Improving Wealth Estimates Derived From Estate Tax Data

by Janet McCubbin

The estate tax multiplier method may currently be the best available estimator of the personal wealth of the U.S. population of individuals with total assets greater than the estate tax filing requirement. In this method, values from the estate tax return are multiplied by the inverse of an appropriate age and sex specific mortality rate to provide an estimate of wealth for the living population. This method has certain advantages over survey methods, but it may tend to underestimate the number and net worth of the wealthiest individuals. Much of the ongoing research at the Statistics of Income Division of the IRS is focused on enhancing the quality and usefulness of data extracted from estate tax returns, and on improving the accuracy of the multipliers used. A variety of approaches aimed at developing better wealth estimates is being explored; three of these are described in this paper.

While the estate tax code has been fairly consistent over time relative to some other tax law areas, several notable changes have been legislated during the past decade. Data collectors and data users should be aware of these alterations as they can cause subtle or sometimes dramatic changes in the nature of the data. Because a basic understanding of the estate tax code and changes to it is necessary for intertemporal analysis of the data, a review of some aspects is presented here.

Estate multiplier estimates may be too low if assets as reported on the returns are undervalued or if they are omitted from the returns. In the interest of timeliness, data are extracted from returns before they are audited. However, developing an adjustment factor that reflects observed changes in net worth figures as a result of the audit process should reduce the downward bias in estate multiplier estimates. A pilot study of post-audit information is being conducted and preliminary results are discussed in the second section of this paper.

Finally, supplementary sources of data may be used to evaluate and correct for the underenumeration of wealthholders and possibly the undervaluation of assets. One available source is the listing of 400 of the wealthiest Americans published annually in Forbes. Analysis of this data set, including exact-matching with the estate tax returns of decedents from this group, is ongoing. Results to date are discussed in the third section of the paper.

ESTATE TAX LAW CHANGES

In order to compare wealth estimates produced by different organizations, it is necessary to understand differences in the ways in which assets are defined and valued. Similarly, when considering wealth estimates produced over time by the Internal Revenue Service, it is necessary to note how tax law changes have affected the types of assets reported and the valuation of those assets.

New tax provisions sometimes affect the estimates directly by redefining what assets are to be reported on the estate tax return. For example, the 1976 Tax Act required that all transfers made within 3 years of death be included in the total gross estate. This increases the net worth figure directly. In addition, a new provision may affect wealth estimates indirectly, by influencing the behavior of taxpayers. If, as a result of the requirement discussed above, taxpayers alter their patterns of gift-giving, other asset categories would be affected indirectly.

Finally, new legislation might redefine the population of taxpayers. For 35 years, the estate tax law required that a return be filed for any decedent with a gross estate of $60,000 or more. That filing requirement has increased annually since 1977. For those dying in 1987, it will be $600,000. This has, of course, drastically reduced the size of our population. Statistics of Income estimates are now limited to a much smaller portion of the wealth distribution curve. [1]

The Tax Reform Act of 1976 became effective on January 1, 1977. Since it pertains to individuals dying after December 31, 1976, its changes will be most evident on returns received after September 1977. (Returns are due to be filed within nine months of death unless an extension is granted.) The Economic Recovery Tax Act of 1981 (ERTA) is effective for individuals dying after December 31, 1981, except for some retroactive changes. Effects resulting from ERTA will be most evident on returns filed after September 1982. Changes in the estate tax law mandated by the Tax Reform Act of 1976 and the Economic Recovery Tax Act of 1981, which have the potential for significantly impacting estate tax multiplier estimates, are discussed below.

