

SPECIAL REPORT

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Estate Taxes, Labor Supply, And Economic Efficiency

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For nearly a quarter of a century, the ACCF Center for Policy Research has sponsored pathbreaking research on tax policies to encourage saving, investment, and economic growth. As the Bush Administration and the U.S. Congress prepare to debate various tax reduction proposals, the Center offers this Special Report to focus the discussion on the economic impact of the estate tax.

The key conclusions of the paper are that the federal estate tax reduces the labor supply and personal saving and increases the cost of capital (the hurdle rate) for new investment. In addition, entrepreneurs are particularly hard hit by the estate tax as they face higher average estate tax rates and higher capital costs for new investment than do other individuals. Finally, the federal estate tax causes distortions in household decision-making about work effort, saving, and investment (and thus loss of economic efficiency) that are even greater in size than those from other taxes on income from capital.

INTRODUCTION

The federal estate tax has been a feature of the tax code for much of the last two hundred years. Currently, the estate tax is one component of the Federal Unified Transfer Tax, which is composed of the estate tax, the gift tax, and the generation-skipping transfer tax. Mechanically, the estate tax consists of a base and rate schedule. Since the Revenue Act of 1954, the gross estate is comprised of the fair market value of the decedent's real estate, stocks, bonds, businesses, pensions, and the proceeds from life insurance policies.

Prior to 1976, the gift tax and the estate tax were not integrated. This provided differential taxation for gifts depending upon the donor's life status. The Tax Reform Act of 1976 (TRA '76) reconciled this discrepancy by integrating the gift and estate taxes and ending the differential taxation. Specifically, to equalize the treatment of *inter vivos* gifts and bequests, lifetime taxable gifts are added to the gross estate to form

the tax base. (As noted below, a credit is provided for lifetime gift taxes paid.)

Finally, transfers that skip a generation (e.g., those to a grandchild) are subject to a generation-skipping transfer tax (GSTT). If \$1 of taxable estate was transferred first to a child and then, in turn, from the child to the grandchild, it would be subject to the estate tax twice. Accordingly, there arises an incentive to "skip" a generation, thereby lowering dynastic estate taxes. The GSTT ensures that each generation is taxed by taxing any such transfer in excess of \$1 million at the highest statutory rate, currently 55 percent.

Estate Tax Rates and Credits

The second basic component of the estate tax is the rate schedule. The federal estate tax rate schedule ranges from 18 percent on the first \$10,000 of taxable estate to 55 percent on estates in excess of \$3 million. In our analysis below, we will utilize data from 1992.

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Unified credit

Several credits against tax liability are allowed under the estate and gift tax, the largest of which is the Unified Credit. From 1987 through 1997, the Unified Credit was fixed at \$192,800. This yielded an effective exemption of the first \$600,000 of estate value per decedent. As a result, the effective marginal tax rates begin at 37 percent on taxable estates in excess of \$600,000. The Tax Reform Act of 1997 (TRA '97) increases the size of the Unified Credit in steps to \$345,800 in 2006, equivalent to an effective exemption of \$1 million.

State tax credit

The second largest credit is that for state death taxes paid. The maximum credit is determined according to a rate schedule based upon the adjusted taxable estate. The credit ranges from zero to 16 percent. The credit acts to reduce the maximum federal marginal estate tax rate from its statutory rate of 55 percent to 39 percent. However, the operation of the credit does not affect either the total (state plus federal) tax liability or overall marginal tax rate that an estate faces. Each \$1 credit issued by the federal government is offset by \$1 in state level estate taxes paid. As noted above, credits also exist for prior federal and state gift (and estate) taxes paid.

State-level death taxes take two forms. States tax either the action of bequeathing (an estate tax) or the receipt of proceeds from an estate (an inheritance tax). From a public finance perspective, these are equivalent, as the decision to tax the estate versus the inheritance is simply a choice concerning the statutory incidence. As usual, the economic effects are not a function of such statutory decisions.

Every state has a tax that is exactly equal to the federal credit for state estate taxes. This sponge (or “pick-up”) tax is simply a transfer of tax revenue from the federal government to the states. However, in 1992, 17 states had estate taxes that potentially exceeded the maximum credit and, thus, potentially added to the overall tax liability. Three of these “non-sponge” states employ an estate tax; 14 rely on an inheritance tax.

Marginal tax rates for the former range from zero percent to 21 percent and for the latter from zero percent to 30 percent. The key issue—whether these taxes carry levies greater than the size of the federal credit and, thus, increase total estate tax liabilities—depends upon the size of the estate and/or the size and composition of bequests.

