Chapter Title: Introduction to "Modeling the Distribution and Intergenerational Transmission of Wealth"

Chapter Author: James D. Smith

Introduction

James D. Smith

The papers in this volume are from the first meeting of the Conference
on Research in Income and Wealth to be devoted primarily to the dy-
namics of the personal distribution of wealth. The meeting reflects a
changing concern by economists from measuring the cross-sectional dis-
tribution of wealth to modeling the processes by which wealth is accu-
mulated and transmitted through time to successive generations.

The relatively small share of the profession's resources devoted to
issues of personal wealth prior to 1975 was almost entirely channeled
into measuring cross-sectional distributions.[1] The history of these mea-
surements in the United States dates back to the 1850 census, but only
a handful of researchers were involved in such activities until after World
War II.[2] The 1860 and 1870 censuses also included queries about asset
holding, but none of the census data was ever published, and with the
exception of house value, questions on asset values have never reap-
peared in the census.[3]

Following the census measurements, scattered attempts were made to
estimate distributions of wealth. For instance, in 1927 W. I. King pub-
lished estimates for 1921 (King 1927). The Federal Trade Commission
published information from over forty-three thousand probated estates
which permits some inferences about wealth concentration over the pe-
riod from 1912 to 1923, but the sampling procedures are defective or
nonexistent. There were attempts to estimate wealth by income capitaliza-
tion and by combining data from several sources, such as social registers
and income and estate tax tabulations in the thirties, but they too suffer
from serious methodological flaws or inadequate data or both. Indeed,
none of the estimates published before 1950 is satisfactory. Our knowl-
edge of the history of U.S. wealth inequality has essentially been pro-
duced by contemporary researchers applying improved methodologies to
old data carefully extracted in anthropologist-like fashion from their en-

tombment in census manuscripts, probate records and tax files. Among others, Soltow (1971), Jones (1970), and Gallman (1969) have cast new light on the past by exploiting data that their predecessors had overlooked or ineffectively used. The production of historical wealth distributions has truly been a case of new bottles for old wine.

The 1950s were prelude to a relative explosion of activity measuring the distribution and concentration of personal wealth. Three significant events in that decade sparked the work of the next two decades.

First, the Survey Research Center of the University of Michigan, with funding from the Board of Governors of the Federal Reserve System, began measuring the assets of families in the Survey of Consumer Finances.[4]

Second, Horst Mendershausen applied the estate multiplier technique to federal estate tax data supplied by the Internal Revenue Service. The technique weights decedents' assets by the reciprocals of the death probabilities of persons their age to estimate the wealth of the living.[5] It has been the most effective tool for estimating the upper tail of the personal wealth distribution.

Third, Raymond W. Goldsmith began putting together national balance sheets for the United States. Over a period of many years this work led to balance sheets with sector accounts for business, government, and households. The household sector in the national balance sheets is a residual sector, absorbing all the errors made in allocating assets to the other sectors. Nevertheless, as Goldsmith continually refined the balance sheets, the maximum value of the assets of households emerged. He thus set the stage for estimating the concentration of wealth in the hands of subpopulations. These three events set the stage for an intensive field survey and numerous estate multiplier applications to estimate the distribution of personal wealth in the 1960s and '70s.

In 1962 Lampman published *The Share of Top Wealth-Holders in National Wealth, 1922–1954*. He obtained from the Internal Revenue Service a large set of detailed tabulations of estate tax returns filed in 1954. The data were organized by age, sex, marital status, asset type, and a few other variables. Each of the cells was then weighted by the appropriate death probability reciprocal to obtain estimates of the size of the living population with wealth great enough to have required the filing of an estate tax return were they to have died in 1953.[6] Using published data from estate tax returns filed in previous years, he also made estimates of the wealth held by top wealthholders for as early as 1922. Then, comparing his estimates with Goldsmith's national balance sheets, he determined the share of the nation's personal wealth held by individuals with gross assets of $60,000 or more.