The Tax Reform Act of 1976

The Tax Reform Act of 1976 was the first major revision of the estate tax law since its inception. Several components of the revision which had important implications for estate tax data are reviewed below. [2-4]

The Unified Rate Schedule, Unified Credit and Filing Requirement.--One of the most sweeping changes mandated by the 1976 Act involved the revamping of the basic structure of the estate and gift taxes. For those dying prior to January 1, 1977, gift tax rates were lower than estate tax rates, and the rate at which an estate was taxed was independent of the amount of gift taxes previously paid by the decedent. Estate planners could cushion the impact of progressive estate tax rates and take advantage of lower gift tax rates by transferring property before death rather than at death. The very wealthy benefitted most from this strategy, as they could afford to transfer large amounts of property prior to death.

The 1976 Tax Act unified the estate and gift tax schedules. Transfers made after December 31, 1976, that are not included in the total gross estate, are added to the taxable estate, in order to determine the rate of taxation. (Gift taxes paid on such transfers are then subtracted from the gross estate tax.)

A unified credit was developed to replace the exemption which was previously used to calculate the estate tax due. The exemption, which was applied to the gross estate before the tax computation, was especially favorable to wealthier individuals because it provided a tax savings from the higher tax brackets. The unified credit, which is subtracted from the gross estate tax after the computation of the tax, constitutes a savings from the lower tax brackets. At the same time, the filing requirement was increased from $60,000 to $175,000 over a period of five years. The unified credit was increased in a similar manner.

Year of Death	Filing Requirement	Credit
1976	$60,000	N/A
1977	$120,000	$30,000
1978	$134,000	$34,000
1979	$147,000	$38,000
1980	$161,000	$42,500
1981	$175,000	$47,500

These changes, designed to bring tax relief and fairness to small and medium estates, affect wealth estimates by removing smaller estates from the population. However, our estimates derived from estates above the filing requirement should not be affected, except to the extent that gift-giving is influenced by the unification of the estate and gift tax schedules.

Transfers within Three Years of Death.--Prior to 1977, transfers of property made within 3 years of death were assumed to have been made in contemplation of death and were includable in the gross estate. The executor of the estate could contest the presumption that a gift was made in contemplation of death and sometimes have the value of the transfer removed from the estate. This rebuttable presumption led to a significant amount of litigation. The Tax Reform Act of 1976 amended section 2035 to include in the gross estate all transfers made within 3 years of death, other than bona fide sales, regardless of the decedent's motivation.

In addition, any gift tax paid after December 31, 1976, and within 3 years of death, was also includable in the gross estate. Prior to 1977, gift taxes reduced the total gross estate by the amount paid, regardless of the timing of the transfer. The abolishment of the rebuttable contemplation of death presumption and the inclusion of the gift tax "gross-up" rule served to simplify the valuation of estates and to remove the incentive to make death-bed transfers for the purpose of tax avoidance.

The effect of the changes in the treatment of transfers on wealth estimates is undoubtedly complex. Under the 1976 Act provisions, more transfers are includable in the gross estate and the gift taxes on these transfers are also includable. Thus, we might expect the amount of transferred wealth reported on the estate tax return to increase. Yet, since the tax advantages of making death-bed transfers are eliminated, the amount of transfers might decrease. This would result in a decrease in the wealth reported as transfers and some increase in the wealth reported as other types of assets. The overall effect, regardless of whether or not there is a decrease in gift-giving, should be some increase in the total gross estate. (The extent of the effect is at least partially dependent upon the extent to which individuals make transfers to minimize taxes.)

Joint Property Held by Spouses.--Prior to 1977, the total gross estate included the entire value of property held by the decedent as a joint tenant or tenant by the entirety with a spouse, except for the portion of the property attributable to consideration furnished by the survivor. The 1976 Act replaces the "consideration furnished" rule with a "fractional interest" rule for qualified joint interests. Under the "fractional interest" rule, only one-half of property held entirely by the decedent with a spouse is includable in the gross estate, provided that: the tenancy was created after December 31, 1976, by the decedent, the spouse or both and the creation of the interest constituted a completed gift for gift tax purposes. (Spouses are permitted to dissolve joint interests and recreate them after December 31, 1976, in order to take advantage of the new law.) The donor must have elected to treat the joint tenancy of real property as a taxable event, even if no gift tax is paid due to the annual exclusion, marital deduction or application of the unified credit.

