



**Growth Consequences of Estate Tax Reform:
Impacts on Small and Family Businesses**

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September 2010

A Study by the American Family Business Foundation

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September 2010

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Executive Summary

The United States economy has endured a severe recession and is currently growing too slowly. Accordingly, it is imperative that policy be focused on generating the maximum possible pace of economic growth. The estate tax is an important element of pro-growth tax policy. Recent research indicates that the estate tax has significant impacts on asset accumulation (and, thus, balance sheet repair), as well as the payroll and investment decisions of small and family businesses.

However, the future of the estate tax is up in the air. At present, the tax is temporarily repealed, but in the absence of new legislation in 2011 the top effective tax rate will jump to 60 percent. A variety of proposals include top rates ranging from 35, to 45, to 65 percent.

This paper examines the impacts of a higher estate tax rate on asset accumulation, small and family businesses' cost of capital, investment outlays, desire to hire, size of payrolls and jobs. In each instance, raising the estate tax has significant negative impacts. In particular, letting the tax rate rise to 60 percent will cost as much as 1.5 million jobs, and even a more modest rate of 15 percent could diminish hiring by over 350,000 jobs. Other impacts on small and family businesses are shown below.

- Raising the "hurdle rate" of return required for investment by 34 basis points,
- Reducing capital outlays by 7.8 percent,
- Decreasing the probability of new hiring by 8.3 percent, and
- Cutting the size of payrolls by 2.5 percent.

<i>Jobs Lost Due to Estate Tax</i> <i>(job loss measured in thousands)</i>											
<i>Tax Rate</i>	<i>Jobs Lost</i>	<i>Tax Rate</i>	<i>Jobs Lost</i>	<i>Tax Rate</i>	<i>Jobs Lost</i>	<i>Tax Rate</i>	<i>Jobs Lost</i>	<i>Tax Rate</i>	<i>Jobs Lost</i>	<i>Tax Rate</i>	<i>Jobs Lost</i>
1	-24.30	12	-292.42	23	-561.95	34	-832.90	45	-1105.31	56	-1379.17
2	-48.62	13	-316.86	24	-586.52	35	-857.61	46	-1130.14	57	-1404.14
3	-72.95	14	-341.32	25	-611.11	36	-882.32	47	-1154.99	58	-1429.12
4	-97.29	15	-365.79	26	-635.70	37	-907.05	48	-1179.85	59	-1454.11
5	-121.64	16	-390.27	27	-660.31	38	-931.79	49	-1204.72	60	-1479.12
6	-146.00	17	-414.76	28	-684.93	39	-956.54	50	-1229.61	61	-1504.14
7	-170.37	18	-439.26	29	-709.56	40	-981.31	51	-1254.50	62	-1529.17
8	-194.76	19	-463.77	30	-734.21	41	-1006.08	52	-1279.41	63	-1554.21
9	-219.16	20	-488.30	31	-758.87	42	-1030.87	53	-1304.33	64	-1579.26
10	-243.57	21	-512.84	32	-783.53	43	-1055.67	54	-1329.26	65	-1604.33
11	-267.99	22	-537.39	33	-808.21	44	-1080.48	55	-1354.21		

1. Introduction and Economic Setting

The United States economy has endured a severe recession and is currently growing slowly. Over the course of the past several years, Administrations and Congresses have engaged in a number of counter-cyclical fiscal measures, or in the parlance of the political world, “stimulus”: checks to households (the Economic Stimulus Act of 2008), the gargantuan stimulus bill in 2009 (American Recovery and Reinvestment Act), “cash for clunkers” (the Car Allowance Rebate System), and tax credits for homebuyers (the Federal Housing Tax Credit). There is an ongoing debate regarding the effectiveness of these measures in mitigating the natural course of the business cycle downturn.

Regardless of the ultimate resolution of that debate, we believe it would be a mistake for policymakers to evaluate tax policy from that perspective. The U.S. economy is growing, albeit slowly, not declining. Gross Domestic Product (GDP) has been rising since the third quarter of 2009, and employment is up from its trough in December 2009. The National Federation of Independent Business’s small business confidence index was 92.2 in May 2010, up from 81.0 in March 2009. Consumer confidence is up from 26 in March 2009 to 63.3 in May. The Institute for Supply Manufacturing’s manufacturing and non-manufacturing indices are above 50, signaling growth. There is substantial and widespread evidence of an ongoing economic expansion. Accordingly, this is not the time for counter-cyclical “stimulus”. Instead, there is a need for pro-growth policies that buttress the underlying pace of expansion.

The Need for Pro-Growth Policies

The pace of expansion remains solid and unspectacular. In many ways this is not surprising. As documented in Rogoff and Reinhart (2009), economic expansions in the aftermath of severe financial crises tend to be more modest

and drawn out than recovery from a conventional recession. Nevertheless, at this juncture it is imperative that policy be focused on generating the maximum possible pace of economic growth. More rapid growth is essential to the labor market futures of the millions of Americans without work and to minimizing the difficulty of slowing the explosion of federal debt to a sustainable pace. More rapid growth will generate the resources needed to meet our obligation to provide a standard of living to the next generation that exceeds the one this generation inherited.

Drivers of Economic Growth

Policies focused on more rapid economic growth are the most important priority at this time. In light of this, it is useful to reflect on the four basic sources of growth in spending in the economy: households, businesses, governments, and international partners.

Households are caught in a double bind of reduced net worth and weak income growth. As is well known, the collapse of the U.S. housing bubble left many households in mortgage distress, and more broadly diminished the net worth of the household sector. In addition, the financial crisis itself destroyed additional household wealth, with the result that household net worth is now \$11 trillion below 2007. The pace of the expansion thus far has yielded modest income growth.

It would be surprising, or even unwise, to expect households to be a robust source of spending growth. Instead, the best course for households would be to repair their damaged balance sheets as quickly as possible. Policies that support the ability of households to do this while otherwise maintaining their consumption patterns will be the most beneficial. One-time “stimulus” in the form of tax cuts or transfers contribute little to these goals.

Similarly, federal and sub-federal governments also face enormous budgetary difficulties, largely due to long-term pension, health, and other spending promises coupled with recent programmatic expansions. The federal government needs to dramatically reduce spending growth and control its debt. No sensible growth strategy can be built around greater federal spending, or greater government spending in general.

With households and governments repairing balance sheets, this leaves the business sector spending and net exports at the heart of badly needed pro-growth policies.

Tax Policy Considerations for Pro-Growth Policy

The estate tax is an important element of pro-growth tax policy for economic growth. As documented in the next section, recent research indicates that the estate tax has significant impacts on asset accumulation (and, thus, balance sheet repair), as well as the payroll and investment decisions of small and family businesses. In the current setting, this is especially important. According to the Small Business Administration, there are almost 120 million private sector workers in the United States. Slightly more than half of those workers, 60 million, work for small businesses.