At the time Lampman published *The Share of Top Wealth-Holders*, the Survey of Financial Characteristics of Consumers, funded by the

Board of Governors of the Federal Reserve System, was organized by Dorothy Projector, with field work carried out by the Bureau of the Census. The Survey, built on the earlier work of the Survey Research Center, was intended to measure the distribution of wealth across the entire population. By a second interview a year later, saving was also to be measured. The Survey was preceded by more methodological work than had been undertaken before or since in preparation for a U.S. economic survey. Furthermore, in a parallel effort, an external research group was organized to carry out validation work for the express purpose of determining where measurement errors were occurring and their magnitude. The Survey of Financial Characteristics of Consumers was significant for scientific inquiry in another important way: for the first time government-collected microdata from an economic field survey were made generally available to the research community.

By the mid-sixties, Smith, using a special Internal Revenue Service tabulation, had made an estate multiplier estimate for 1958. Then, after pushing the Internal Revenue Service to release microdata from estate tax returns, he obtained computer tapes for federal estate tax returns filed in 1963, 1966, 1970, and 1973. These provided the basis for a detailed examination of the sensitivity of estate multiplier estimates to various assumptions inherent in the method. It also permitted detailed estimates of the concentration of wealth in the years 1962, 1965, 1969, and 1972.

Thus in a span of a few years substantial microdata on personal wealth distributions became available from their two major sources: field interviews and estate tax returns. For researchers interested in analyzing the distribution of wealth, this was an embarrassment of riches. The microdata permitted the detection of weaknesses in both methods and suggested avenues for improvement.

Unfortunately, just as sufficient knowledge had been accumulated to suggest research that would overcome the problems of field surveys, funding agencies began losing interest in supporting them. We have never satisfactorily measured personal wealth distribution with a field survey. Although the Survey of Financial Characteristics of Consumers was a great leap forward, it fell short of the expectations held for it, and there has been no subsequent effort.[7] Rather, there appears to be a prejudice among many survey practitioners that one cannot ask survey respondents about their assets without offending them. Unlike analysts, who may have only a short-run professional interest in survey data, survey practitioners have a long-term commitment to field measurement and are understandably cautious not to sour their future relations with respondents.

This conservative bias of field measurement specialists can be overcome if it is shown to be methodologically unfounded, but unfortunately

there has been little inclination on the part of agencies of the federal government or foundations to support such methodological work. And since the estate multiplier method can be used for estimating only the upper tail of U.S. wealth distribution, because returns are not required for estates of decedents of modest wealth (until recently, less than $60,-000 gross assets),[8] the momentum which built up in the early sixties and produced exciting breakthroughs fizzled out by the end of the seventies. That first good estimate of the distribution of wealth seems a long way down the road.

Thus the obstacles to obtaining a good estimate of the distribution of wealth are formidable. Field surveys cannot reach the upper tail, and data which would permit the estate multiplier method to reach the bottom are scarce. Some combination of field interviews, estate tax returns, and other administrative records probably will be required. Obtaining information from administrative records is cheap, but severe organizational and bureaucratic impediments exist. A field survey adequately prepared for and carried out would now appear to cost at least $20 to $30 million.

Fortunately, the need for measured cross-sectional wealth distributions is lessening. One or two very good estimates are desperately needed, but once they have been made, it would be a misuse of resources to engage in repetitive annual or biennial measurements as we do with income. A cross-section measurement every ten years or so would appear adequate.

One of the messages of the conference is that the important things to be measured are the process and behavior by which individuals accumulate and disaccumulate wealth. Answers are needed to questions about the factors which influence individuals to save out of current income, the role of assortative mating, the wealth ownership arrangements of married couples, the division of wealth between parties at the time of divorce, the pattern of gifts among family and nonfamily members, and the bequeathing patterns of decedents. Once these and related questions are answered, simulation and analytical models can be used to generate the cross-sectional distributions and to address public policy issues which affect citizens' economic activity and status. In fact, as demonstrated by Wolff and by Smith and Orcutt in this volume, for many questions synthetic cross-sections are adequate.

