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7 The Intergenerational Transmission of Wealth: Does Family Size Matter?

James D. Smith and Guy H. Orcutt

The progeny of small families are likely to inherit more wealth than are children with greater numbers of siblings for two rather simple reasons: parents of smaller families can save more, and they have fewer heirs among which to leave their accumulated wealth. If subpopulations such as Catholics and blacks have larger than average families and Jews tend toward smaller families, this simple demographic fact may have a substantial impact on the distribution of wealth which is unrelated to any overt or subtle discriminatory behavior of the dominant population.

How large are the effects of family size likely to be? An adequate data base to answer the question directly does not exist. We therefore created a synthetic population with the characteristics of the 1962 U.S. population and used a microsimulation system (MASS) to explore the importance of family size on inherited wealth.[1]

7.1 An Initial Population for Simulating the Transmission of Wealth

An analysis of the limited information on inherited wealth provided by the *Survey of Financial Characteristics of Consumers* suggests that social-economic variables usually measured in field surveys explain very little of the variance in the probability of inheriting, or of the value of inherited wealth (Projector and Weiss 1966). Age, sex, marital status, income level, and occupation are very poorly associated with the dependent variables. The most important and rather obvious predictors of inheritances are the wealth, age, and marital status of one's surviving

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parents and the number of one's siblings. We are unaware of a data base in which these variables are associated with inheritance.

Although a population has never been measured in a field survey with genealogical links among the units of observation, enough information existed to build a synthetic population. We started with a sample representation of the 1960 U.S. population which was 'grown' from the 1860 U.S. Census of Population by Peabody.[2] The 1960 Peabody population has a limited set of characteristics. These include age, race, sex, and marital status. The population consists of 1,115 families, and each person in each family carries the identity of his mother, father, and children. These relatives either exist within the same family, are members of other families in the population, or have died. Thus, it is possible to identify at least three generations of relatives within the same sample population. When the population was grown Peabody did not have operating characteristics to generate values for economic variables such as income, assets, and labor force participation. This would have required historical information at the microlevel which was and is not available. The important and unique value of the Peabody population is its genealogic links.

To utilize the links it was necessary to superimpose them on a contemporary U.S. population sample containing a sufficiently large set of personal characteristics to simulate economic activity such as earning and saving, and social behavior such as marriage, birth, divorce, and death. All of this, of course, was for the purpose of generating the accumulation of wealth by individuals in the social context of families and its disbursal upon their death to their heirs. For this purpose we chose the 1/10,000 1960 Census Public Use Sample which had had wealth variables imputed to it.[3]

We imposed the genealogical links in the Peabody population on the 1960 Public Use Sample in a manner which preserved the covariance between relatives of the key variables age, sex, race, and marital status. The Public Use Sample contained about 7,500 families, while the grown 1960 population consisted of only about 1,100 families. Consequently, the genealogical links of each family in the grown population were used an average of about seven times.

We proceeded as follows:

1. Each *family* in each data base was classified by the age, sex, race, and marital status of its head.[4]
2. Heads and wives in families in each data base were all classified according to their own age, sex, race, and marital status.
3. All families in the Peabody population were arrayed into groups according to their age, sex, race, and marital status of their heads.
4. All *heads* and *wives* in the Public Use Sample were grouped by age, sex, race, and marital status characteristics.

5. Each family in turn was selected from the Public Use Sample. A family was drawn from the appropriate group of Peabody families so that the characteristics of the heads of the two families matched. The age, sex, race, and marital status of the head's father and mother and the wife's father and mother in the Peabody family were then used to select individuals from the Public Use Sample to be the parents of the head and wife in the Public Use Sample.

At the end of this process we had a file in which each person in the 1960 Public Use Sample "knew" who were his mother and father or child (up to 10 children), whether they lived together or in another family.