The policy tradeoffs are clear. At this juncture the most important priority should be to foster faster economic growth, and policy should be focused on supporting that aim. Estate tax policy can contribute to this, especially among the small and family businesses that are part of the fabric of the American economy. Our goal in what follows is to outline the consequences for asset accumulation, small business hiring and payroll decisions, and family business innovation investments when other considerations are put ahead of a pro-growth focus.

2. Economic Implications of the Estate Tax: A Review

As reviewed in Holtz-Eakin and Smith [2009], recent research on the estate tax has led to a rethinking of the appropriate estate tax policy. Traditionally, the estate tax was viewed primarily as an instrument of social justice. In contrast, a modern view indicates that the estate tax will distort decisions ranging from the legal structure of the estate, to the entrepreneurial ventures that generate significant wealth. We note here only the most important channels of influence.

Historically, among the most vociferous opponents of the estate tax have been small and family businesses as well as entrepreneurs – important contributors to U.S. economic vitality. As documented by the Small Business Administration, “...small businesses employ about half of U.S. workers. Of 116.3 million nonfarm private sector workers in 2005, small firms with fewer than 500 workers employed 58.6 million and large firms employed 57.7 million. Firms with fewer than 20 employees employed 21.3 million.”ⁱⁱ Recent research fleshes out the foundations of this opposition – the estate tax has a disproportionate impact on the overall economy precisely because it has such dramatic impacts on these individuals and their enterprises.

These impacts occur on both sides of the generational transactions – lower estate taxes may both engender greater success among those accumulating estates, and provide needed cash flows for those who are recipients of bequests and running a business. And perhaps most importantly, even if one believes that it is appropriate to more heavily tax the return to capital in order to equalize the distribution of wealth, recent evidence suggests that the estate tax is not the most efficient means to this end, a topic to which we now turn.

Altering bequests and portfolios to reduce estate taxes carries a price: asset accumulation is less solely dedicated to the financial objectives of the individual, whether one is investing in a family business or leaving bequests to children. Not surprisingly, one might suspect that the estate tax might reduce the overall amount of saving in an economy. In a comprehensive and detailed analysis of Internal Revenue Service data dating to 1916, Kopzcuk and Slemrod [2000] find that in aggregate, time-series analysis the estate tax is “generally negatively correlated with the reported net worth of the top estates relative to national wealth.” In other words, when the estate tax goes up, the accumulated net worth declines.

This finding stands up to further scrutiny of individual tax return data, where the authors find a statistically significant, negative relationship between reported estates and the tax rate. Interestingly, Kopzcuk and Slemrod [2000] find that the tax rate that prevailed during one’s lifetime (as opposed to the rate at death) has a greater effect on the estimated savings rate. Using the marginal estate tax rate at the age of 45, they find that the estimated elasticity is statistically significant and it implies that an estate tax rate of 50 percent would lower net worth among the wealthiest ½ percent by over 10 percent.ⁱⁱ

To understand this reduction in net worth as a result of the estate tax, recognize that the tax reduces the lifetime marginal rewards for work, risk-taking, and investment when compared to leisure or consumption. A successful entrepreneur may face a top personal federal income tax rate of 35 percent, plus an estimated average state income tax of 10 percent, for a marginal rate of 45 percent. Each additional dollar added to his estate will also be taxed. However, if our entrepreneur facing the estate tax decides instead to buy an around-the-world cruise, he reduces his estate, and lowers his estate tax liability.

These statistical results echo those by Holtz-Eakin and Marples [2001]. Using a sophisticated analysis of individual-level data, they find the estimated impact of the estate tax is negative, statistically significant, and far stronger than the impact of capital income taxes. Their estimate is comparable to an elasticity with respect to the estate tax rate of roughly -1.4 .

The research results are far from conclusive, and the authors in each instance provide substantial caveats regarding their basic findings. However, they are part of a larger trend away from the view that estates are not responsive to economic incentives and the estate tax has little impact in our tax system. This reflects, as well, a more sophisticated view of who is affected by the estate tax. Those with the highest saving propensity are also those most likely to be affected by the estate tax, so it is less surprising that the estate tax is a deterrent to overall asset accumulation. In the same way, those who start businesses are much more likely to be affected by the estate tax (see Holtz-Eakin and Marples [2001]), with the result that entrepreneurship and the estate tax are closely intertwined.

Poterba [1997] indicates that when translated into an annual-equivalent, the estate tax raises the effective tax rate on capital income, thereby affecting business growth and success. A higher tax rate raises the cost of capital, and leads to lower investment and employment (see Carroll, Holtz-Eakin, Rider, and Rosen [2000a,b]). These incentives are consistent with the results of Carroll, Holtz-Eakin, Rider, and Rosen [2001], who found that those small businesses likely to face the estate tax experienced slower growth than otherwise-situated competitors.

3. Policy Options

The federal estate tax is a tax on “your right to transfer property at your death.”ⁱⁱⁱ Property, as defined by the estate tax, includes the fair market value

of all assets such as cash and securities, real estate, insurance, trusts, annuities and business interests. As with any tax, the key components are not simply the base, but also exemptions and deductions, the schedule of tax rates, tax credits, and the overall revenue objectives.

What is the future of the estate tax? At present, the near-term outlook for all aspects of the tax is highly uncertain. Consistent with the Economic Growth and Tax Relief Reconciliation Act (EGTRRA) of 2001 the estate tax was entirely repealed in 2010. However, EGTRRA sunsets in 2010. Without extension of the EGTRRA, or new legislation, in 2011 the top statutory tax rate will jump to 60 percent^{iv} and the exemption will fall to \$1 million per individual (\$2 million per married couple). As a result, there is considerable interest in legislation that would remove the uncertainty over the future of the estate tax. The top estate tax rate could end up even higher. Senator Sanders from Vermont has proposed that rates be as high as 65 percent on the largest estates.

In the other direction, during the 2008 campaign President Barack Obama supported permanent extension of the 2009 law – effectively a permanent 45 percent top rate with \$3.5 million exemption per individual (\$7 million for couples), and his Budgets have consistently supported this proposal.

In light of this, it appears that an enormous range of outcomes is possible. Indeed, it ranges from extension of the current zero rate of estate taxation up to a rate of 65 percent in Senator Sanders' proposed legislation. Accordingly, in the next section we outline the consequences of each alternative in that range.

4. Policy Simulations

The heart of this paper is to use the existing literature to outline the consequences for aggregate asset accumulation, as well as hiring and

investment decisions in small and family businesses, of choosing higher rates of estate taxation. Presumably, these higher rates reflect the desire to achieve other tax policy objectives at the expense of growth. Our objective is to document the tradeoff.

The detailed results are contained in Appendix Tables 1 through 5, each of which documents the economic implications of the entire range of possible outcomes from a rate of zero percent to a rate of 65 percent.^v For this discussion, we focus on the highlights shown in the Summary Table of the impact of a few key tax rates. The reader is directed to the Appendix Tables to see the entire analysis.