While the entire value of joint property assets is often referred to on Schedule E of the estate tax return, only one-half of the value of a qualified joint interest must be included in the total gross estate. Therefore, our net worth estimates will be reduced to the extent that such interests are created. This reduction may be partially offset by the inclusion of one-half of the property as transferred wealth, when a qualified joint tenancy is created by a decedent within 3 years of death. The net worth of surviving spouses is not affected by the provision, as the entire property will be includable in the surviving spouse's gross estate, if it was not disposed of prior to death.

Special Use Valuation.--Prior to 1977, all assets in the gross estate were included at their fair market or "highest and best use" value. This created severe liquidity problems for some farmers and owners of closely held businesses, forcing them to sell their inherited property in order to pay the estate taxes on it. The 1976 Act allowed executors to refer to the capitalization of earnings or similar methods, as well as to the fair market value, when valuing assets and thereby reduce the value of the property by up to $500,000.

To qualify for special use valuation, the decedent and the heirs must meet stringent requirements regarding citizenship, the size of the property relative to the total estate and

the use of the property prior to and subsequent to the time of death. Because of the specific requirements allowing for special use valuation and the limitation of the reduction to $500,000, the effect of this provision on wealth estimates may be slight and is more significant for smaller estates.

The generation-skipping transfer tax also first appeared in the 1976 Act; however, because of subsequent, ongoing revisions and problems with compliance, the eventual effects of this tax are not yet apparent.

The Economic Recovery Act of 1981

The Economic Recovery Tax Act (ERTA) mandated the next significant estate tax code revisions. Those which are likely to have affected IRS data are discussed here. [5,6]

The Filing Requirement, Unified Credit and Tax Rate.--The 1976 Tax Act increased the estate tax filing requirement from $60,000 to $175,000 over a period of 5 years. ERTA provided for further increases in the filing requirement and corresponding unified credit.

Year of Death	Filing Requirement	Credit
1982	$225,000	$ 62,800
1983	$275,000	$ 79,300
1984	$325,000	$ 96,300
1985	$400,000	$121,800
1986	$500,000	$155,800
1987 and after	$600,000	$192,800

In addition, ERTA decreased the maximum estate and gift tax rate from 70 percent to 50 percent over 4 years beginning in 1982 and enlarged the highest tax bracket to include taxable transfers of $2.5 million or more, rather than $5 million or more. (The Tax Reform Act of 1984 delayed the effective year of the final reduction by 3 years.)

The increase in the filing requirement will further limit estate tax multiplier estimates to the very wealthiest Americans. Taxpayer response to lower estate tax rates is another subject worthy of consideration. Given lower tax rates, taxpayers may decide to avoid the inconvenience of sheltering assets and, thus, more wealth would be reported on the estate tax return.

The 1981 Act also increased the annual gift tax exclusion from $3,000 to $10,000. This increase should induce individuals to make more lifetime transfers, thus resulting in some decrease in estate multiplier estimates, as assets are removed from the estate.

Interspousal Transfers and Joint Property.--The 1981 Act drastically liberalized the treatment of interspousal transfers, eliminating limits on estate and gift tax marital deductions. After December 31, 1981, individuals can transfer unlimited amounts to their spouses tax-free. (The Act includes a transitional rule to address marital deduction clauses in wills executed or trusts created before 30 days after the enactment of ERTA.) Provisions which prohibit estate and gift tax deductions for transfers of community property between spouses were removed. Furthermore, only one-half of the value of joint property owned by spouses with rights of survivorship must be included in the total gross estate, regardless of which spouse furnished consideration for the property or the purpose for which the property is used.

Certain lifetime income interests granted to spouses may also pass tax-free. To qualify for this Qualified Terminable Interest Property (QTIP) deduction, the decedent's executor must make an election. No person may have the power to appoint any part of the property before the second spouse's death. The property is taxed when the second spouse disposes of it or dies.