7.2 Driving the Initial Population Forward

The simulation system MASS, for Microanalytic Simulation System, was developed as a broad gauged model with an emphasis on economic behavior. For the work reported here we incorporated a "post office" into it which permits individuals to send one another messages during simulation runs.[5]

In a MASS simulation, marriages, divorces, births, and deaths take place; individuals participate in the labor force and receive income from labor, transfers, and wealth. Consumption takes place out of income and family saving occurs (See Orcutt and Glazer 1976). When a death occurs, relatives of a decedent are notified of the event by messages sent through the post office.[6]

In the real world death and transference of ownership of a decedent's wealth impose certain costs upon an estate and/or surviving relatives. The most important of these are are associated with last illness, burial, executors' and lawyers' fees. Cost functions for each of these were estimated using data from federal estate tax returns and incorporated into the simulation model. The estimated parameters for these operating characteristics are are shown in appendix 1. Many decedents' estates have little wealth to distribute after payment of these costs of dying. This is particularly true of the very young and the old. When death costs are fully accounted for, some decedents leave negative estates.[7]

Wealth transferred from one generation to another may also be eroded by death taxes. At the federal level, about 5 percent of estates are taxed. A rough representation of the pre-1972 estate tax statute is used in the simulations.[8]

The simulated events which take place each year are outlined in figure 7.1. They take place at the individual level. Events and changes in status which take place during a simulation year are, for the most part, stochastically determined using annual probabilities of occurrence. A few changes, such as age incrementation, are purely mechanical.

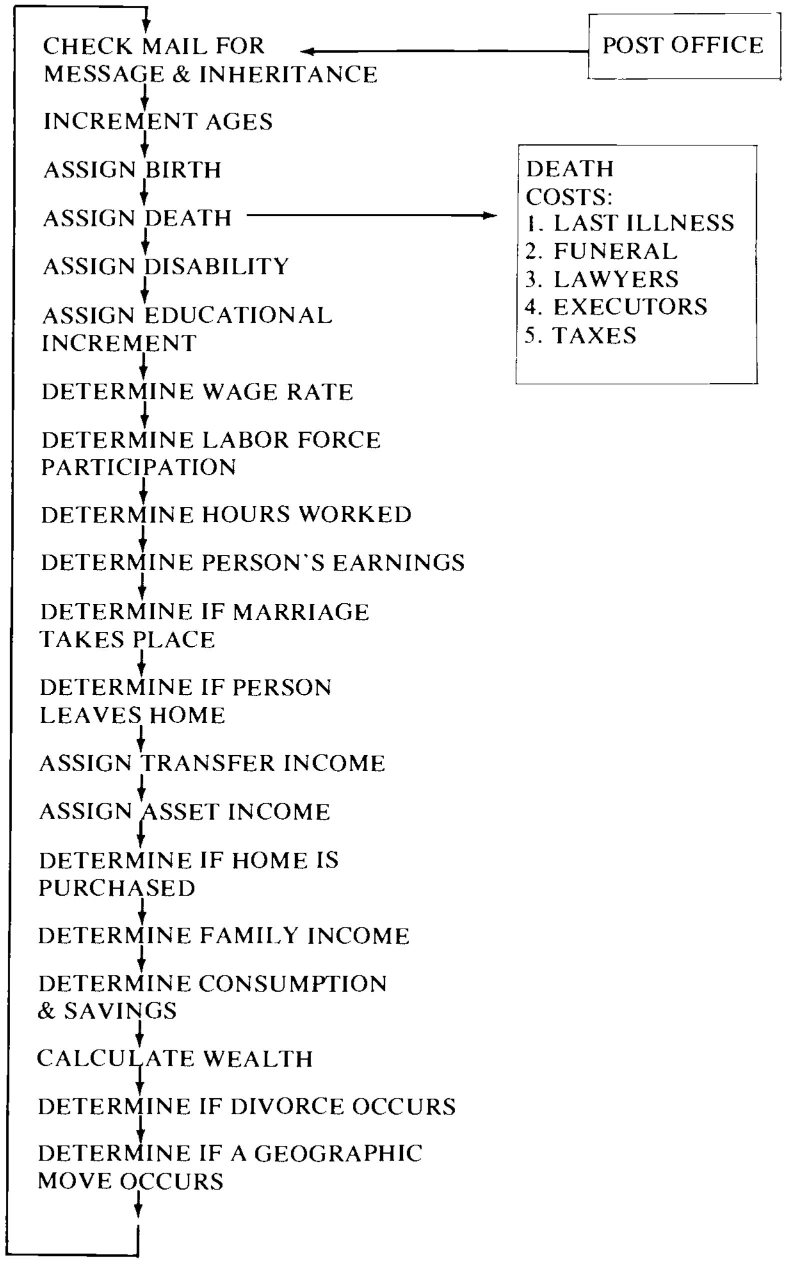

Fig. 7.1 Sequence of MASS Operations

In a simulated year the first thing which each person in each family does is to check his "post office box" for messages. In this particular application the messages are limited to information that a relative has died or a relative has died and left him assets.