Consider, then, the Summary Table. As the reader can see, the columns represent alternative rates of tax increase. Specifically, the entries show the impact of raising the rate from zero (the current rate) to: 15 percent (the capital gains tax rate), 35 percent (a rate proposed by Senator Kyl), 40 percent (a potential compromise rate), 45 percent (the President's proposal), 50 percent, 55 percent (the top statutory rate in 2000), 60 percent (the top effective rate upon sunset), and 65 percent (Senator Sanders' proposed rate).

The rows show the economic impact on asset accumulation and the activities of small businesses. Begin with the bottom row, which displays the potential impact of changes in the estate tax on asset accumulation. Specifically, we use the estimated elasticity of wealth accumulation from Kopzcuk and Slemrod^{vi} to estimate the impact of increasing the estate tax rate from its current level of zero percent. The first column shows the impact of raising the tax rate from zero to 15 percent. In 2004, individuals reported a total of \$10.2 trillion in wealth on estate tax returns.^{vii} Raising the estate tax would lower the wealth reported on estates by over \$510 billion. In contrast, allowing EGTRRA to sunset would raise the estate tax to 60 percent and lower estate

asset accumulation by \$2 trillion. Notice as well that pursuing the President's proposal would have roughly a \$1.5 trillion impact on estate asset accumulation.

In the next rows up, we turn to the impact of estate taxation on family businesses. Row 2 (from the bottom) shows the impact of a higher estate tax rate on the cost of capital for a family business. We do this in several steps. First, it is possible to translate each rate of estate taxation (at the end of life) into an equivalent capital income tax (each year of life).^{viii} Our computations focus on estate tax rates, and their corresponding marginal capital income tax rates, as these are the tax rates that influence decisions to accumulate and deploy more capital. The second step is to recognize that the estate tax is not a certainty. Obviously, not everyone pays the estate tax, and over periods as long as 20 to 30 years, there is no certainty that asset accumulation will proceed on a pace that guarantees facing an estate tax liability. Thus, we embed in our computations the substantial probability that no tax liability will accrue, and the corresponding small probability that the marginal tax rates matter.^{ix} This adjustment affects the scale of the implicit annual taxes, but the basic pattern and message are the same.

Returning to the Summary Table, we deploy these effective tax rates to show the “cost of capital” – defined here as the pre-tax return required to pay taxes and depreciation, and still make the post-tax market rate of return.^x As shown in the table, raising the estate tax rate to match capital gains taxation (15 percent) raises the cost of capital by 8 basis points. At the other extreme, a full sunset of EGTRRA – or even higher taxes – would increase the cost of capital by roughly 35 basis points.

Higher capital costs translate directly to reduced incentives to invest, and lower investment. As shown in the next row of the table, capital outlays by

family businesses would fall by anywhere from 2 to 9 percent in response to higher estate taxation. This reduction in crucial physical and technological capital will reduce the capacity of firms to grow, innovate and provide jobs.

At the same time there will be direct impacts on hiring and payroll. As shown in the next two rows of the table, a tax rate of 45 percent will lower the probability of a small family business being willing to place someone on payroll by over 6 percentage points and diminish overall payrolls by nearly 2 percent. Not surprisingly, a lower rate of estate taxation, for example 15 percent, will have a more modest impact (2 percentage points and under 1 percent, respectively).

What is the bottom line for family businesses? In the end, the impact of higher effective marginal tax rates will materialize as diminished investments and reduced ability to hire and expand payrolls. We use the results from the literature to estimate the impact of policy changes – higher or lower estate taxes – on the amount of its capital investment, the probability that a business will be able to increase hiring, and the scale of its overall payroll. There may be no more vivid statistic than that shown in the top row of the table: jobs. Compared to the current rate, letting the tax rate go to 60 percent will cost as much as 1.5 million jobs, and even a more modest rate of 15 percent could diminish hiring by over 350,000 jobs.^{xi}

Summary and Conclusions

The U.S. economy is growing at a painfully slow pace and policy efforts should undergird faster economic expansion. Accordingly, utilizing the estate tax to achieve social goals will come at the expense of pro-growth incentives to accumulate capital, invest, and hire. This paper documents the nature of those tradeoffs, illustrating the economic losses attributable to alternative estate tax rates.

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About the American Family Business Foundation

The American Family Business Foundation (AFBF) is the research and education voice of America's family business owners and farmers. Established in 2008, the Foundation publishes reports that examine critical policy questions about the impact of the estate tax on capital accumulation, family businesses, employment, income mobility and wealth disparity, federal revenues and the general economy. In addition to academic research, the Foundation hosts educational events to contribute to the public debate about the estate tax. Finally, the Foundation's principals are policy experts that are frequently called upon to provide insight on estate tax issues.

Endnotes

ⁱ See www.sba.gov.

ⁱⁱ “Elasticity” is an index used by economists to measure the responsiveness of individuals to changes in taxes and other incentives. At one extreme, an elasticity could be literally zero – individuals do not alter their behavior a bit in response to changes in incentives. While elasticities could in principle be large, in practice an elasticity of roughly 1.0 is considered quite responsive behavior.

ⁱⁱⁱ See IRS [2008].

^{iv} The top statutory rate is 55 percent. However, a 5 percent surtax applies to estates valued between \$10,000,000 and \$17,184,000, yielding a top marginal rate of 60 percent.

^v We do not model explicitly the impact of changing capital gains from stepped-up basis at death to carryover basis; instead focusing on the impact of estate tax rates.

^{vi} Kopczuk and Slemrod estimate the elasticity with respect to the “tax price” – one minus the tax rate. We transform the elasticity to apply directly to the tax rate in each case.

^{vii} Internal Revenue Service, “Personal Wealth, 2004”, *Statistics of Income Bulletin*, 2008.

^{viii} That is, the effective capital income tax rate, t , that is equivalent to the estate tax, e , is defined by: $(1+r)^N(1-e) = (1+r(1-t))^N$, where N is the expected lifetime of the individual and r is the pre-tax rate of return.

^{ix} The computations assume that the probability of a liability is 5 percent. There can be no single number that fits all situations. This choice reflects that the overall probability is low – only about 1.5 percent of the overall population pays the estate tax. However, entrepreneurial business owners are more likely than the population as a whole to pay the estate tax, so a higher estimate is appropriate for examining their incentives.

^x These computations assume a market return of 4 percent and an expected life of 20 years prior to having an estate tax liability (with probability 5 percent). Although the absolute numbers will change, the basic pattern is not sensitive to the assumed rate of return.

^{xi} These computations assume that *all* the adjustment in payroll takes place by reducing the number of employees and not by reducing wages and salaries.