In the first chapter of this volume, Jeffrey Williamson and Peter Lindert do three important things. They give us a rapid review of much of the wealth distribution work which has been done, primarily in the U.S.; they provide a process for decomposing measured wealth distributions and the forces which determine them; and they bring to bear demographic and economic history to test their own and others' interpretations of U.S. wealth distribution dynamics. Based on their analysis of

others' data, three points in U.S. history contend for the pinnacle of wealth concentration: 1860, 1914, and 1929.

In the second chapter, William Newell does what Williamson and Lindert urge researchers who would understand the distribution of wealth to do. He assembles a data base out of wills and an assortment of administrative records, and analyzes it taking into account both macro and micro variables.

Newell examined the wills of testate decedents in Butler County, Ohio, from 1803 to the Civil War and combined their information with a variety of administrative records to construct a sixty-two-year time series of testators' wealth. After adjusting the value of these decedents' estates to constant dollars, Newell examined the concentration of wealth among testate decedents over the sixty-two-year period. He found an increasing concentration of wealth up to 1825, followed by a decade of increasing equality and then by a steady increase in concentration up to the Civil War.

He finds the explanation for the changing concentration of wealth in national economic conditions and local demographic change. The importance of Newell's work is not that it explicates the relative economic status of the citizens of Butler County, Ohio, but that it contributes to our understanding of the forces which shape the distribution of wealth.

In chapter 3, Michael Allen presents a simulation model of the intragenerational and intergenerational transmission of wealth which he considers the basis for more elaborate models. He takes into account the amount of wealth left by a decedent, the diminution of the decedent's wealth by death taxes, the distribution of the remaining estate among heirs, and the accumulation of wealth by the heirs over their lifetime before the cycle is repeated.

In the next chapter, Paul Menchik analyzes the importance of inheritance and saving for the wealth position of children of wealthy parents. To do this, he both assembles a data base and estimates two models. As in Newell's work, his data base is local—in this case, Connecticut—but his analysis leads to generalizations about the processes of wealth accumulation and transmission.

Menchik started with a set of about a thousand Connecticut residents who died in the 1930s and '40s and left estates of $40,000 or more. Examining death records, he found that sixty percent of the decedents had children who survived them. He then searched for the probate records of the surviving children for all years up to and including 1976. He estimates two models of the relationship of inherited wealth to the sum of inherited and potential earnings.

In chapter 5, Michael Wolfson presents a simulation model whose basic building blocks are density functions representing wealth distributions for families with specific, but limited, age-family-size characteris-

tics. The density functions are derived from data from the 1970 Statistics Canada Survey of Consumer Finance, but the model yields results not dependent upon precise population measurements. The main parameters of the Wolfson model relate to how the wealth of decedents is parceled out to heirs, the age interval, or the devolution gap, between heirs and their benefactors, and finally the relationship between the wealth class of inheritors and the size of inheritances they receive.

In chapter 6, Edward Wolff presents estimates of the 1969 distribution of U.S. wealth based on a synthetic data base developed at the National Bureau of Economic Research. The data base was created by applying statistical matching techniques to the Public Use Sample of the 1970 Census of Housing and Population and federal income tax returns. Some asset values were derived by capitalizing income flows. Others were imputed to the file using information from still other data bases such as the Survey of Consumer Expenditures. The assets and income flows in the synthetic data base were aligned to totals available from the National Income Accounts and from national balance sheets developed by Goldsmith.

In chapter 7, James Smith and Guy Orcutt use a large simulation model to derive a synthetic representation of the 1960 U.S. population over a period of thirteen years, in order to explore the importance of the number of siblings on the value of inherited wealth. The results of the simulation are less important than the implications of their large, functioning model for future research. As evidenced by other papers in the conference, the identification of variables which predict the value of individual inheritances is of critical importance for modeling the intergenerational transmission of wealth. Attempts by Smith and Orcutt and by others to explain the variation in inheritance using personal characteristics of inheritors have been unsuccessful, because the observable characteristics of children of the rich, before they inherit, differ insufficiently from those of children with middle or lower class economic parentage. Using a population "grown" by simulation from 1960, in which they preserved the identity of each person's children and parents, they were able to transmit wealth to decedents' surviving relatives, circumventing the presently intractable problem of estimating inheritance from personal characteristics.