This information is used in two ways. First, since every person in the population keeps a record of the names of his living kin, messages about the deaths of relatives are used to update their records, which we can think of as electronic family bibles.[9] Secondly, when one finds a relative died and bequeathed him wealth, he takes it and adds it to his own assets and to those of his family if he is the head or wife in a family. (All wealth owned by married persons in our simulated world is shared equally with their spouses.) Wealth inherited by children living at home is kept by them and not considered as part of the family's wealth. By the same token, when a child leaves home he takes only his own wealth.

After checking his post office box for information, a person's age is incremented. He or she is then given a chance of giving birth, dependent upon sex, marital status, age, race, education, number of children born, and parity (see Orcutt, Glazer, Jaramillo, and Nelson 1976).

The next step in the simulation is the assignment of death. If death occurs, a message is put into the post office box of "known" relatives of the decedent. An estate is set up and probated. The estate begins with the decedent's net worth at the time of death. From this the cost of last illness is subtracted (see appendix). The estate of each decedent is charged with the cost of a funeral, and the fees of executors and lawyers are calculated and charged against it as well.

Finally, an estate tax is levied. It provides for a \$100,000 personal exemption after the above costs have been subtracted. The value of the estate after the exemption is treated as the taxable estate. The tax rates used are a function of the size of the taxable estate and are computed as follows:

$$\begin{aligned} \text{ESTRATE} = {} & .05 + .015(\text{TXBLEST}'/10{,}000) \\ & + .02(\text{TXBLEST}''/100{,}000) \\ & + .03(\text{TXBLEST}'''/1{,}000{,}000) \end{aligned}$$

where TXBLEST′ is the value of the taxable estate under \$100,000; TXBLEST″ is the value of the taxable estate from \$100,000 to \$999,-999 and TXBLEST ‴ is the value of the estate in excess of \$999,999. For example, a taxable estate of \$1,200,000 would have a tax rate of 40.6% (.05 + .15 + .20 + .006).

After the taxable estate has been reduced by the estate tax, the remaining estate is distributed to heirs according to the following devolution rules.

1. If there is a surviving spouse, the entire distributable estate devolves to the spouse.
2. If there is no surviving spouse, the distributable estate is divided evenly among surviving children.
3. If there are neither children nor spouse surviving, the distributable estate passes equally to the decedent's surviving parents.
4. If there are neither children, spouse, nor parents surviving, the distributable estate goes into the kitty.[10]

We will not describe the remainder of the general simulation of MASS outlined in figure 7.1. The reader is referred to Orcutt et al. (1976) for a complete description of the other operating characteristics.

Our hypothesis that children with fewer siblings receive larger parental wealth bequests than do children with more siblings follows from the reasoning that other things being equal, parents with fewer children save more, and wealth is passed to surviving children in equal shares. Although this proposition has face and some empirical validity, it is seldom noted in the wealth distribution literature, and its importance vis-à-vis other factors is unknown.

In table 7.1 the simulated amounts bequeathed and received by persons with different numbers of siblings is shown for twelve years. We denote the period of the simulation as 1960 to 1972. The interpretation of the simulation, however, is not dependent upon its alignment with some historical period. The results are most appropriately thought of as belonging to an interval of lapsed time, rather than a period of history.

It should be noted in table 7.1 that the results of the first simulation year (1960) show the value of bequests to be several times greater than the inheritances received. In a society in which wealth is increasing and there is a lag between the time when a person dies and the time his heirs inherit, there is a tendency for inheritances in a year to be less than bequests. The great difference shown for 1960, however, is largely mechanical, reflecting the fact that in the first year of the simulation everyone in the population had a chance of dying and bequeathing an estate, but no one had a chance of inheriting from a relative who died in year t-1. Once the simulation is underway, the amounts bequested and inherited begin to converge.