Since the marital deduction is taken after the computation of the total gross estate, the deduction will not directly affect the wealth observed after the death of the first spouse. However, it is possible that the total gross estate figure will increase somewhat if taxpayers, able to pass an entire estate to a spouse tax-free, shelter fewer assets. In addition, since wives are more often the surviving spouse, wealth estimates for women may increase, as husbands minimize estate taxes by bequeathing more assets to their wives and fewer to children or other beneficiaries. Under ERTA, the gross estate figure will be lower for some owners of joint property (those who furnished consideration), and higher for others, than it would have been under previous law.

Transfers within Three Years of Death.--Under the 1976 Tax Act, all gifts made within 3 years of the donor's death were to be included in the gross estate at their value as of the date of death or as of the alternate valuation date. Under ERTA, only certain gifts made within 3 years of death are included. These are gifts of life insurance, gifts in which life estates are retained, gifts in which the decedent had a reversionary interest, revocable transfers and gifts of general powers of appointment.

This change will lead to some decrease in our net worth estimates. Gifts within 3 years of death will still be taxed when the gift is made, and the gift tax paid will still be included in the total gross estate, but the value of the transferred property will not be included in the total gross estate. Patterns of gift-giving will probably not be significantly affected. (Under ERTA, estates will only be saved the tax on the appreciation of property which occurred between the date of the gift and the date of death.)

Special Use Valuation.--ERTA liberalizes the special use valuation provisions enacted in 1976. The changes are generally retroactive to January 1, 1977. The amount by which the value of farms and closely held businesses may be reduced is increased from $500,000 to $750,000 over 3 years. The liberalization of these provisions will reduce our net worth estimates to the extent that more estates will qualify for special valuation and that some estates will be allowed larger reductions in property values.

Summary

The discussion here of indirect effects on our

estimates is not supported by theory or empirical evidence; yet, it is important to consider such possibilities, especially when using estate tax (or other IRS) data for intertemporal analysis. It is also necessary to consider legislative changes when evaluating the ability of the estate multiplier method to estimate the distribution of wealth in the United States.

POST-AUDIT DATA

As previously noted, estate tax multiplier estimates of wealth produced by the Internal Revenue Service are based on data edited from estate tax returns before the returns are audited. All estate tax returns are examined by the Service, but in the interest of timeliness, returns are edited for statistical purposes prior to the audit process. While it has long been recognized that asset valuations might change significantly during the audit, no review of these changes has been conducted in recent years. [7] A pilot study of post-audit returns is currently being conducted by the Internal Revenue Service. Returns are being examined to evaluate the nature and magnitude of changes in the valuation of assets made by auditors using these data. We may be able to develop adjustment factors to apply to estate data to compensate for inaccuracies in reporting by taxpayers.

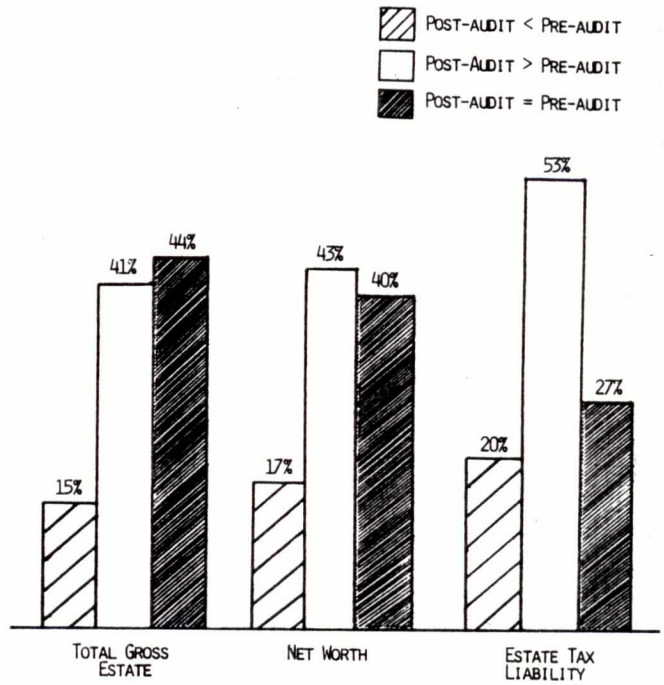
Currently, returns filed in 1983 at two IRS service centers are being examined. It was determined that returns filed in 1983 would be old enough to have completed the audit process, yet recent enough to provide insight applicable to future wealth estimates. In addition, there are also personal wealth estimates available which are focused on this filing year. [8] These returns represent primarily individuals dying in 1982. The estate tax filing requirement in that year was $225,000.