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**Summary Table
Economic Impact of Alternative Rate Increases***

<i>Potential Tax Rate (percent)</i>	15 ⁱ	35 ⁱⁱ	40 ⁱⁱⁱ	45 ^{iv}	50	55 ^v	60	65 ^{vi}
Family Business¹								
<i>Jobs (thousands)</i>	-363.3	-855.6	-978.6	-1,107.5	-1,230.6	-1,353.7	-1,476.7	-1,605.6
<i>Payroll Size (percent)</i>	-0.6%	-1.5%	-1.7%	-1.9%	-2.1%	-2.3%	-2.5%	-2.7%
<i>Probability of Hiring (percentage points)</i>	-2.0%	-4.8%	-5.5%	-6.2%	-6.9%	-7.6%	-8.3%	-9.0%
<i>Investment (percent)²</i>	-1.9%	-4.5%	-5.2%	-5.9%	-6.5%	-7.2%	-7.8%	-8.5%
<i>Cost of Capital (basis points)³</i>	8	19	22	25	28	31	34	37
Asset Accumulation								
<i>Estate Wealth (billions)</i>	-\$510	-\$1,190	-\$1,360	-\$1,530	-\$1,700	-\$1,870	-\$2,040	-\$2,210

ⁱ Impact computed compared to current zero tax rate. See Appendix for alternatives.

¹ Calculations assume a business-planning horizon of 20 years.

² The percentage decline in capital outlays.

³ Required pre-tax rate of return to cover taxes, depreciation, and still meet the post-market rate of return, measured in basis point increase.

⁴ Current tax rate for capital gains.

ⁱⁱ H.R.3905: Estate Tax Relief Act of 2009, and H.R.4174: Tax Relief for Business Growth and Sustainability Act of 2009

ⁱⁱⁱ H.R.1986

^{iv} 2009 estate tax rate, and H.R.4154: Permanent Estate Tax Relief for Families, Farmers, and Small Businesses Act of 2009 (Pomeroy), H.R.436:

Certain Estate Tax Relief Act of 2009 (Pomeroy), H.R.3841: Small Business and Family Farm Estate Tax Relief Act of 2009 (Schrader), H.R.4015:

Family Farm and Small Business Tax Relief Act of 2009 (McNerney), S.2784 (Voinovich, Carper)

^v H.R.2023: Sensible Estate Tax Act of 2009 (McDermott)

^{vi} H.R.5764: Responsible Estate Tax Act (Sanchez), S.3533: Responsible Estate Tax Act (Sanders)

Appendix Table 1
Small Business Jobs and Estate Taxation

(Entries show the number of small business jobs lost, by length of planning period, due to raising the estate tax rate from zero to the rate shown)

Tax Rate	Horizon					
	5	10	15	20	25	30
0%	0.00	0.00	0.00	0.00	0.00	0.00
1%	-97.21	-48.61	-32.41	-24.30	-19.44	-16.20
2%	-194.47	-97.24	-64.83	-48.62	-38.90	-32.41
3%	-291.76	-145.89	-97.26	-72.95	-58.36	-48.63
4%	-389.09	-194.57	-129.71	-97.29	-77.83	-64.86
5%	-486.46	-243.26	-162.18	-121.64	-97.31	-81.09
6%	-583.87	-291.98	-194.66	-146.00	-116.80	-97.34
7%	-681.32	-340.72	-227.16	-170.37	-136.30	-113.59
8%	-778.81	-389.48	-259.67	-194.76	-155.81	-129.84
9%	-876.34	-438.27	-292.20	-219.16	-175.33	-146.11
10%	-973.90	-487.07	-324.74	-243.57	-194.86	-162.38
11%	-1071.51	-535.90	-357.30	-267.99	-214.40	-178.67
12%	-1169.15	-584.75	-389.87	-292.42	-233.94	-194.96
13%	-1266.84	-633.62	-422.46	-316.86	-253.50	-211.25
14%	-1364.56	-682.52	-455.07	-341.32	-273.07	-227.56
15%	-1462.32	-731.44	-487.69	-365.79	-292.64	-243.87
16%	-1560.12	-780.37	-520.32	-390.27	-312.23	-260.19
17%	-1657.96	-829.34	-552.97	-414.76	-331.82	-276.52
18%	-1755.85	-878.32	-585.63	-439.26	-351.42	-292.86
19%	-1853.77	-927.33	-618.32	-463.77	-371.04	-309.21
20%	-1951.73	-976.35	-651.01	-488.30	-390.66	-325.56
21%	-2049.73	-1025.40	-683.72	-512.84	-410.29	-341.92
22%	-2147.76	-1074.48	-716.45	-537.39	-429.93	-358.29
23%	-2245.84	-1123.57	-749.19	-561.95	-449.58	-374.67
24%	-2343.96	-1172.69	-781.95	-586.52	-469.25	-391.05
25%	-2442.12	-1221.83	-814.72	-611.11	-488.92	-407.45
26%	-2540.32	-1270.99	-847.51	-635.70	-508.60	-423.85
27%	-2638.56	-1320.17	-880.32	-660.31	-528.29	-440.26
28%	-2736.83	-1369.38	-913.14	-684.93	-547.98	-456.68
29%	-2835.15	-1418.61	-945.97	-709.56	-567.69	-473.10
30%	-2933.51	-1467.86	-978.82	-734.21	-587.41	-489.53
31%	-3031.91	-1517.14	-1011.69	-758.87	-607.14	-505.98
32%	-3130.34	-1566.43	-1044.57	-783.53	-626.88	-522.43
33%	-3228.82	-1615.75	-1077.47	-808.21	-646.62	-538.88
34%	-3327.34	-1665.10	-1110.38	-832.90	-666.38	-555.35
35%	-3425.90	-1714.46	-1143.31	-857.61	-686.15	-571.82
36%	-3524.49	-1763.85	-1176.25	-882.32	-705.92	-588.31
37%	-3623.13	-1813.26	-1209.21	-907.05	-725.71	-604.80
38%	-3721.81	-1862.69	-1242.19	-931.79	-745.50	-621.29
39%	-3820.53	-1912.15	-1275.18	-956.54	-765.31	-637.80
40%	-3919.29	-1961.62	-1308.19	-981.31	-785.12	-654.31