The most striking information provided by the table is the concentration of inheritance in persons with no more than three siblings. The values shown are in billions of dollar amounts of the inheritance. There are, of course, bequests to persons with greater numbers of siblings, but bequests with positive values are offset by negative bequests. A negative bequest comes about because a decedent leaves little or no wealth and the costs of last illness and funeral expenses are "inherited" by his kin. This is clearly the real world situation for decedents who are young children and for a reasonable number of decedents who are unmarried

Table 7.1 **Value of Annual and Cumulative Bequests and Inheritance by Number of Siblings of Benefactors and Inheritors over a Simulated 12-Year Period (amounts in billions of dollars)**

	1960		1961		1962		1963		1964		1965		1966	
No. of Siblings	Year	Cum.	Year	Cum.	Year	Cum.	Year	Cum.	Year	Cum.	Year	Cum.	Year	Cum.
0–1 siblings														
Bequests	19.0	19.0	14.6	33.6	24.9	58.5	11.1	70.0	24.5	94.0	23.0	117.0	23.1	140.2
Inheritance	3.3	3.3	14.8	18.1	11.9	30.0	17.4	47.4	11.5	58.9	16.5	75.4	14.4	89.8
Kitty	1.0	1.0	0.8	1.8	5.9	7.6	0.1	7.7	6.0	13.6	8.6	22.3	2.3	24.6
2 siblings														
Bequests	−0.1	−0.1	0.0	−0.2	−0.1	−0.3	−0.2	−0.5	−0.1	−0.6	−0.1	−0.7	−0.1	−0.8
Inheritance	0.0	0.0	0.5	0.5	0.3	0.8	0.8	1.7	0.5	2.2	−0.1	2.1	0.7	2.8
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 siblings														
Bequests	−0.1	−0.1	−0.1	−0.2	0.0	−0.2	−0.2	−0.3	−0.1	−0.4	−0.1	−0.4	−0.1	−0.5
Inheritance	0.0	0.0	0.1	0.1	0.7	0.8	0.5	1.3	0.0	1.3	0.1	1.4	0.0	1.4
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 siblings														
Bequests	−0.1	−0.1	−0.1	−0.2	0.0	−0.2	0.0	−0.2	−0.2	−0.4	−0.1	−0.5	−0.1	−0.5
Inheritance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.2
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 siblings														
Bequests	−0.1	−0.1	0.0	−0.1	0.0	−0.2	0.0	−0.2	0.0	−0.2	0.0	−0.2	0.0	−0.2
Inheritance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 siblings														
Bequests	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	−0.1	−0.1	−0.1	−0.2
Inheritance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7 or more siblings														
Bequests	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	−0.1	−0.1	0.0	−0.1	0.0	−0.1
Inheritance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 7.1—*continued*

No. of Siblings	1967 Year	1967 Cum.	1968 Year	1968 Cum.	1969 Year	1969 Cum.	1970 Year	1970 Cum.	1971 Year	1971 Cum.	1972 Year	1972 Cum.
0–1 siblings												
Bequests	21.7	161.9	11.1	173.1	35.7	208.7	18.9	227.6	26.6	254.3	14.8	269.1
Inheritance	19.7	109.5	17.3	126.9	14.5	141.3	24.6	165.9	12.9	178.8	21.6	200.5
Kitty	2.9	27.5	0.3	27.8	7.1	34.9	1.4	36.4	5.4	41.7	−0.2	41.5
2 siblings												
Bequests	−0.1	−0.9	−0.4	−1.3	−0.1	−1.4	−0.2	−1.6	−0.2	−1.8	−0.3	−2.1
Inheritance	0.3	3.1	0.7	3.8	0.1	3.9	−0.1	3.8	0.3	4.2	1.7	5.9
Kitty	0.0	0.0	−0.2	−0.2	0.0	−0.2	0.0	−0.2	−0.1	−0.2	−0.1	−0.3
3 siblings												
Bequests	−0.1	−0.6	0.0	−0.6	−0.1	−0.7	−0.4	−1.2	−0.6	−1.8	−0.1	−1.8
Inheritance	0.0	1.3	0.0	1.3	0.0	1.3	0.2	1.5	0.5	2.0	−0.1	1.9
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	−0.1	−0.1	0.0	−0.1
4 siblings												
Bequests	−0.1	−0.7	−0.1	−0.7	−0.1	−0.8	0.0	−0.8	0.0	−0.8	−0.3	−1.1
Inheritance	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	−0.2	0.0
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 siblings												
Bequests	−0.2	−0.4	0.0	−0.4	−0.1	−0.4	−0.3	−0.8	0.0	−0.8	0.0	−0.8
Inheritance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 siblings												
Bequests	0.0	−0.2	−0.2	−0.4	0.0	−0.4	−0.1	−0.4	0.0	−0.4	−0.1	−0.5
Inheritance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7 or more siblings												
Bequests	−0.1	−0.2	0.0	−0.2	0.0	−0.2	−0.1	−0.3	−0.3	−0.5	−0.2	−0.7
Inheritance	−0.1	−0.1	0.0	−0.1	0.0	−0.1	0.0	−0.1	0.0	−0.1	0.0	−0.1
Kitty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: The initial population has characteristics which have been aligned with that of the U.S. population in 1960, but the intent here is not to track historical time.