One hundred thirty-seven returns have been sampled thus far. Eighty-three percent of the returns are for estates with at least $5 million in assets. All of the returns with at least $5 million in assets, from the two IRS service centers involved, are included in the sample; the sample does not include any returns with less than $500,000 in the gross estate. Seventy-two percent of these returns have been received and examined; we expect to receive the remaining returns shortly.

Preliminary Results

Figure 1 shows the frequency and direction of changes in the total gross estate, net worth and estate tax liability. Thus far, the post-audit differences we have observed have been smaller than expected. Aggregate net worth, defined as the total gross estate less debts and mortgages, increased by about 2 percent. If we consider only the cases for which net worth increased, the increase was over 4 percent. A fair amount of the 2 percent increase in aggregate net worth is due to a 1.7 percent decrease in debts and mortgages allowed as deductions. Of the assets, the largest increases were to real estate (1.8 percent), corporate stock (1.9 percent) and miscellaneous assets (4 percent). In addition

Figure 1.--Direction and Frequency of Change: Pre-audit Versus Post-audit Amounts



to personal effects and automobiles, this miscellaneous category includes some types of property which are difficult to value, such as artwork, mineral rights and royalties.

As you might expect, some assets, including bonds, cash, insurance and annuities, are relatively easy to value and are only rarely subject to significant changes. Harriss estimated "that probably one-third to two-fifths of gross taxable estates consist of property presenting no significant valuation problems." [9] In the newer data, real estate, corporate stock and miscellaneous assets make up over 75 percent of the aggregate total gross estate. The value of each of these assets changed in about 26 percent of the returns examined. While these assets are more likely to be revalued than others, auditing apparently does not significantly change the portfolio distribution of assets.

In addition, auditing does not significantly change the size distribution of aggregate wealth. While larger estates may be scrutinized more vigorously by IRS examiners, they do not seem to be revalued more frequently nor are the changes in the gross estate proportionately larger than those made to smaller estates. This may be because larger estates had, on average, proportionately larger marital and charitable deductions. Estates with less than $5 million in assets claimed, on average, marital deductions of 22 percent, while estates of $5 - 7.5 million and estates of greater than $7.5 million claimed marital deductions which averaged over 23 and 37 percent, respectively.

Again, the valuation changes are somewhat smaller overall than expected. Perhaps the differences in asset values before and after audits are not significant. It would, though, be premature to conclude this after examining only 98 returns. Most of the returns not yet

examined are for estates with at least $5 million in assets. Some of the most complicated returns must still be retrieved from district offices. Most of these remaining returns will probably have been subject to some change during auditing.

But still, perhaps the returns reviewed thus far are a representative sample of our population of returns. Why, then, are the percentage changes so low? One reason is that because of the complexity of the estate tax laws, many estate tax decedents have designated professional executors and tax form preparers. As Harriss noted, "The widespread participation of corporate and professional legal fiduciaries in executing estates, therefore, probably insures a high minimum level of integrity in estate tax compliance." [10] Secondly, inaccuracies in reporting which result from ignorance or computational errors should not be biased toward over- or underestimation. The current study of returns seems to support this assumption.