Table 1 displays the effects of the federal unified credit, the credit for state death taxes, and conveys the difference in marginal tax rates from living in a non-sponge tax state.

The key feature of the table is the final column, which shows two important features of the overall tax system. First, living in a non-sponge state generates a marginal death tax in excess of that in a sponge tax state. In the analysis that follows, we will use this difference between states as a key to identifying behavioral responses.

Second, the bulk of the marginal effects occur at relatively low levels of wealth. Thus, one would expect to observe an impact of the estate tax on individuals well below the wealth levels of the “super rich.” From a research perspective, this is fortuitous. The super rich are, by definition, rare and unusual. In contrast, the “mere mortals,” identified in Table 1, occur in substantial numbers and are, thus, amenable to analysis using the typical statistical methods. This is our strategy below.

To gain a feel for the institutions, consider a single individual near the median level of wealth (\$200,000) who dies in Florida. Florida is typical of sponge tax states in that its levy is equal to the federal credit. Thus, an individual dying in Florida would have no net estate tax burden. In contrast, if the same individual had died as a resident of New York in 1992, she would face a state estate tax liability of \$6,000. This would be offset in part by the federal credit, leaving a net liability of \$3,360. In short, an individual with wealth well below the federal estate tax threshold is potentially subject to a substantial estate tax levy as a resident of a non-sponge tax state.

Methodology of the Study

The goal of this study is to summarize the impact of federal and state estate taxes on incentives for households' economic activities. Our strategy is to focus on the saving and labor supply of older workers, who are far enough along in life to be cognizant of the estate tax, but not so far along as to preclude economic responses to its incentives. Fortunately, the structure of state-level estate taxes has substantial impact on these households, even when they are not wealthy enough to immediately become liable for the federal estate tax. In this way, we can use these individuals to learn about household responses to the state plus federal estate tax system. Of course, because the very wealthy are even more likely to be responsive to tax incentives, it is likely that our findings will understate

Table 1 State-Based Effective Marginal Tax Rates After Federal Credits

				Average State Death Tax Rates			State-Based Marginal Rate
Taxable Estate (\$1,000s)		Federal Tax Rate after Unified Credit	Federal Credit for State Taxes	All States	Sponge Tax States	Non-Sponge Tax States	Sponge versus Non-Sponge Difference
Over	But less than						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
0	600	0.0%	4.0%	4.7%	4.0%	6.5%	2.5%
600	700	37.0%	4.0%	5.5%	4.0%	7.1%	3.1%
700	750	37.0%	4.8%	5.5%	4.8%	7.1%	2.3%
750	900	39.0%	4.8%	6.2%	4.8%	7.7%	2.9%
900	1,000	39.0%	5.6%	6.2%	5.6%	7.6%	2.0%
1,000	1,100	41.0%	5.6%	6.9%	5.6%	8.1%	2.5%
1,100	1,250	41.0%	6.4%	6.9%	6.4%	8.2%	1.8%
1,250	1,500	43.0%	6.4%	7.0%	6.4%	8.4%	2.0%
1,500	1,600	45.0%	6.4%	7.7%	6.4%	8.8%	2.4%
1,600	2,000	45.0%	7.2%	7.7%	7.2%	8.9%	1.7%
2,000	2,100	49.0%	7.2%	8.4%	7.2%	9.3%	2.1%
2,100	2,500	49.0%	8.0%	8.3%	8.0%	9.1%	1.1%
2,500	2,600	53.0%	8.0%	9.0%	8.0%	9.6%	1.6%
2,600	3,000	53.0%	8.8%	9.1%	8.8%	9.6%	0.8%
3,000	3,100	55.0%	8.8%	9.8%	8.8%	10.2%	1.4%
3,100	3,600	55.0%	9.6%	10.6%	9.6%	10.9%	1.3%
3,600	4,100	55.0%	10.4%	11.3%	10.4%	11.7%	1.3%
4,100	5,100	55.0%	11.2%	12.2%	11.2%	12.5%	1.3%
5,100	6,100	55.0%	12.0%	12.9%	12.0%	13.3%	1.3%
6,100	7,100	55.0%	12.8%	13.7%	12.8%	14.1%	1.3%
7,100	8,100	55.0%	13.6%	14.5%	13.6%	14.8%	1.2%
8,100	9,100	55.0%	14.4%	15.3%	14.4%	15.6%	1.2%
9,100	10,000	55.0%	15.2%	16.1%	15.2%	16.3%	1.1%
10,000	10,100	60.0%	15.2%	16.1%	15.2%	16.3%	1.1%
10,100	21,040	60.0%	16.0%	16.1%	16.0%	16.3%	0.3%
21,040	and over	55.0%	16.0%	16.1%	16.0%	16.3%	0.3%

Source: Authors' tabulations of the estate tax codes of 50 states and the District of Columbia, and the Internal Revenue Service.

the impact of the estate tax. Our data are drawn from the Health and Retirement Survey (HRS) for 1992. These data are a nationally representative sample of individuals aged 51 to 61 in 1992.