41%	-4018.09	-2011.12	-1341.21	-1006.08	-804.95	-670.84
42%	-4116.93	-2060.65	-1374.25	-1030.87	-824.78	-687.37
43%	-4215.81	-2110.19	-1407.31	-1055.67	-844.63	-703.91
44%	-4314.73	-2159.76	-1440.38	-1080.48	-864.48	-720.45
45%	-4413.69	-2209.35	-1473.46	-1105.31	-884.35	-737.01
46%	-4512.69	-2258.97	-1506.56	-1130.14	-904.22	-753.57
47%	-4611.73	-2308.61	-1539.68	-1154.99	-924.10	-770.15
48%	-4710.81	-2358.27	-1572.81	-1179.85	-943.99	-786.73
49%	-4809.93	-2407.95	-1605.96	-1204.72	-963.90	-803.31
50%	-4909.10	-2457.66	-1639.13	-1229.61	-983.81	-819.91
51%	-5008.30	-2507.39	-1672.31	-1254.50	-1003.73	-836.51
52%	-5107.55	-2557.14	-1705.51	-1279.41	-1023.66	-853.13
53%	-5206.83	-2606.91	-1738.72	-1304.33	-1043.61	-869.75
54%	-5306.16	-2656.71	-1771.95	-1329.26	-1063.56	-886.38
55%	-5405.53	-2706.53	-1805.19	-1354.21	-1083.52	-903.02
56%	-5504.94	-2756.38	-1838.45	-1379.17	-1103.49	-919.66
57%	-5604.38	-2806.24	-1871.73	-1404.14	-1123.47	-936.32
58%	-5703.87	-2856.13	-1905.02	-1429.12	-1143.46	-952.98
59%	-5803.41	-2906.05	-1938.33	-1454.11	-1163.46	-969.65
60%	-5902.98	-2955.98	-1971.66	-1479.12	-1183.47	-986.33
61%	-6002.59	-3005.94	-2005.00	-1504.14	-1203.49	-1003.02
62%	-6102.25	-3055.93	-2038.35	-1529.17	-1223.53	-1019.71
63%	-6201.94	-3105.93	-2071.73	-1554.21	-1243.57	-1036.42
64%	-6301.68	-3155.96	-2105.12	-1579.26	-1263.62	-1053.13
65%	-6401.46	-3206.02	-2138.52	-1604.33	-1283.68	-1069.85

Appendix Table 2
Small Business Hiring and Estate Taxation

(Entries show the percentage point decline in the probability that a small business will hire, by length of the planning period, due to raising the estate tax rate from zero)

Estate Tax Rate	Planning Horizon					
	5	10	15	20	25	30
0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1%	-0.54%	-0.27%	-0.18%	-0.14%	-0.11%	-0.09%
2%	-1.09%	-0.54%	-0.36%	-0.27%	-0.22%	-0.18%
3%	-1.63%	-0.81%	-0.54%	-0.41%	-0.33%	-0.27%
4%	-2.17%	-1.09%	-0.72%	-0.54%	-0.43%	-0.36%
5%	-2.71%	-1.36%	-0.91%	-0.68%	-0.54%	-0.45%
6%	-3.26%	-1.63%	-1.09%	-0.81%	-0.65%	-0.54%
7%	-3.80%	-1.90%	-1.27%	-0.95%	-0.76%	-0.63%
8%	-4.35%	-2.17%	-1.45%	-1.09%	-0.87%	-0.72%
9%	-4.89%	-2.45%	-1.63%	-1.22%	-0.98%	-0.82%
10%	-5.44%	-2.72%	-1.81%	-1.36%	-1.09%	-0.91%
11%	-5.98%	-2.99%	-1.99%	-1.50%	-1.20%	-1.00%
12%	-6.52%	-3.26%	-2.18%	-1.63%	-1.31%	-1.09%
13%	-7.07%	-3.54%	-2.36%	-1.77%	-1.41%	-1.18%
14%	-7.62%	-3.81%	-2.54%	-1.90%	-1.52%	-1.27%
15%	-8.16%	-4.08%	-2.72%	-2.04%	-1.63%	-1.36%
16%	-8.71%	-4.36%	-2.90%	-2.18%	-1.74%	-1.45%
17%	-9.25%	-4.63%	-3.09%	-2.31%	-1.85%	-1.54%
18%	-9.80%	-4.90%	-3.27%	-2.45%	-1.96%	-1.63%
19%	-10.35%	-5.18%	-3.45%	-2.59%	-2.07%	-1.73%
20%	-10.89%	-5.45%	-3.63%	-2.73%	-2.18%	-1.82%
21%	-11.44%	-5.72%	-3.82%	-2.86%	-2.29%	-1.91%
22%	-11.99%	-6.00%	-4.00%	-3.00%	-2.40%	-2.00%
23%	-12.53%	-6.27%	-4.18%	-3.14%	-2.51%	-2.09%
24%	-13.08%	-6.54%	-4.36%	-3.27%	-2.62%	-2.18%
25%	-13.63%	-6.82%	-4.55%	-3.41%	-2.73%	-2.27%
26%	-14.18%	-7.09%	-4.73%	-3.55%	-2.84%	-2.37%
27%	-14.72%	-7.37%	-4.91%	-3.68%	-2.95%	-2.46%
28%	-15.27%	-7.64%	-5.10%	-3.82%	-3.06%	-2.55%
29%	-15.82%	-7.92%	-5.28%	-3.96%	-3.17%	-2.64%
30%	-16.37%	-8.19%	-5.46%	-4.10%	-3.28%	-2.73%
31%	-16.92%	-8.47%	-5.65%	-4.23%	-3.39%	-2.82%
32%	-17.47%	-8.74%	-5.83%	-4.37%	-3.50%	-2.92%
33%	-18.02%	-9.02%	-6.01%	-4.51%	-3.61%	-3.01%
34%	-18.57%	-9.29%	-6.20%	-4.65%	-3.72%	-3.10%
35%	-19.12%	-9.57%	-6.38%	-4.79%	-3.83%	-3.19%
36%	-19.67%	-9.84%	-6.56%	-4.92%	-3.94%	-3.28%
37%	-20.22%	-10.12%	-6.75%	-5.06%	-4.05%	-3.38%
38%	-20.77%	-10.40%	-6.93%	-5.20%	-4.16%	-3.47%
39%	-21.32%	-10.67%	-7.12%	-5.34%	-4.27%	-3.56%
40%	-21.87%	-10.95%	-7.30%	-5.48%	-4.38%	-3.65%

41%	-22.42%	-11.22%	-7.48%	-5.61%	-4.49%	-3.74%
42%	-22.98%	-11.50%	-7.67%	-5.75%	-4.60%	-3.84%
43%	-23.53%	-11.78%	-7.85%	-5.89%	-4.71%	-3.93%
44%	-24.08%	-12.05%	-8.04%	-6.03%	-4.82%	-4.02%
45%	-24.63%	-12.33%	-8.22%	-6.17%	-4.94%	-4.11%
46%	-25.18%	-12.61%	-8.41%	-6.31%	-5.05%	-4.21%
47%	-25.74%	-12.88%	-8.59%	-6.45%	-5.16%	-4.30%
48%	-26.29%	-13.16%	-8.78%	-6.58%	-5.27%	-4.39%
49%	-26.84%	-13.44%	-8.96%	-6.72%	-5.38%	-4.48%
50%	-27.40%	-13.72%	-9.15%	-6.86%	-5.49%	-4.58%
51%	-27.95%	-13.99%	-9.33%	-7.00%	-5.60%	-4.67%
52%	-28.50%	-14.27%	-9.52%	-7.14%	-5.71%	-4.76%
53%	-29.06%	-14.55%	-9.70%	-7.28%	-5.82%	-4.85%
54%	-29.61%	-14.83%	-9.89%	-7.42%	-5.94%	-4.95%
55%	-30.17%	-15.10%	-10.07%	-7.56%	-6.05%	-5.04%
56%	-30.72%	-15.38%	-10.26%	-7.70%	-6.16%	-5.13%
57%	-31.28%	-15.66%	-10.45%	-7.84%	-6.27%	-5.23%
58%	-31.83%	-15.94%	-10.63%	-7.98%	-6.38%	-5.32%
59%	-32.39%	-16.22%	-10.82%	-8.11%	-6.49%	-5.41%
60%	-32.94%	-16.50%	-11.00%	-8.25%	-6.60%	-5.50%
61%	-33.50%	-16.78%	-11.19%	-8.39%	-6.72%	-5.60%
62%	-34.05%	-17.05%	-11.38%	-8.53%	-6.83%	-5.69%
63%	-34.61%	-17.33%	-11.56%	-8.67%	-6.94%	-5.78%
64%	-35.17%	-17.61%	-11.75%	-8.81%	-7.05%	-5.88%
65%	-35.72%	-17.89%	-11.93%	-8.95%	-7.16%	-5.97%