Of course, the accuracy of post-audit valuations must also be considered. Indeed, the audit process is designed to increase tax revenues, rather than to provide a more accurate valuation of every estate. While every return is examined, field audits are not always conducted. (This review is, however, more thorough than the review of individual income tax returns, only a fraction of which are examined for anything other than mathematical accuracy and consistency.) Efforts to increase the value of smaller estates may not be pursued, when such efforts are obviously not cost effective. Even very large estates may escape increases in the gross estate when such changes would not lead to increases in tax, due to corresponding increases in marital or charitable deductions. Of the cases in which the value of the estate was changed, the aggregate gross value of estates claiming marital deductions of 50 percent of the gross estate or less changed by nearly 4 percent; the value of estates in which the marital deduction exceeded 50 percent of the gross estate changed by less than 2 percent. Even when a change in the value of an estate does occur, it may be the result of a compromise between the auditor and the executor, rather than an increase which the auditor believes to be absolutely correct. (In fact, only one of the cases reviewed was litigated and in nearly every case, an agreement was secured with the executor.)

Despite these factors and the small magnitude of change observed thus far, we are convinced that a bias towards the underestimation of estates exists. A review of audited returns provides at least some indication of the size and nature of this bias. That information can then be used to adjust our data and yield more accurate wealth estimates.

Future Plans

At this time, we do have plans to expand the post-audit study. The first step will be to retrieve and examine the remaining returns already sampled. At that point, our sample will consist of about 140 returns, most of which were filed for decedents with at least $5 million in the gross estate. Next, we will probably expand the study in two ways, by including additional service centers and by sampling more returns with less than $5 million in the gross estate. After the data are analyzed, we should be able to develop the adjustment factors to at least partially correct for the undervaluation of estates. Finally, we would, of course, need to update these adjustment factors periodically.

USING OUTSIDE SOURCES TO ENRICH ESTATE TAX DATA

Other efforts to improve wealth estimates involve using sources outside of the Internal Revenue Service for additional financial and demographic information. One such source is Forbes magazine and its annual listing of the 400 wealthiest Americans. [11] The demographic information provided allows us to evaluate the changing nature of the population of very wealthy individuals. In addition, while the reliability of their net worth estimates is limited, direct comparisons of the information published in Forbes with the figures reported on estate tax returns may provide clues about the types of assets and amounts of wealth not fully captured by our current estimation techniques. In addition, data from Forbes are a particularly useful supplement, as they focus on very wealthy individuals. Current IRS estimates associated with these economically powerful individuals suffer from large variances, due to the small sample sizes.

Forbes has published a report on wealthy Americans each year since 1982. This information, gathered by a small group of Forbes staff members, is obtained from public documents, published information and interviews with financial experts. They also try to contact the 400 members themselves, although many, of course, do not respond. Tabulations of the data published in Forbes have been completed. These are classified according to demographic characteristics including age and sex.

The estate tax returns of members of this population are examined as they become available. There are currently less than 50 known decedents from the population. Most of these individuals were still listed among the 400 wealthiest Americans at the time of their death. Approximately 30 returns have been examined; less complete information is available for several additional individuals. The summary statistics presented here are based on all of these decedents, except where otherwise indicated.