children living away from home. In the simulation, when these individuals died the negative value of their distributable estate was sent to their surviving parents. Elderly persons who died during the simulation were also frequently poor. The negative value of their estates was bequeathed to their surviving spouse or children. As noted above, life insurance contracts are not included in the model at this time. Their inclusion is likely to make considerable difference in the value and distribution of intergenerational transfers. The same would be true of health insurance, and to a much smaller extent, Social Security death benefits.[11] To further illustrate the importance of number of siblings on the level of inherited wealth, we produced a simple cross-tabulation, shown here in table 7.2. In the table there is a definite inverse relation between number of siblings and amount of inherited wealth. Ninety-four percent of persons who inherited $15,000 or more over the twelve-year period were either only children or had one sibling. Only about one percent of those who had three siblings inherited $15,000 or more in the same period. For practical purposes, virtually all persons with four or more siblings, i.e., from families with five or more children, inherited less than $1,000 in the twelve years of simulation. It should be kept in mind that the probability of inheriting anything in a given year is not very great. In a given year about one percent of the population dies. If each decedent had an average of four survivors unrelated to any other decedent, only about four percent of the surviving population would receive an inheritance (including a negative or zero-valued inheritance). One would like to look at lifetime inheritance to better understand the importance of of family size for ultimate wealth status. Work is progressing to run simulations of one-hundred-years' duration to further the exploratory efforts presented here.

Table 7.2 **Percent Distribution by Value of Inheritance and Number of Siblings after Twelve Years of Simulation (row %/column %)**

	Amount Inherited				
No. of Siblings	< $1,000	$1,000 < $3,000	$3,000 < $5,000	$5,000 < $15,000	≥ $15,000
0–1	92.6/59.7	1.2/87.1	0.7/87.2	2.6/93.9	2.9/94.2
2	98.4/10.5	0.1/ 1.4	0.1/ 1.2	0.7/ 4.1	0.7/ 3.9
3	98.6/10.8	0.7/ 8.2	0.1/ 2.3	0.3/ 2.0	0.3/ 1.8
4	99.5/ 9.0	0.0/ 0.0	0.5/ 9.3	0.0/ 0.0	0.0/ 0.0
5	99.4/ 4.7	0.6/ 3.4	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
6	100.0/ 2.4	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
7 or more	100.0/ 2.8	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0

Appendix

Cost of Last Illness

Nearly all deaths impose medical costs on the estates of decedents. Where there is a prolonged terminal illness, the medical costs may be substantial. The deductibility of these costs for purposes of calculating taxable estate on the federal estate tax return provided a data base to estimate the relation of the cost of last illness to other characteristics of decedents. The cost of last illness was estimated using AID-III.[12]

In figure 7.A.1 the result of the AID analysis is shown. The five final groups explain 5.4 percent of the variance in the cost of terminal illnesses as reported on federal estate tax returns. One would not expect to explain a great deal of the variance with the variables available to us, but there is a systematic, positive relationship between net worth and cost of last illness. The only other variable which contributed significantly to reducing the original variance was age of decedent. Thus, only these two characteristics of decedents were used in the attribution of last illness costs. The actual attribution of the cost was unsophisticated; the expected value was assigned within each characteristic class.