Appendix Table 3
Small Business Payroll and Estate Taxation

(Entries show the percent decline in small business payroll, by length of planning period, due to raising the estate tax rate from zero to the rate shown)

Tax Rate	Planning Horizon					
	5	10	15	20	25	30
0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1%	-0.17%	-0.08%	-0.06%	-0.04%	-0.03%	-0.03%
2%	-0.33%	-0.17%	-0.11%	-0.08%	-0.07%	-0.06%
3%	-0.50%	-0.25%	-0.17%	-0.12%	-0.10%	-0.08%
4%	-0.66%	-0.33%	-0.22%	-0.17%	-0.13%	-0.11%
5%	-0.83%	-0.42%	-0.28%	-0.21%	-0.17%	-0.14%
6%	-1.00%	-0.50%	-0.33%	-0.25%	-0.20%	-0.17%
7%	-1.16%	-0.58%	-0.39%	-0.29%	-0.23%	-0.19%
8%	-1.33%	-0.66%	-0.44%	-0.33%	-0.27%	-0.22%
9%	-1.50%	-0.75%	-0.50%	-0.37%	-0.30%	-0.25%
10%	-1.66%	-0.83%	-0.55%	-0.42%	-0.33%	-0.28%
11%	-1.83%	-0.91%	-0.61%	-0.46%	-0.37%	-0.30%
12%	-2.00%	-1.00%	-0.67%	-0.50%	-0.40%	-0.33%
13%	-2.16%	-1.08%	-0.72%	-0.54%	-0.43%	-0.36%
14%	-2.33%	-1.16%	-0.78%	-0.58%	-0.47%	-0.39%
15%	-2.50%	-1.25%	-0.83%	-0.62%	-0.50%	-0.42%
16%	-2.66%	-1.33%	-0.89%	-0.67%	-0.53%	-0.44%
17%	-2.83%	-1.42%	-0.94%	-0.71%	-0.57%	-0.47%
18%	-3.00%	-1.50%	-1.00%	-0.75%	-0.60%	-0.50%
19%	-3.16%	-1.58%	-1.06%	-0.79%	-0.63%	-0.53%
20%	-3.33%	-1.67%	-1.11%	-0.83%	-0.67%	-0.56%
21%	-3.50%	-1.75%	-1.17%	-0.88%	-0.70%	-0.58%
22%	-3.67%	-1.83%	-1.22%	-0.92%	-0.73%	-0.61%
23%	-3.83%	-1.92%	-1.28%	-0.96%	-0.77%	-0.64%
24%	-4.00%	-2.00%	-1.33%	-1.00%	-0.80%	-0.67%
25%	-4.17%	-2.09%	-1.39%	-1.04%	-0.83%	-0.70%
26%	-4.34%	-2.17%	-1.45%	-1.08%	-0.87%	-0.72%
27%	-4.50%	-2.25%	-1.50%	-1.13%	-0.90%	-0.75%
28%	-4.67%	-2.34%	-1.56%	-1.17%	-0.94%	-0.78%
29%	-4.84%	-2.42%	-1.61%	-1.21%	-0.97%	-0.81%
30%	-5.01%	-2.50%	-1.67%	-1.25%	-1.00%	-0.84%
31%	-5.17%	-2.59%	-1.73%	-1.29%	-1.04%	-0.86%
32%	-5.34%	-2.67%	-1.78%	-1.34%	-1.07%	-0.89%
33%	-5.51%	-2.76%	-1.84%	-1.38%	-1.10%	-0.92%
34%	-5.68%	-2.84%	-1.89%	-1.42%	-1.14%	-0.95%
35%	-5.85%	-2.93%	-1.95%	-1.46%	-1.17%	-0.98%
36%	-6.01%	-3.01%	-2.01%	-1.51%	-1.20%	-1.00%
37%	-6.18%	-3.09%	-2.06%	-1.55%	-1.24%	-1.03%
38%	-6.35%	-3.18%	-2.12%	-1.59%	-1.27%	-1.06%
39%	-6.52%	-3.26%	-2.18%	-1.63%	-1.31%	-1.09%
40%	-6.69%	-3.35%	-2.23%	-1.67%	-1.34%	-1.12%
41%	-6.86%	-3.43%	-2.29%	-1.72%	-1.37%	-1.14%

42%	-7.03%	-3.52%	-2.35%	-1.76%	-1.41%	-1.17%
43%	-7.19%	-3.60%	-2.40%	-1.80%	-1.44%	-1.20%
44%	-7.36%	-3.69%	-2.46%	-1.84%	-1.48%	-1.23%
45%	-7.53%	-3.77%	-2.51%	-1.89%	-1.51%	-1.26%
46%	-7.70%	-3.85%	-2.57%	-1.93%	-1.54%	-1.29%
47%	-7.87%	-3.94%	-2.63%	-1.97%	-1.58%	-1.31%
48%	-8.04%	-4.02%	-2.68%	-2.01%	-1.61%	-1.34%
49%	-8.21%	-4.11%	-2.74%	-2.06%	-1.64%	-1.37%
50%	-8.38%	-4.19%	-2.80%	-2.10%	-1.68%	-1.40%
51%	-8.55%	-4.28%	-2.85%	-2.14%	-1.71%	-1.43%
52%	-8.72%	-4.36%	-2.91%	-2.18%	-1.75%	-1.46%
53%	-8.89%	-4.45%	-2.97%	-2.23%	-1.78%	-1.48%
54%	-9.05%	-4.53%	-3.02%	-2.27%	-1.81%	-1.51%
55%	-9.22%	-4.62%	-3.08%	-2.31%	-1.85%	-1.54%
56%	-9.39%	-4.70%	-3.14%	-2.35%	-1.88%	-1.57%
57%	-9.56%	-4.79%	-3.19%	-2.40%	-1.92%	-1.60%
58%	-9.73%	-4.87%	-3.25%	-2.44%	-1.95%	-1.63%
59%	-9.90%	-4.96%	-3.31%	-2.48%	-1.99%	-1.65%
60%	-10.07%	-5.04%	-3.36%	-2.52%	-2.02%	-1.68%
61%	-10.24%	-5.13%	-3.42%	-2.57%	-2.05%	-1.71%
62%	-10.41%	-5.21%	-3.48%	-2.61%	-2.09%	-1.74%
63%	-10.58%	-5.30%	-3.54%	-2.65%	-2.12%	-1.77%
64%	-10.75%	-5.39%	-3.59%	-2.69%	-2.16%	-1.80%
65%	-10.92%	-5.47%	-3.65%	-2.74%	-2.19%	-1.83%