Preliminary Results

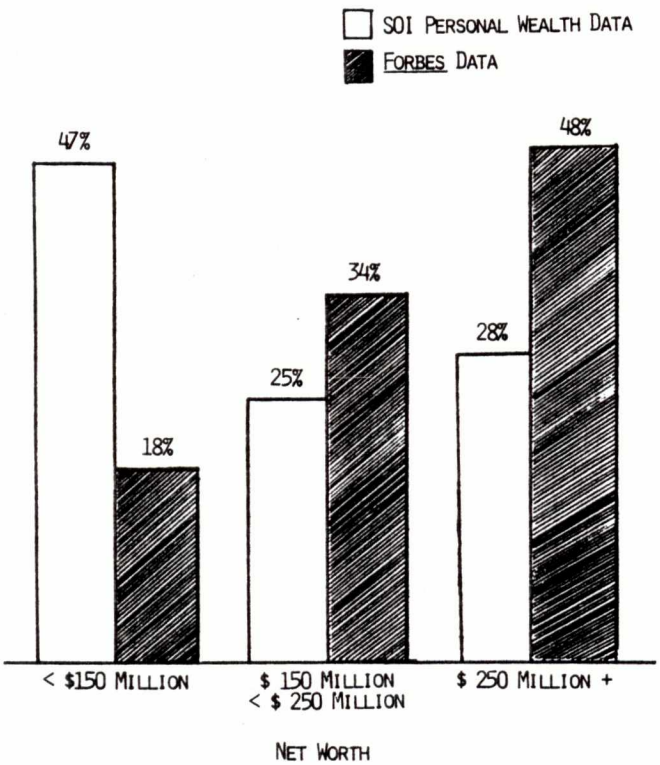
The estate tax mean and median figures are lower than the Forbes figures. The examination

Net Worth	Estate Tax Data	Forbes Data
Mean	$ 114,134,312	$ 199,000,000
Median	$ 94,694,396	$ 170,000,000

of returns revealed that Statistics of Income estimates were, on average, 35 percent lower than estimates published in Forbes. (The figures on several returns were not comparable due to major financial changes, such as the sale

of family-owned businesses, occurring during the time elapsed between the two estimations.) The net worth figure reported on the estate tax return was less than the estimate appearing in Forbes in 79 percent of the cases. Figure 2 shows the distribution of IRS net worth figures versus the distribution of Forbes net worth estimates for the decedents studied. Nearly

Figure 2.--Percentage Distribution of Net Worth by Net Worth Size Class: Forbes Versus IRS



half of the wealth reported on the estate tax returns (47 percent) is held by decedents with less than $150 million. As the bar graph shows, the distribution of wealth as reported by Forbes peaks much later.

Certainly many factors contribute to these differences in valuation. Forbes' researchers assume that "the separate elements of ownership (control of principal, receipt of income, power to name heirs, etc.) are deliberately spread among different people to defend against the inheritance tax laws." [12] Thus, they generally attribute the wealth of spouses and other family members to a principal family member. Similarly, assets in trust are generally assigned "to the person who created the wealth, where still alive and in control, or to the principal controlling family member where he is not." [13] (Irrevocable charitable trusts are not considered to be personal wealth by Forbes' researchers, even where they are used to retain control of family companies.)

On the other hand, the estate tax law is quite specific in determining what constitutes legal ownership. In addition, some types of assets are not required to be reported on the estate tax return or are not required to be reported at their full value. For example, only one-half of most jointly owned property is included in the estate. Not surprisingly, when net subtractions for jointly owned property (reported on Schedule E of the estate tax return) are added back to the values of the estates, the net worth figures are, on average, only 28 percent lower than those published in Forbes. (This adjustment is applicable to approximately one-third of the estates.)

In addition to ownership and valuation issues, the timing of the two sets of estimates must be considered. Forbes' estimates are usually published in October. The cutoff date for 1986 was September 12. [14] The estate tax valuation date for the individuals studied ranged from 33 months to less than 1 month after the valuation for the Forbes estimate. The average length of time between the two estimates is approximately 10 months. (Eighty-nine percent of the estates were valued as of the date of death; the alternate valuation date, defined as 9 months after the date of death, was elected for the others.)

We would expect the wealth of these individuals to increase over time, and the lower cutoff value of the living Forbes population has indeed increased in every year except 1985. However, the average age of these decedents at the time of death is about 81 years. A number of them have undoubtedly distributed a significant portion of their assets to family members or other beneficiaries prior to their deaths. (As noted before, some of these distributions are so complete that the two estimates are not comparable.) Thus, we might expect the estate tax figures to be lower.