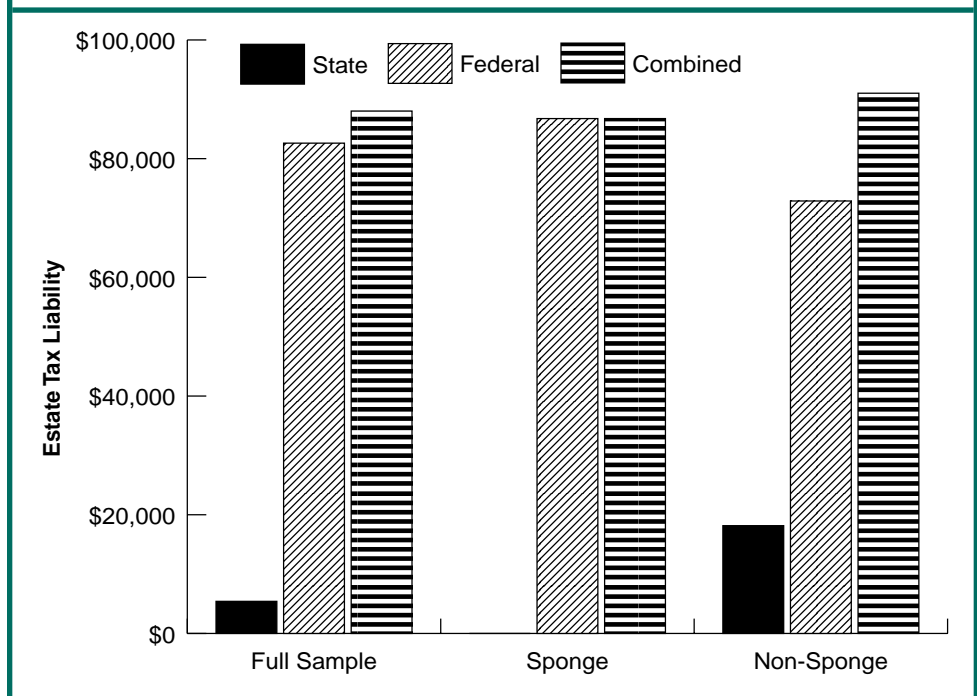
Using the HRS data, we compute expected death tax liability, expected average tax rates, and expected marginal tax rates. Our computations include both the federal estate tax and state-level estate and inheritance taxes. Our computations incorporate information on net worth, age, gender, and mortality probabilities. While estate taxes are (currently) certain, the timing of death is not. Thus, we use wealth-adjusted mortality probabilities to capture the likelihood of death in each year in the future, and its associated tax liability.

To get a feel for the data, begin with Figure 1, which shows the expected, present-value tax liability for the sample as a whole, in sponge states and in non-sponge states. In each instance, we show the liability due to federal statutes, state-level estate taxes, and the combined tax liability. The first thing to notice regarding Figure 1 is the overall level of estate taxes—the mean value is roughly \$90,000. That is, on average, households equate their future with the estate tax as the equivalent of a \$90,000 payment in 1992.

The second feature of Figure 1 to note is that the composition of tax liability differs between sponge (pick-up) states and non-sponge states. In the latter, the state-level liability is greater and contributes (because it can exceed the federal credit) to raising the overall liability.

Our tax policy goal is to understand the economic consequences of federal estate taxes. Ideally, to learn the answer we would compare the labor supply, saving, bequests, etc., of those who face the estate tax with the corresponding behavior of those who do not. Unfortunately, everyone faces the federal tax and it has not changed much over time, making it a somewhat unpromising research tool. Thus, the more promising strategy is to compare people in high-tax states with those in low-tax states.

Figure 1 Expected Present-Value Estate Tax Liabilities by Type of State



ECONOMIC IMPACT OF ESTATE TAX

■ Impact on Entrepreneurs

The study shows that entrepreneurs face an expected estate tax liability that is typically nearly five times as large as that of non-entrepreneurs (see Figure 2). Of course, one might immediately suspect that entrepreneurs, especially those who survive to later in their working careers, are simply more successful. The data, however, show that simply having greater wealth is not the whole story; instead, entrepreneurs face significantly higher average and marginal tax rates because of the type of investments they make.