Appendix Table 4
Aggregate Wealth Loss Due to Higher Taxation

(Entries show long-run impact on total wealth accumulation of raising
estate tax rate from zero to rate shown)

Estate Tax Rate	Wealth Loss (\$ billions)	Estate Tax Rate	Wealth Loss (\$ billions)
1%	-\$34	34%	-\$1,156
2%	-\$68	35%	-\$1,190
3%	-\$102	36%	-\$1,224
4%	-\$136	37%	-\$1,258
5%	-\$170	38%	-\$1,292
6%	-\$204	39%	-\$1,326
7%	-\$238	40%	-\$1,360
8%	-\$272	41%	-\$1,394
9%	-\$306	42%	-\$1,428
10%	-\$340	43%	-\$1,462
11%	-\$374	44%	-\$1,496
12%	-\$408	45%	-\$1,530
13%	-\$442	46%	-\$1,564
14%	-\$476	47%	-\$1,598
15%	-\$510	48%	-\$1,632
16%	-\$544	49%	-\$1,666
17%	-\$578	50%	-\$1,700
18%	-\$612	51%	-\$1,734
19%	-\$646	52%	-\$1,768
20%	-\$680	53%	-\$1,802
21%	-\$714	54%	-\$1,836
22%	-\$748	55%	-\$1,870
23%	-\$782	56%	-\$1,904
24%	-\$816	57%	-\$1,938
25%	-\$850	58%	-\$1,972
26%	-\$884	59%	-\$2,006
27%	-\$918	60%	-\$2,040
28%	-\$952	61%	-\$2,074
29%	-\$986	62%	-\$2,108
30%	-\$1,020	63%	-\$2,142
31%	-\$1,054	64%	-\$2,176
32%	-\$1,088	65%	-\$2,210
33%	-\$1,054		

Appendix Table 5
Small Business Investment and Estate Taxation

(Entries indicate the percentage decline in capital outlays, by duration of investment, for small businesses due to increasing the estate tax rate from zero to the rate shown)

Tax Rate	Planning Horizon / Service Life of Investment					
	5	10	15	20	25	30
0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1%	-0.51%	-0.26%	-0.17%	-0.13%	-0.10%	-0.09%
2%	-1.03%	-0.52%	-0.34%	-0.26%	-0.21%	-0.17%
3%	-1.55%	-0.77%	-0.52%	-0.39%	-0.31%	-0.26%
4%	-2.06%	-1.03%	-0.69%	-0.52%	-0.41%	-0.34%
5%	-2.58%	-1.29%	-0.86%	-0.64%	-0.52%	-0.43%
6%	-3.09%	-1.55%	-1.03%	-0.77%	-0.62%	-0.52%
7%	-3.61%	-1.80%	-1.20%	-0.90%	-0.72%	-0.60%
8%	-4.13%	-2.06%	-1.38%	-1.03%	-0.83%	-0.69%
9%	-4.64%	-2.32%	-1.55%	-1.16%	-0.93%	-0.77%
10%	-5.16%	-2.58%	-1.72%	-1.29%	-1.03%	-0.86%
11%	-5.68%	-2.84%	-1.89%	-1.42%	-1.14%	-0.95%
12%	-6.19%	-3.10%	-2.06%	-1.55%	-1.24%	-1.03%
13%	-6.71%	-3.36%	-2.24%	-1.68%	-1.34%	-1.12%
14%	-7.23%	-3.62%	-2.41%	-1.81%	-1.45%	-1.21%
15%	-7.75%	-3.87%	-2.58%	-1.94%	-1.55%	-1.29%
16%	-8.26%	-4.13%	-2.76%	-2.07%	-1.65%	-1.38%
17%	-8.78%	-4.39%	-2.93%	-2.20%	-1.76%	-1.46%
18%	-9.30%	-4.65%	-3.10%	-2.33%	-1.86%	-1.55%
19%	-9.82%	-4.91%	-3.27%	-2.46%	-1.97%	-1.64%
20%	-10.34%	-5.17%	-3.45%	-2.59%	-2.07%	-1.72%
21%	-10.86%	-5.43%	-3.62%	-2.72%	-2.17%	-1.81%
22%	-11.38%	-5.69%	-3.79%	-2.85%	-2.28%	-1.90%
23%	-11.90%	-5.95%	-3.97%	-2.98%	-2.38%	-1.98%
24%	-12.41%	-6.21%	-4.14%	-3.11%	-2.49%	-2.07%
25%	-12.93%	-6.47%	-4.32%	-3.24%	-2.59%	-2.16%
26%	-13.45%	-6.73%	-4.49%	-3.37%	-2.69%	-2.24%
27%	-13.98%	-6.99%	-4.66%	-3.50%	-2.80%	-2.33%
28%	-14.50%	-7.25%	-4.84%	-3.63%	-2.90%	-2.42%
29%	-15.02%	-7.51%	-5.01%	-3.76%	-3.01%	-2.51%
30%	-15.54%	-7.77%	-5.18%	-3.89%	-3.11%	-2.59%
31%	-16.06%	-8.04%	-5.36%	-4.02%	-3.22%	-2.68%
32%	-16.58%	-8.30%	-5.53%	-4.15%	-3.32%	-2.77%
33%	-17.10%	-8.56%	-5.71%	-4.28%	-3.42%	-2.85%
34%	-17.62%	-8.82%	-5.88%	-4.41%	-3.53%	-2.94%
35%	-18.15%	-9.08%	-6.06%	-4.54%	-3.63%	-3.03%
36%	-18.67%	-9.34%	-6.23%	-4.67%	-3.74%	-3.12%
37%	-19.19%	-9.60%	-6.40%	-4.80%	-3.84%	-3.20%
38%	-19.71%	-9.87%	-6.58%	-4.94%	-3.95%	-3.29%
39%	-20.24%	-10.13%	-6.75%	-5.07%	-4.05%	-3.38%