Finally, we have also taken note of all of the estate tax returns filed for very wealthy individuals dying after the first Forbes report was published. Sixty-one percent of those individuals with estates of $60 million or more and 47 percent of those with $100 million or more never appeared in Forbes. These individuals may have held assets which Forbes was unable to uncover. The timing issue discussed earlier may also have contributed to these differences in the two populations. At any rate, we will have to consider these factors when using Forbes data to model the wealth distribution curve.

Future Plans

Despite the differences in the units and items measured and in the timing of the estimates, we feel that supplementary sources of data such as that published in Forbes can enhance our understanding of the population of very wealthy Americans. Future plans for this effort include reviewing Forbes' work as it is published. We are also continuing to track the decedents from this group. In addition, we are using other outside sources to supplement our data. Recent work by Scheuren and McCubbin describes some of these developments. [15]

CONCLUSION

The recent ongoing work at IRS has reenforced our opinion that the estate tax multiplier

method may currently be the best available estimator of the personal wealth in the U.S. population, for individuals above the estate tax filing requirement. Nevertheless, we realize that this method probably tends to underestimate the number and net worth of the very wealthiest individuals. The variety of approaches discussed here is aimed at developing better wealth estimates. The post-audit and Forbes projects are both just beginning and the data presented here are preliminary. Yet it appears that information available from these sources will be useful. The post-audit study and the use of data collected by Forbes and others will continue to be part of our research program, as will the evaluation of any changes to the estate tax code. The results of these efforts and the cooperation we are receiving from researchers outside the IRS should ensure that the quality of our data will continue to improve.

ACKNOWLEDGMENTS

Thanks to Wendy Alvey, Beth Kilss, and Dan Skelly, for reviewing this text, and to Nancy Dutton and Sheila Gray for typing and proofreading it. Thanks also to my supervisors and colleagues at IRS and to my colleagues at the Andover and Ogden Service Centers, whose encouragement and cooperation have made this paper possible.

NOTES AND REFERENCES

[1] Schwartz, Marvin, "Preliminary Estimates of Personal Wealth, 1982: Composition of Assets," Statistics of Income Bulletin, Internal Revenue Service, Winter 1984-85, pp. 1-18.

[2] Commerce Clearing House, Inc., Tax Reform Act of 1976 - Law and Explanation, 1976.

[3] Internal Revenue Service, Review of Technical Developments, Tax Reform Act of 1976, IRS Publication 788, Special Edition, June 1977.

[4] Weinberger, Michael J. (Ed.), Estate and Gift Tax After Tax Reform, Practising Law Institute, New York City, 1977.

[5] Commerce Clearing House, Inc., Economic Recovery Tax Act of 1981 - Law and Explanation, 1981.

[6] Weinberger, Michael J. (Ed.), Estate and Gift Tax After ERTA, Practising Law Institute, New York City, May 1982.

[7] Harriss, C. Lowell, "Wealth Estimates as Affected by Audit of Estate Tax Returns," National Tax Journal, December 1949, pp. 316-333.

[8] Schwartz, Marvin, "Further Estimates of Personal Wealth in the United States Using the Estate Multiplier Technique," 1987 American Statistical Association Proceedings, Section on Survey Research Methods (also in this volume).

[9] Harriss, op. cit., p. 319.

[10] Ibid., p. 332.

[11] Editors, "The 400 Richest People in America," Forbes, October 1984. (See also 1982 - 1986 issues.)

[12] Ibid., p. 72.

[13] Editors, "The Forbes Four Hundred," Forbes, Fall 1983, p. 73.

[14] Anderson, Kevin, "Digging Up Today's List Wasn't Easy," USA Today, October 14, 1986, p. 13.

[15] Scheuren, Fritz and McCubbin, Janet, "Piecing Together Personal Wealth Distributions," Statistics of Income and Related Administrative Record Research: 1986-1987, Internal Revenue Service, 1987 (in this volume).

Editor's Note: This paper was originally presented at the annual meetings of the American Statistical Association, August 1987.