■ Impact on the Cost of Capital

The finding described above that entrepreneurs face higher expected estate tax rates highlights the possibility that these taxes may serve as a disincentive to entrepreneurial, closely held, or family businesses. To investigate this possibility, we compute the “user-cost of capital” facing entrepreneurs in our sample. The user-cost of capital is the internal rate of return, or hurdle rate, required of a project in order that the cash flows are sufficient to meet the market rate of return after covering depreciation, real borrowing costs, and taxes. In this context, the estate tax represents another tax on the

Figure 2 Expected Estate Tax Liabilities by Entrepreneurial Status

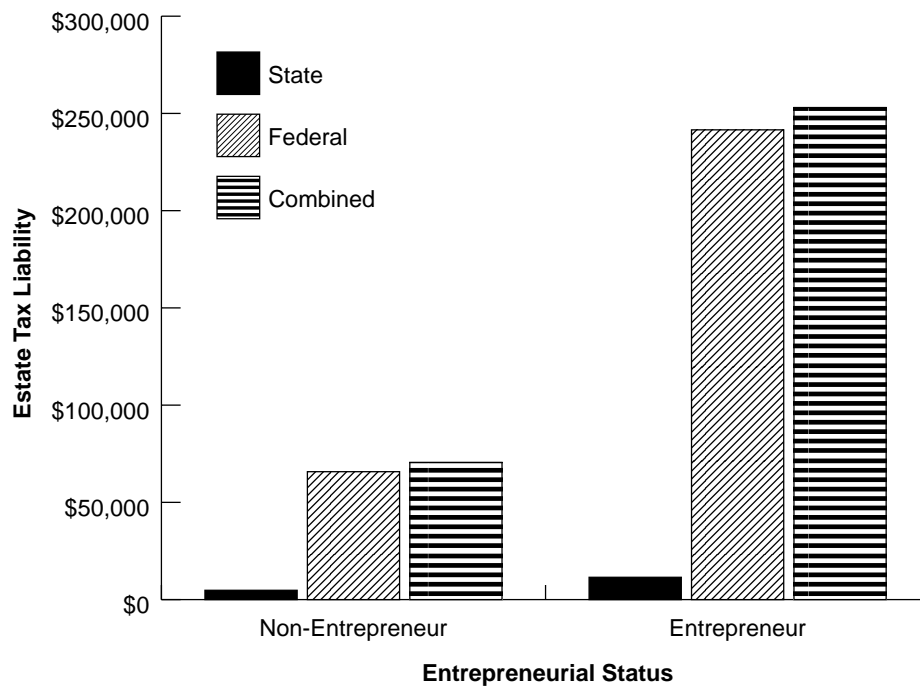
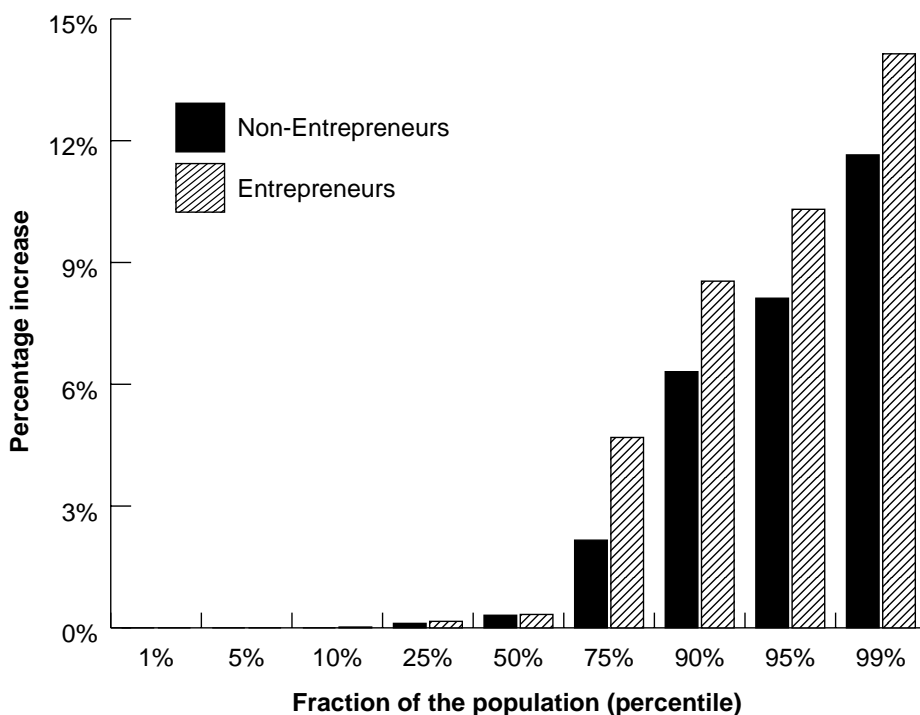