As the reader eases into Nelson McClung's essay in chapter 8, he may sense he is about to be dragged through a rehash of the old conflict between scholars, who desire data to test the propositions of pure science, and producers of data, who see the data needs of society as being met by repetitious measurement of rather obvious behavior and status. The reader is quickly disabused of any such notions, however. McClung is critical of both data producers and data users. The former

he accuses of being too presumptuous about how a body of data will or should ultimately be used, and the latter he chides for clinging to old conceptual structures beyond their useful lives. He points out, for instance, that wage income and transfers cannot always be easily distinguished. Gifts and inheritances may be payments to alter the behavior of the recipient in the same spirit that wages are paid to alter the recipient's behavior.

McClung would place a substantial burden on the two largest data producers: the Bureau of the Census and the Internal Revenue Service. These agencies are producing more statistical information of higher quality and getting it into the hands of users faster than ever before. McClung argues, however, that this flood of information is less relevant than ever before for addressing fundamental scientific questions and public policy issues.

Notes

1. An early interest in the dynamics of wealth ownership can be found in Lansing and Sonquist 1969, pp. 30–70.

2. Lampman notes that only ten scholars had attempted to estimate nation-wide size distributions prior to World War II. See Lampman 1962, p. 9.

3. Lee Soltow draw samples from the old census manuscripts and used them to make estimates of wealth distribution for the second half of the Nineteenth Century.

See Soltow, *1971, 1975.*

Also see the comments on Soltow's work by Williamson and Lindert in the first chapter of this volume.

4. For a discussion of the early efforts of the Survey Research Center and its subsequent development see Strumpel et al. 1972, pp. 1–34.

5. For a detailed explanation of the procedure see Smith, 1974.

6. There is a lag between the time of death and the date an estate tax return is filed. The assumption in early estate multiplier estimates was that an estate tax return represented a death in the preceding year.

7. One can hardly call the passing nod to assets in the Survey of Economic Opportunity an attempt to measure wealth distribution. Similarly there have been limited questions asked in other field surveys, for instance, the Retirement History Survey and the Survey of Income and Education. There is also an effort to include asset questions in the Survey of Income and Program Participation. The questions on specific assets in these surveys are not intended, however, to sum to net or gross wealth.

8. The method, of course, can be applied to estates of any size. Estate multiplier estimates for Washington, D.C., Oklahoma, and Tennessee have used local death tax returns required of decedents with as little as $1,000 in gross assets.

References

Gallman, Robert E. 1969. "Trends in the Size Distribution of Wealth and Income." In Lee Soltow, ed., *Six Papers on the Size Distribution of Wealth and Income. Studies in Income and Wealth,* vol. 33. New York: Columbia University Press.

Jones, Alice H. 1970. "Wealth Estimates for the Middle Colonies, 1774." *Economic Development and Cultural Change* 18, no. 4, pt. 2.

King, W. I. 1927. "Wealth Distribution in the Continental United States at the Close of 1921." *Journal of the American Statistical Association,* n.s. 22, no. 158, pp. 135–53.

Lampman, Robert A. 1962. *The Share of Top Wealth-Holders in National Wealth.* Princeton: National Bureau of Economic Research.

Lansing, John B., and John Sonquist. 1969. "A Cohort Analysis of Changes in the Distribution of Wealth." In Lee Soltow, ed., *Six Papers on the Size Distribution of Wealth and Income. Studies in Income and Wealth,* vol. 33. New York: Columbia University Press.

Smith, James D. 1974. "The Concentration of Personal Wealth in America: 1969." *Review of Income and Wealth,* series 20, no. 2, pp. 143–80.

Soltow, Lee. 1971. "Economic Inequality in the United States in the Period from 1790 to 1860." *Journal of Economic History* 31, pp. 822–39.

———. 1975. *Men and Wealth in the United States, 1850–1870.* New Haven: Yale University Press.

Strumpel, Burkhard; James N. Morgan; and Ernst Zahn eds. 1972. *Human Behavior in Economic Affairs: Essays in Honor of George Katona.* Amsterdam: Elsevier.