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## Appendix C: Predicting Estate Tax Returns

Since price changes are an important determinant of wealth-holder status, it is interesting to see how well one can predict the number of estate tax returns on the basis of price and population changes. The period from 1939 to 1953 is a good one to select for this purpose. We know that estate building is only indirectly related to income and price movements and hence would not expect the aggregate data on estates of decedents to move closely with any other single series, quite apart from any changes in law and practice.

In Chapter 2 we pointed out the extraordinary rise in the number of estate tax returns after 1944, from about 15,000 in the war period to over 36,000 in 1953 and 1954. What factors are responsible for this remarkable rise? The only important changes in the law (that is, important for our purposes) in the period after World War II were the 1948 repeal of the 1942 law as it affected community property states and the introduction of the marital deduction in 1948. The former, which restored the full effect of community property law in the eight states under such law, had mixed effects. By allowing more complete splitting of property, it encouraged smaller returns in those states. To the extent that the split reduced individual holdings below $\$ 60,000$, it reduced the number of returns. To the extent, however, that there was a tax saving at the death of the first spouse to die, the number of reported estates of surviving spouses might have been expected to rise. On balance, however, the repeal of the 1942 amendment probably decreased the number of returns and certainly decreased the size of the average return.

The introduction of the martial deduction did not change the method of reporting gross estate but it did set up new incentives for property disposition both before and at the time of death. This deduction allows the taxpayer to reduce his taxable estate by an outright transfer at the time of death to his spouse of up to 50 per cent of his gross estate. While this provision reduces tax liability, it probably does not reduce the number of returns filed. To the extent that there is a tax saving, it would seem to encourage more returns by surviving
spouses. It would reduce the incentive to make gifts to spouses before death and would thus encourage more estate tax returns. Finally, it reduces somewhat the incentive to place the bequest to a spouse in a life estate (such a disposition would not have qualified for the marital deduction until 1954) and hence encourages returns from surviving spouses. On balance, then, the marital deduction would seem to encourage more returns while not having any very important effect on the size of the average return.

Taken altogether, the 1948 changes in the law tend to cancel out each other's effects on number of returns and amount of gross estate reported during 1948-54. But it may be guessed that the net effect of these changes would be to raise the number of returns and the amount of reported gross estate.

How much of the rise in number of returns and total gross estate can be predicted on the basis of price and population changes? By applying such changes to both 1939 and 1944 data, we obtain a prediction of a smaller number of returns, a smaller total of gross estate, and a larger average size of return than was actually the case in 1953. The method used was as follows: First, the number of returns filed in the base year was raised by the percentage rise in population over age 20 from the base year to 1953. Second, the number of returns in the relevant (on the basis of price change) estate sizes below $\$ 60,000$ in the base year was estimated by extending the frequency curve backward. Adding the number of returns in the two steps gives the predicted number of returns. Third, the number of returns in the first step was multiplied by the base year's average returns inflated by the rise in consumer prices. Fourth, the number of returns raised from below $\$ 60,000$ (in step 2) was multiplied by $\$ 65,000$. Finally, the amounts determined in steps 3 and 4 were added together to get the predicted total gross estate for 1953.

## predicting estate tax returns

Using this method, the following results were obtained.

|  | Total <br> Gross <br> Estate |  |  |
| :---: | :---: | :---: | :---: |
| Base Year | Number <br> of <br> Returns | (billion <br> dollars) | Average <br> Return <br> (dollars) |
|  | PREDIGTED FOR 1953 |  |  |
| 1939 | 24,000 | 6.4 | 266,000 |
| 1944 | 22,800 | 5.7 | 250,000 |
|  | ACTUAL 1953 |  |  |
|  | 36,699 | 7.4 | 202,000 |

It would seem that some growth factor in addition to price and population is necessary in predicting estate tax returns. From 1944 to 1953 the number of returns rose 224 per cent and the amount of gross estate rose 217 per cent. Using 1939 as a base year, the number of returns rose 310 per cent and the amount of gross estate 274 per cent (only returns over $\$ 60,000$ considered for 1939, insurance of first $\$ 40,000$ excluded). Substituting asset prices for consumer prices would yield a somewhat better prediction.

Presumably the relevant growth factors in addition to price and population change are rises in income and savings. From 1944 to 1953 total personal disposable income rose 170 per cent and the number of families and unattached individuals with $\$ 5,000$ or more total money income rose 285 per cent. Applying the latter factor to the 1944 returns yields the very high prediction of 50,455 returns for 1953. The best result is obtained by applying the personal disposable income percentage rise. The predicted number of returns for 1953 in this case is 32,192 . The method followed here is to multiply the number of returns in 1944 by 170 and then add 5,200 for the number raised out of the $\$ 40,000$ to $\$ 60,000$ gross estate size into the $\$ 60,000$ and over size. Aggregate gross estate was multiplied by the price rise.

