1-1-1999

Entrepreneurs and the Estate Tax

James R. Repetti
Boston College Law School, repetti@bc.edu

Recommended Citation
James R. Repetti. "Entrepreneurs and the Estate Tax." *Tax Notes* 84, (1999): 1541-1544.

Commentary: Entrepreneurs and the Estate Tax

James R. Repetti*

Introduction

I would like to offer an analysis quite different from a recent commentary, "The Death Tax: Investments, Employment, and Entrepreneurs,"[1] (hereinafter referred to as the "Entrepreneur Investment" article). The "Entrepreneur Investment" article asserts that the estate tax discourages entrepreneurs from investing their own financial resources and labor in their entrepreneurial activities.

The "Entrepreneur Investment" article seeks to support this assertion by using two forms of analysis. First, it uses tax elasticities calculated by measuring the changes in hiring practices and investments by sole proprietors in response to changes in the income tax. Tax elasticities, in general, represent the percentage change in a taxpayer's behavior, such as hiring employees, that occurs in response to a percentage change in the tax rate. The "Entrepreneur Investment" article uses a form of these income tax elasticities to approximate how sole proprietors respond to the effective estate tax rates selected in that article. As discussed below, this methodology significantly over estimates the responses to the estate tax for two reasons. First, the behavioral response to an effective estate tax is likely to be much different than the behavioral response to the income tax for reasons discussed below. In effect, using income tax elastiticies to measure responses to the estate tax is like comparing apples to oranges. Second, the effective estate tax rates selected in the "Entrepreneur Investment" article to measure the behavioral response to the estate tax apply only to sole proprietors age 60 and over. Since it is likely that the majority of entrepreneurs are under age 60, smaller effective estate tax rates should be used. As shown below, when smaller effective tax rates are used, the effect of the estate tax is minimal.

The second form of analysis employed by the "Entrepreneur Investment" article to illustrate the harmful effect of the estate tax on investment by entrepreneurs is the use of data compiled from surveys. As discussed herein, the conclusions drawn from the survey data can readily be explained by factors not relating to the estate tax.

---

* Professor of Law, Boston College Law School. The author thanks Charles Glover, a student at Boston College Law School, for helpful assistance.

[1] Douglas Holtz-Eakin, "The Death Tax: Investments, Employment, and Entrepreneurs," 84 Tax Notes 782 (Aug. 2, 1999).

Distortions Created by Taxation, In General

The estate tax, like any tax based on income or wealth, creates an economic distortion because it causes an investor to receive an after-tax return from an investment which is less than the investment's pretax return. Thus, all other things being equal, the income and estate taxes require the investment to pay more than it would have to pay without the taxes to attract investors. The "Entrepreneur Investment" article correctly observes that the distortion created by these taxes influence an entrepreneur's decision to invest in his or her enterprise, just as they also influence all investors analyzing alternative investments.

Minimal Distortion Created by the Estate Tax

Contrary to the suggestion of the "Entrepreneur Investment" article, however, the effect of the federal estate tax on the entrepreneur's decision to invest in his or her business venture is probably quite small because the estate tax has a minimal effect on the entrepreneur's annual yield from investing in the entrepreneurial activity. This is illustrated by a model developed by Professor James Poterba of MIT.[2] Professor Poterba posits that an investor's annual rate of return is affected by the income tax imposed on the yield plus the statistically expected value of the estate tax that might also be imposed on the return in the year the yield is realized. He calculates the expected value of the estate tax burden by using mortality tables that state the probability of an individual of a specified age dying in the year a return on investment is realized. The two tables used by Porterba are the Population Life Table, which is reported by the Social Security Administration Office of the Actuary, and the Individual Annuitant Life Table, which describes the mortality experience of individuals who purchase single-premium annuities from life insurance companies. His estimates of the effective rate of the federal estate tax for investors who are different ages in the year the yield is realized are summarized below:

[2] James Poterba, "The Estate Tax and After-Tax Investment Returns," National Bureau of Economic Research Working Paper No. 6337 (December, 1997).

