero, but not from one) for their sons. Thus, our most reliable estimates indicate fully compensatory behavior on the part of bequest recipients of the current generation; in other words, the own wealth accumulation of bequest recipients declines by almost one Rupee for every additional Rupee received in the form of a bequest, so as to leave their terminal wealth unchanged.

Estimates of relation (4) also indicate that, while the effect of education on own wealth accumulation was not significantly different from zero for household heads of the previous generation, it is large, positive and significant for their sons. Thus, the returns to schooling have increased significantly over time, even in the context of the rural sector.

Our empirical results imply a very sharp decline in the own wealth accumulation efforts of the current generation of household heads with bequest receipts, and are indicative of large (and increasing over time) disincentive effects associated with bequests. What could be some of these effects? A complete analysis of these effects is beyond the scope of this paper, and we can only conjecture on what these effects might be and why they may have increased over a generation.

In a situation of increasing demographic pressure on families, it is quite likely that increasingly larger proportions of inherited wealth are used by households for satisfying their growing consumption needs, and smaller proportions are devoted to investment and wealth accumulation. In the sample under consideration, the average size of households has increased over a generation, implying increased demographic pressure. At the same time, while the previous generation generally experienced stable prices of assets, such as gold, land and cattle, the last several decades have seen a sharp increase in the relative price of assets (to consumption goods) in rural India. The *ceteris paribus* effect of rising relative prices of investible assets is generally to reduce asset accumulation and saving.

CONCLUDING REMARKS

Using a unique retrospective data set from south India on bequest receipts and wealth over two generations of rural households, we have estimated the effect of bequest receipts on the lifetime wealth accumulation of recipients. We exploit the availability of data on two generations of the same household by estimating a household-differenced model that controls for unobserved intergenerationally-persistent wealth-accumulation propensities. We also test for the intergenerational constancy of the bequest effect on wealth accumulation.

Our results suggest an adverse impact of bequest receipts on the wealth accumulation of recipients. This effect is much more negative for current heads of households than for previous heads, indicating that the disincentive effects

¹⁴Note that the coefficients on the differenced right-hand variables can be interpreted as the relevant parameters for fathers, while those on the levels variables (for sons) can be interpreted as the change in parameters over the two generations. To obtain the relevant parameters for sons, the coefficient on the levels variable has to be subtracted from the coefficient on the respective differenced variable. See relation 4.

associated with bequest receipts (such as an increase in consumption of goods, services, and leisure) have increased substantially over a generation. Such disincentive effects are consistent with the commonly-observed phenomenon of "regression to the mean," and imply that the interhousehold distribution of bequests is more unequal than the interhousehold distribution of terminal wealth.

The empirical results also show that the positive association between schooling and wealth accumulation has strengthened substantially over the course of a generation, implying rising returns to schooling, even in the rural areas of south India.

Our study indicates a need for further research in this important area and, in particular, for a better understanding of the exact reasons for and mechanisms through which the 'returns' to bequests have fallen while those to schooling have increased over a generation.

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