Attorneys' Fees

Attorneys' fees are a deductible item in the federal estate tax. Consequently, they are available from the estate tax return. When AID was used to split the population into groups such that a regression of attorneys' fees on gross estate within groups would produce the greatest reduction of variance relative to a regressions on the total set of observations, 51.1 percent of the variance was explained. Age and marital status of decedent were the only other variables which were able to provide a basis for splitting the population with a significant reduction in variance. In figure 7.A.2 it can be seen that a simple regression of attorneys' fees on gross assets (measured in thousands of dollars) would produce coefficients of $a = \$549$, $b = 15.66$. The predicted value \$3,645 is the expected attorneys' fee when the mean value of the group's gross assets (\$198,000) is plugged into the equation.

Executors' Fees

The cost of executors' fees was estimated using two regression equations and data from the 1962 federal estate tax file.

$$\begin{aligned}\text{EXCOM} = a + b_1\,(\text{NETWORTH}) + b_2\,(\text{MS1}) \\ + b_3\,(\text{MS2}) + b_4\,(\text{MS3})\end{aligned}$$

where net worth is measured in thousands of dollars, MS1 is a dummy for married decedents MS2 is a dummy for never married decedents, and MS3 is a dummy for all other marital statuses. The equation was fitted separately for decedents with net worth under $200,000 and those with net worth of $200,000 or more. The estimated coefficients for the two equations are given in table 7.A.1:

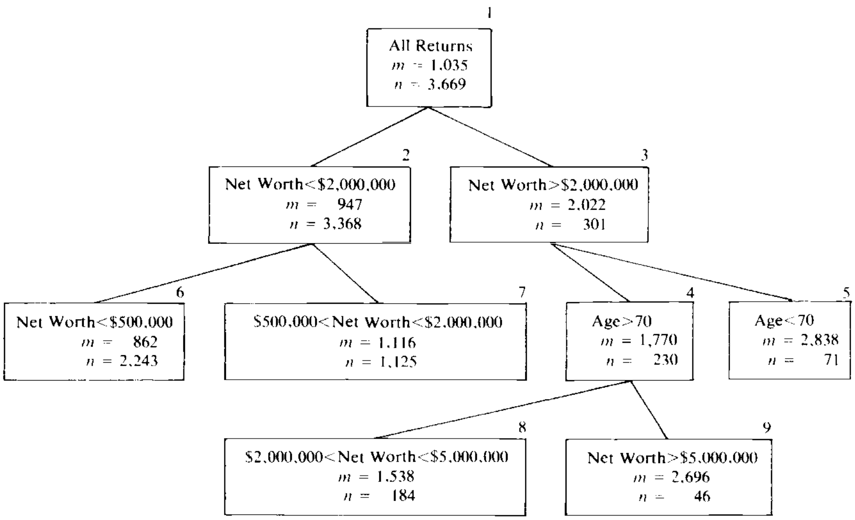

Fig. 7.A.1 Medical Expenses of Last Illness (m = mean cost in dollars). Variation e explained equals 5.4%. Sex was an eligible in variance.