Age of Household Head	Effective Federal Estate Tax Rate
A. Population Life table	
<50	0.1%
50-59	0.3%
60-69	1.0%
70-79	2.7%
>80	19.0%
B. Annuitant Mortality Table	
<50	0.1%
50-59	0.2%
60-69	0.5%
70-79	1.7%
>80	13.9%

Source: James Poterba, "The Estate Tax and After-Tax Investment Returns," NBER Working Paper No. 6337, Table 6 (December 1997)

Note that the expected effective tax burden of the federal estate tax for investors under age 60 (the period in which entrepreneurs are probably most active) is minimal, 0.3% or 0.2%, depending on which mortality table is used. The effective tax rate is 1% or less for investors who realize the return between the ages of 60 and 69. When the taxpayer reaches age 70 and beyond, however, the effective tax rate starts to represent a significant reduction in yield. For investors between the age of 70 and 79, the effective tax rate is 2.7% if the probabilities in the Population Life Table are used or 1.7% if the probabilities in the Annuitant Mortality Table are used.[3] For investors age 80 and over, the effective tax rate is 19.0% if the Population Life Table is used, or 13.9% if the Annuity Mortality Table is used.

It is likely that most entrepreneurs making investment decisions are under age 60. Thus, the effective federal estate tax rate of 0.3% has only a minor impact on yield calculations by entrepreneurs during their most active years. Although investor behavior can be highly complex, the minimal effect on an entrepreneur's

[3] Professor Poterba suggests that the probabilities in the Annuitant Mortality Table may be more accurate for individuals likely to pay an estate tax because that Table reflects life expectancies of individuals affluent enough to purchase a single premium annuity.

yield probably in turn results in minimal effect on his or her propensity to engage in entrepreneurial activity, all other factors remaining the same.

Indeed, there is a strong argument that most entrepreneurs do not consider the effective tax rate of the federal estate tax at all in their yield calculations. Although factoring the federal estate tax rate in the yield calculation would certainly be rational, psychiatrists teach that most of us spend most of our lives denying our mortality.[4] Ask yourself, when you got up today was your decision to work or make an investment influenced by the thought of your mortality? The answer for most of us is no. Moreover, how many business school courses teach that the effective estate tax rate should be included in yield calculations? There may be some, but I am not aware of any.

The "Examples" of the Estate Tax's Harmful Effect

Examples in the "Entrepreneur Investment" article of the potentially harmful effect of the estate tax in fact illustrate the opposite — that the estate tax has a minimal impact on an entrepreneur's decision. For instance, consider the example in the "Entrepreneur Investment" article that uses a form of income tax elasticities to calculate the effect of the estate tax on hiring employees.[5] The article determined the tax elasticities for the income tax with respect to (1) sole proprietors who have no employees hiring an employee and (2) sole proprietors expanding an existing work force. Using the elasticities based on an income tax, the article suggests that a 1% effective tax rate for the estate tax would decrease by 2.42% the probability that a sole proprietor who has no employees would hire an employee. Similarly, the article suggests that a 1% effective estate tax rate would decrease by .74% the amount a sole proprietor who has employees is willing to pay in wages.

Given our denial of death, it is not clear that income tax elasticities can appropriately be applied to determine the response to an estate tax. In general, an income tax elasticity compares the percentage change in taxpayer behavior, such as investment, to the percentage change in the income tax. The behavioral response to an income tax, with respect to which most persons do not deny the triggering event (the recognition of income), may be very different from the response to an estate tax, with respect to which individuals deny the triggering

---

[4] See e.g. Weisman, Dying and Denying 13 (1972) (stating, "The primary paradox is that while man recognizes that death is universal, he cannot imagine his own death. The belief is illogical, but persistent…").

[5] 84 Tax Notes at p. 785.

event (death). Moreover, since an effective federal estate tax rate of 1% exists only for taxpayers age 60 or over using the Population Life Table or taxpayers age 70 or over using the Annuity Mortality Table, how significant is this response even if it does occur? It is likely that a small minority of active sole proprietors are age 60 or over. Also, might other behavioral responses exert a greater influence than the estate tax on sole proprietors making an investment decision who are age 60 or over? For example, the desire for a secure income may cause sole proprietors age 60 or over to reduce expansion plans apart from any concerns about the estate tax.

Since the majority of sole proprietors are probably less than 60 years old, it is illuminating to examine the results of the methodology used by the "Entrepreneur Investment" article with respect to sole proprietors in age categories under 60 years old. For sole proprietors under age 50, the .1% effective estate tax rate results in only a .24% decrease in the probability that a sole proprietor having no employees would hire an employee and only a .074% decrease in the amount that sole proprietors with employees are willing to pay their employees. For sole proprietors between the age of 50 and 59, a .3% effective estate tax rate results in only a .726% decline in the probability of a sole proprietor with no employees hiring an employee and would decrease by only .22% the amount that the sole proprietors with employees would be willing to pay employees. These numbers are so small that there probably is no impact from the estate tax since hiring and wage decisions are affected by a myriad of other factors.