40%	-20.76%	-10.39%	-6.93%	-5.20%	-4.16%	-3.47%
41%	-21.28%	-10.65%	-7.10%	-5.33%	-4.26%	-3.55%
42%	-21.81%	-10.91%	-7.28%	-5.46%	-4.37%	-3.64%
43%	-22.33%	-11.18%	-7.45%	-5.59%	-4.47%	-3.73%
44%	-22.85%	-11.44%	-7.63%	-5.72%	-4.58%	-3.82%
45%	-23.38%	-11.70%	-7.80%	-5.85%	-4.68%	-3.90%
46%	-23.90%	-11.96%	-7.98%	-5.99%	-4.79%	-3.99%
47%	-24.43%	-12.23%	-8.16%	-6.12%	-4.89%	-4.08%
48%	-24.95%	-12.49%	-8.33%	-6.25%	-5.00%	-4.17%
49%	-25.48%	-12.75%	-8.51%	-6.38%	-5.11%	-4.25%
50%	-26.00%	-13.02%	-8.68%	-6.51%	-5.21%	-4.34%
51%	-26.53%	-13.28%	-8.86%	-6.64%	-5.32%	-4.43%
52%	-27.05%	-13.54%	-9.03%	-6.78%	-5.42%	-4.52%
53%	-27.58%	-13.81%	-9.21%	-6.91%	-5.53%	-4.61%
54%	-28.10%	-14.07%	-9.39%	-7.04%	-5.63%	-4.69%
55%	-28.63%	-14.34%	-9.56%	-7.17%	-5.74%	-4.78%
56%	-29.16%	-14.60%	-9.74%	-7.30%	-5.84%	-4.87%
57%	-29.68%	-14.86%	-9.91%	-7.44%	-5.95%	-4.96%
58%	-30.21%	-15.13%	-10.09%	-7.57%	-6.06%	-5.05%
59%	-30.74%	-15.39%	-10.27%	-7.70%	-6.16%	-5.14%
60%	-31.27%	-15.66%	-10.44%	-7.83%	-6.27%	-5.22%
61%	-31.79%	-15.92%	-10.62%	-7.97%	-6.37%	-5.31%
62%	-32.32%	-16.19%	-10.80%	-8.10%	-6.48%	-5.40%
63%	-32.85%	-16.45%	-10.97%	-8.23%	-6.59%	-5.49%
64%	-33.38%	-16.72%	-11.15%	-8.36%	-6.69%	-5.58%
65%	-33.91%	-16.98%	-11.33%	-8.50%	-6.80%	-5.67%

Appendix Table 6
Investment Incentives and Estate Taxation

(Entries show the “cost of capital” – the hurdle rate of return on an investment needed to cover taxes, depreciation, and market return to investors – for each estate tax rate and length of investment)

Estate Tax Rate	Planning Horizon/Service Life of Investment				
	2	5	10	15	20
0%	60.10%	30.98%	17.87%	12.87%	11.57%
1%	60.14%	31.00%	17.88%	12.88%	11.57%
2%	60.18%	31.02%	17.89%	12.89%	11.58%
3%	60.21%	31.04%	17.90%	12.89%	11.58%
4%	60.25%	31.06%	17.91%	12.90%	11.59%
5%	60.29%	31.07%	17.92%	12.90%	11.59%
6%	60.33%	31.09%	17.93%	12.91%	11.60%
7%	60.37%	31.11%	17.94%	12.92%	11.60%
8%	60.40%	31.13%	17.95%	12.92%	11.61%
9%	60.44%	31.15%	17.96%	12.93%	11.61%
10%	60.48%	31.17%	17.97%	12.94%	11.62%
11%	60.52%	31.19%	17.98%	12.94%	11.63%
12%	60.56%	31.21%	17.99%	12.95%	11.63%
13%	60.59%	31.22%	18.00%	12.96%	11.64%
14%	60.63%	31.24%	18.01%	12.96%	11.64%
15%	60.67%	31.26%	18.02%	12.97%	11.65%
16%	60.71%	31.28%	18.03%	12.98%	11.65%
17%	60.75%	31.30%	18.04%	12.98%	11.66%
18%	60.79%	31.32%	18.05%	12.99%	11.66%
19%	60.83%	31.34%	18.06%	13.00%	11.67%
20%	60.87%	31.36%	18.07%	13.00%	11.68%
21%	60.90%	31.38%	18.08%	13.01%	11.68%
22%	60.94%	31.40%	18.09%	13.02%	11.69%
23%	60.98%	31.41%	18.10%	13.02%	11.69%
24%	61.02%	31.43%	18.11%	13.03%	11.70%
25%	61.06%	31.45%	18.12%	13.04%	11.70%
26%	61.10%	31.47%	18.13%	13.04%	11.71%
27%	61.14%	31.49%	18.14%	13.05%	11.72%
28%	61.18%	31.51%	18.15%	13.06%	11.72%
29%	61.22%	31.53%	18.16%	13.06%	11.73%
30%	61.26%	31.55%	18.17%	13.07%	11.73%
31%	61.30%	31.57%	18.18%	13.08%	11.74%
32%	61.34%	31.59%	18.19%	13.09%	11.74%
33%	61.38%	31.61%	18.20%	13.09%	11.75%
34%	61.42%	31.63%	18.21%	13.10%	11.76%
35%	61.46%	31.65%	18.22%	13.11%	11.76%
36%	61.50%	31.67%	18.23%	13.11%	11.77%
37%	61.54%	31.69%	18.24%	13.12%	11.77%
38%	61.58%	31.71%	18.25%	13.13%	11.78%

39%	61.62%	31.73%	18.27%	13.13%	11.79%
40%	61.66%	31.75%	18.28%	13.14%	11.79%
41%	61.70%	31.77%	18.29%	13.15%	11.80%
42%	61.74%	31.79%	18.30%	13.15%	11.80%
43%	61.78%	31.81%	18.31%	13.16%	11.81%
44%	61.82%	31.83%	18.32%	13.17%	11.81%
45%	61.86%	31.85%	18.33%	13.18%	11.82%
46%	61.90%	31.87%	18.34%	13.18%	11.83%
47%	61.94%	31.89%	18.35%	13.19%	11.83%
48%	61.99%	31.91%	18.36%	13.20%	11.84%
49%	62.03%	31.93%	18.37%	13.20%	11.84%
50%	62.07%	31.95%	18.38%	13.21%	11.85%
51%	62.11%	31.97%	18.39%	13.22%	11.86%
52%	62.15%	31.99%	18.40%	13.22%	11.86%
53%	62.19%	32.01%	18.41%	13.23%	11.87%
54%	62.23%	32.03%	18.43%	13.24%	11.87%
55%	62.27%	32.05%	18.44%	13.25%	11.88%
56%	62.32%	32.07%	18.45%	13.25%	11.89%
57%	62.36%	32.09%	18.46%	13.26%	11.89%
58%	62.40%	32.11%	18.47%	13.27%	11.90%
59%	62.44%	32.13%	18.48%	13.27%	11.90%
60%	62.48%	32.15%	18.49%	13.28%	11.91%
61%	62.53%	32.17%	18.50%	13.29%	11.92%
62%	62.57%	32.19%	18.51%	13.30%	11.92%
63%	62.61%	32.21%	18.52%	13.30%	11.93%
64%	62.65%	32.23%	18.53%	13.31%	11.94%
65%	62.69%	32.25%	18.55%	13.32%	11.94%