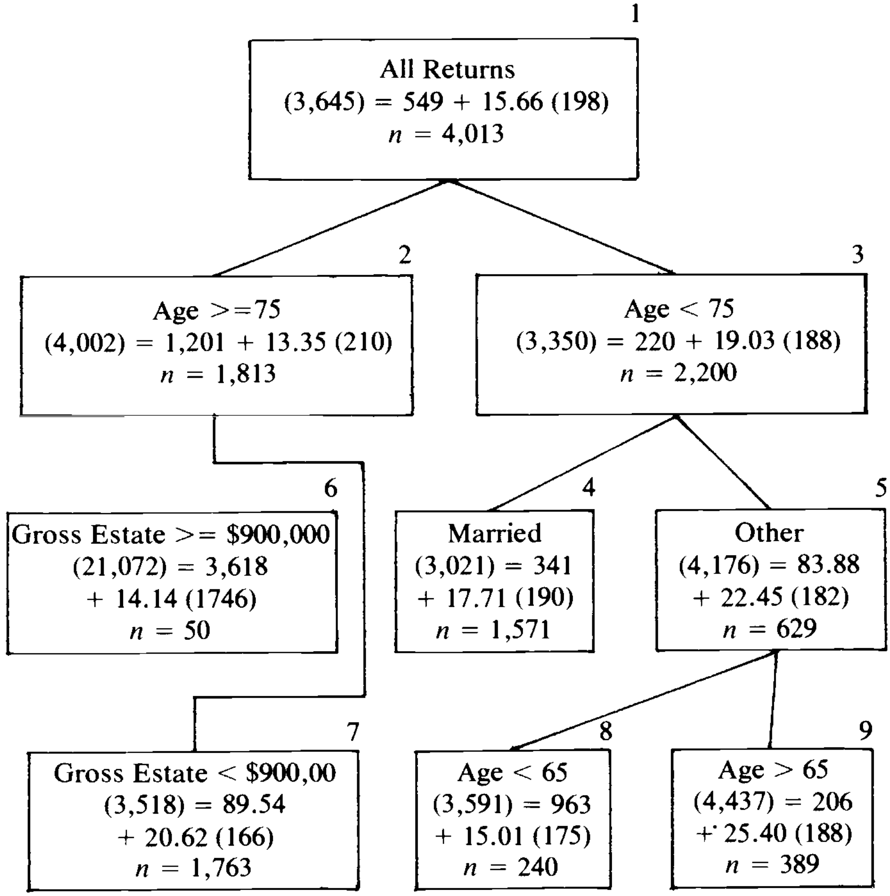

Fig. 7.A.2 Attorneys' Fees AID with Regression on Gross Estate (dollars). The overall regression R^2 equals 46.8%. Marginal variance explained by subgroup regressions equals 4.3%. Total R^2 equals 51.1%. Sex was also an eligible variable but could not produce a significant reduction in variance. The predicted value of the equation in each group is the value of attorneys' fees estimated when gross estate measured in thousands of dollars was at its mean for the group.

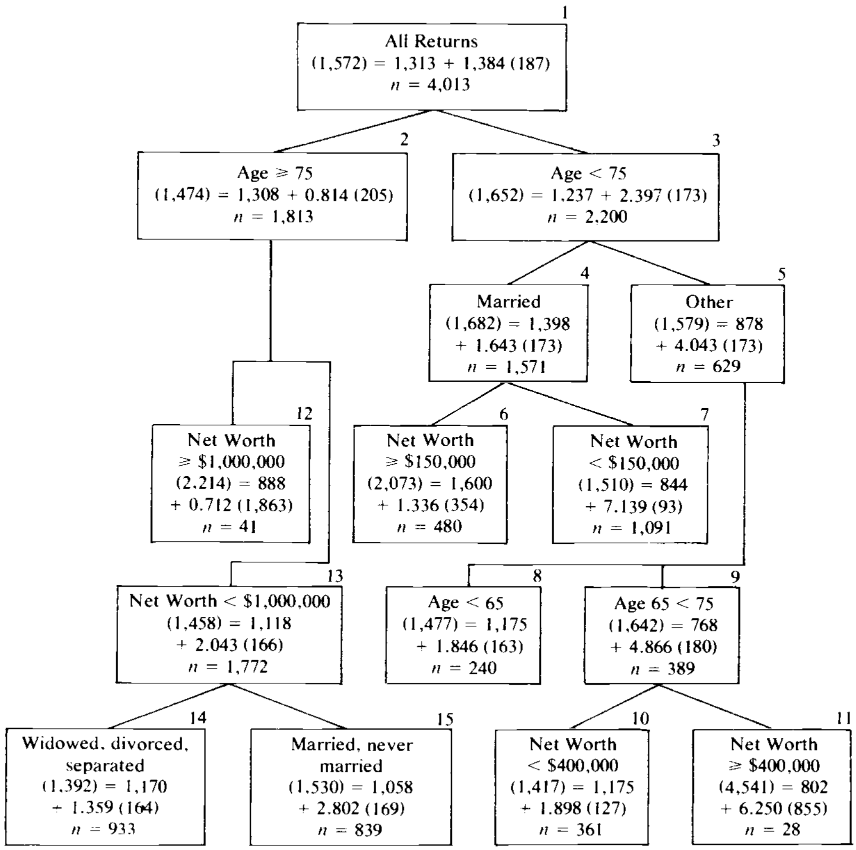

Fig. 7.A.3 Funeral Expenses AID with Regression on Net Worth. The overall regression R^2 equals 9.3%. Marginal variance explained by subgroup regression equals 9.9%. Total R^2 equals 19.2%. The dependent variable in parentheses is the estimated value of funeral expenses when the independent variable in parentheses, net worth measured in thousands of dollars, is at the mean for the group.