The "Entrepreneur Investment" article's second example of an effective estate tax rate in the range of 1 to 3 percent reducing investment by sole proprietors between roughly $2.5 and $7.5 billion is also not persuasive.[6] The article determines this reduction by calculating that an effective estate tax rate of 1% to 3% lowers annual investment by sole proprietors by 2% to 6%. This response is calculated using elasticities based upon observed differences in investment to changes in the <u>income</u> tax. The article then multiplies the <u>total</u> investment by <u>all</u> sole proprietors in 1997 of $125.1 billion by 2% and 6% to yield a reduction in investment of between $2.5 and $7.5 billion. But note that the effective estate tax rates of 1% to 3% apply only to taxpayers age 60 or over using mortality probabilities from the Population Life Table and to taxpayers age 70 or over using probabilities from the Annuitant Mortality Table. It is unlikely that <u>all</u> sole proprietors are over age 60. Indeed, I would expect that a relatively small percentage of sole proprietors are age 60 or over. Thus, the <u>total</u> investment by all proprietors should not have been used to calculate the effect or investment of

[6] 84 <u>Tax Notes</u> at p. 785.

effective estate tax rates of 1% to 3%. Instead, only a small portion of $125.1 billion should have been used. As a result, the reduction in investment, if it occurs at all, is probably much less than the $2.5 to $7.5 billion range determined by the article. For example, if 10% of sole proprietors are age 60 or over, investment would be reduced by only $.25 to $.75 billion using the article's methodology. Moreover, it is again important to consider that the behavioral response to the effective estate tax rate probably differs significantly from the response to effective income tax rates. This may be particularly true for proprietors over age 60 who may be seeking a steady income stream. Thus, the reduction in investment may be even less.

Similarly, the conclusion in the "Entrepreneur Investment" article that the estate tax discourages older adults from working[7] is also questionable. This conclusion is based upon an analysis of data from surveys of two groups of individuals: one consisting of individuals between age 51 and 61 and the other of individuals age 70 and over. The analysis found that the individuals in the data sets who are likely to face a positive estate tax at death work less than those who do not expect to pay an estate tax. However, this cannot be attributed solely to the estate tax. It is just as likely to result from the fact that those facing a positive estate tax have sufficient wealth to avoid working in their "golden years."

Lastly, the survey data about how the estate tax has affected the employment growth of family-owned business over the past five years and anticipated employment grown in the next five years[8] is interesting, but also not persuasive. The "Entrepreneur Investment" article states that data from a 1999 survey of businesses in upstate New York shows that concerns about paying an estate tax in the future reduced job growth by approximately 2.32% in the prior five years and is anticipated to reduce job growth by approximately 4.87% in the ensuing five years. Could these results reflect the effect of the increased income tax which occurred in 1993, instead of the effect of the estate tax? As the "Entrepreneur Investment" article notes, income tax burdens have a directly observable impact on hiring. For example, an increase in the effective income tax rate of 3% would dwarf any impact that the .3% effective estate tax has on entrepreneurs under age 60. Alternatively, could the political views of the persons surveyed, all of whom lived in upstate New York, a Republican stronghold, have affected their responses? The difficulties and biases of surveys

[7] 84 Tax Notes at p. 787-788.

[8] 84 tax Notes at pp. 786-787.

are well known. Additional analysis and surveys with more diverse data samples are required before any conclusions can be drawn from this survey.

Conclusion

In conclusion, the effect of the estate tax on entrepreneurs is probably much weaker than asserted. In contrast, the effect of the income tax on the entrepreneur's investment decision is significant. The difference arises from the fact that the income tax is certain to be applied to at least some forms of income in each year from which an investment yield is calculated.[9] The effective estate tax rate, however, is a function of the probability of death occurring in the year for which the yield is calculated. The result is that the effective federal estate tax rate is only .3% for entrepreneurs under age 60.

The estate tax may have an even smaller impact because of human behavior. Entrepreneurs may exclude the effective estate tax rate from their calculations entirely during their most productive years because people tend to deny the inevitability of their deaths. The interplay of this significant behavioral tendency with the estate tax merits more study.

[9] Not all forms of income are certain to be taxed. Capital gains can be deferred by avoiding recognition events and can be eliminated by holding the investment to death.