Figure 3 Estate Taxes, Entrepreneurs and Cost of Capital
Percentage increase due to estate tax



cash flows generated by the business project—as above, computed as a one-time, up-front tax—that raises the hurdle rate. As Figure 3 shows, the estate tax raises the cost of capital substantially for the upper 25 percent of individuals, especially for the entrepreneurs in the sample.

For example, the top 10 percent of entrepreneurs surveyed face capital costs that are over 8 percent higher than they would be in the absence of the estate tax. For the top 1 percent of entrepreneurs, the cost of capital is over 14 percent higher.

■ Impact on Labor Supply

The results indicate that the estate tax decreases labor force participation among single individuals.

How large is the effect? To get a ballpark figure, eliminating the estate tax would raise labor force participation by single individuals aged 51 to 61 by 0.5 percent. In October, 2000, roughly 34 million individuals fell in this age group. Assuming that the same effects apply to married individuals, eliminating the estate tax would raise employment by roughly 170,000 jobs. Of course, this may overstate the effects, as not all married couples may react in this fashion. In the other direction, however, there are likely effects on workers both older and younger than the 51-to-61 age bracket to which we refine our computation. And, as noted earlier, one might suspect that the labor supply impact on the extremely wealthy might be stronger.

Regardless of the precise number, this research for the first time links the estate tax with reduced supply of effort to the labor market.

■ Impact on Saving

The statistical analysis of the effect of the estate tax on saving shows a negative impact. The study shows, for example, that eliminating the estate tax would raise the mean net worth of individuals in the sample by approximately \$166,000. If we spread this out over 30 years—roughly the ages 25 to 55 for those in our data—this is a bit over \$5,500 per year *without interest*. If we assume that the saving takes place at an average return of only 4 percent, this implies a saving effect of just under \$3,000 per year. If we use the median (as opposed to average) effect, the implied effects are roughly one-fourth as large, suggesting an effect on saving of roughly \$800 or so per year. Of course, “large” is in the eye of the beholder, but these strike the authors as economically sizeable, yet plausible, impacts of the estate tax.

■ Impact on Economic Efficiency

The findings summarized above suggest that the estate tax significantly alters labor supply and saving decisions. The estate tax is also a source of “deadweight loss”; an inefficiency that arises from the distortion of individuals’ decisions due to the tax system. For example, using a framework similar to one employed by Harvard University Professor Martin Feldstein and assuming that the deadweight loss of the capital income tax is roughly equal to 24 percent of pre-retirement saving, the authors examine the issue by estimating the distortion cost of eliminating the estate tax and replacing the revenue with a capital income tax. The authors find that the distortion cost of the estate tax is roughly 2 cents greater than that of the capital income tax. (Feldstein further argues that the distortion cost of the capital income tax is on par with that of the corporation income tax, suggesting that the estate tax is comparable as well.) Given the age group under consideration, net worth corresponds nicely to pre-retirement saving. The authors find that the distortion cost of the estate tax is roughly \$.26 per dollar of pre-retirement saving.

Again, to get a feel for the implications, note that personal saving in 1999 was just under 2 percent of personal income, implying that the deadweight loss was roughly 0.5 percent of personal income, or \$38.4 billion. That is, one would have to compensate individuals by nearly \$40 billion in excess of the expected tax revenue associated with the estate tax in order to make

up for the distortion of household decisions. Again, this is a conservative estimate in two ways. First, personal saving (as measured in the National Income and Product Accounts) was relatively low in 1999, and our data do not incorporate the distortions on the super-rich who are most likely to develop sophisticated strategies to avoid the estate tax.

CONCLUSIONS

The key findings are that the estate tax tends to raise the cost of capital, especially for entrepreneurs, as well as to reduce work effort and saving by individuals. The labor force participation of older workers falls by 170,000 jobs annually. Similarly, the estate tax reduces saving. Our statistical estimates imply an economically important impact of plausible magnitude. Elimination of the estate tax would correspond to increased household saving of between \$800 and \$3,000 annually. Finally, the federal estate tax causes distortions in household decision-making about work effort, saving, and investment (and thus loss of economic efficiency) that are even greater in size than those of the capital income tax. ❖