Table 7.A.1 Estimated Cost of Executors' Fees

	Net Worth	
	< \$200,000	≥ \$200,000
a	\$172.50	\$2,517.80
b_1	14.8	17.3
b_2	−843.5	−3,575.0
b_3	575.5	4,223.4
b_4	268.0	− 648.1
	$R^2 = 17.9$	$R^2 = 32.2$

Funeral Expenses

In the simulation, funeral expenses are attributed to decedents' estates on the basis of eight regression equations fitted in the process of an AID run on the 1962 estate tax file. The combined splitting of the population into eight final groups, and the simple regression of funeral expenses on net worth within each final group, explained 19.2 percent of the variance of funeral expenses. In figure 7.A.3 we show the results of the AID run with group regressions.

In some cases, the total costs of dying exceed the assets of the decedent. This is frequently the case with children. Although their estates will not generally incur legal or administration fees of any significance, the cost of last illness and funeral will diminish them as well as those of adults. Whether for a child or for an adult, the costs of last illness, administration fees, lawyers' fees, and funeral expenses are all deducted from the estate in accordance with the AID analyses above. When these costs result in a negative estate, it is transferred to the decedent's heirs in the same manner as a positive valued estate. This conceptualization is consistent with the actual process of cost bearing for decedents.

Notes

1. MASS (Microanalytic Simulation System) was developed through the joint efforts of a number of researchers over a longer period of time than we have had funds to simulate. The principal contributor and father of the model is Orcutt. Smith designed and implemented the "post office" software which permits individuals to send messages to one another while the system is running and in the application presented here to bequeath wealth to their heirs. The basic MASS software system was designed and implemented under the direction of Amihai Glazer. See Orcutt and Glazer (1976) for a general description of MASS, and Orcutt, Glazer, Jaramillo, and Nelson (1976b) for a programmer's perspective.

2. The growth of the 1860 sample population to 1960 was carried out several years ago by Gerald Peabody at the Urban Institute using DYNASIM. For a description of DYNASIM see Orcutt, et al., 1976a.

3. Using the *1962 Survey of Financial Characteristics of Consumers* to estimate income-wealth relationships by demographic characteristics, Smith and Franklin had imputed to a 1960 Public Use Sample a set of asset and liability variables. See Smith, Franklin, and Orcutt 1977.

4. We also attempted to use measures of family size and numbers of children, but these proved to be ineffective.

5. The post office is technically an array with elements for storing messages. The element subscripts are the IDs of all persons in the initial population plus all IDs for children born during the simulation period.

6. In the work presented here messages are sent only to parents and children. We have also limited the distribution of bequests to parents and children. The model is capable of transmitting messages and bequests to siblings, uncles, aunts, grandparents, great grandparents, and cousins, but the evidence suggests that very little bequeathed wealth moves beyond the radius of spouse, children, and parents.

7. We have not incorporated life insurance contracts into the model at this time. It is expected that including life insurance policies will reduce the rather large number of decedents we find with negatively valued estates.

8. Implementing death costs and taxes into the model represents work in progress. In the present application of the model, alignment of these observable costs is not critical so long as our approximations do not distort the relationships we wish to measure, namely, the importance of number of siblings and inherited wealth.

9. In the current implementation each person in the population carries with him the names of up to ten persons who are related to him as mother, father or child. With this amount of information it is possible to find his brothers and his sisters and his uncles and aunts.

10. The kitty represents all other heirs including both collateral relatives, charitable organizations and governments.

11. In an earlier simulation experiment by Smith, Franklin, and Orcutt 1977 using a one-year period, life insurance was modeled as part of the financial characteristics of persons. In a simulation model which runs over many years, not only must the initial distribution of insurance risk be modeled, but the operating characteristics which generate purchases, lapses and cash surrender value must also be implemented. This work is on our research agenda, but is at least a year away from completion.

12. AID-III is a data-searching algorithm which sequentially splits a population into pairs such that the sum of the variance around the mean of the pair or the expected value of a regression is the smallest possible proportion of the variance around the expected values of the group from which the pair was derived. The technique has the advantage over regression in not requiring an additive set of independent variables. It also imposes no linearity restrictions on relations between variables. For a detailed discussion of AID-III see Sonquist, 1971.

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