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ESTATE TAXES, DEFICITS, AND BUDGET IMPLICATIONS

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INTRODUCTION

The future of the Federal Estate Tax is still uncertain. Over the summer, Congress established a Select joint Committee on Deficit Reduction (the "Super Committee") to recommend at minimum a $1.2 trillion deficit reduction plan. The committee must present its recommendations by November 23, 2011, and pressure is already mounting for the committee to increase the estate tax as a means to cut the deficit.

This paper reveals that lower estate taxes actually reduce more of the deficit over the long-term than do higher estate taxes, making an increase d estate tax one of the worst policies the Super Committee could adopt. Unfortunately, efforts to eliminate or reduce the estate tax are being held hostage by deficient revenue estimates to the contrary.

Federal revenue estimators show the tax as contributing revenue to the Treasury, and report that reducing or eliminating the tax would raise the deficit. They get this result by assuming no change in the economy as a result of the estate tax reduction, ignoring the economic gains that would accrue.

In reality, the estate tax is so destructive of investment and employment that it reduces federal revenue over time by eroding the tax base. Our report takes this into consideration by applying a model of the estate tax's effect on capital formation, GDP, wages, and other income to calculate the budget effect of reducing the tax, allowing for the increase in GDP and other revenue. We find that:

1. Elimination of the tax would increase the level of GDP by about 2.26% by 2021, or $538 billion in that year alone compared to current law.

2. From 2012 through 2021, the cumulative gain in GDP would be close to $3 trillion.

3. Instead of increasing the federal deficit by 6.54% over the period, it would reduce it by 5.19%.

4. Repeal would cover 30.18% of the $1.2 trillion in deficit reduction being required of the Super Committee by 2021.

Congress significantly altered the federal unified estate and gift tax (a.k.a. the federal transfer tax) in 2001. Its rates were gradually reduced, and the unified credit that the law allows against the tax to shelter small estates was increased. By 2009, the top rate was 45%, and the credit effectively exempted up to $3.5 million in lifetime gifts and bequests per individual. The estate portion of the tax expired for one year, in 2010. Due to the sunset provision in the 2001 tax law, the estate tax was due to reappear in 2011 at rates scheduled under pre-2001 law: a top rate of 55% with a credit that would shelter $1 million per individual. In December 2010, Congress enacted a temporary, less severe tax with a top rate of 35% and a credit that would shelter $5 million per individual, for 2011-2012. Unless further action is taken, the 55% rate and $1 million exemption will take effect in 2013. This is the assumption in the baseline estate tax revenue forecast of the Congressional Budget Office (CBO).

Congress is considering various alternatives for the future of the tax. It is not likely to allow the tax to return to pre-2001 levels in 2013. Options include restoring the tax to its 2009 rates and credits (recommended by President Obama), extending the 2011-2012 rates, or ending the estate tax permanently, with various possibilities in between. This paper seeks to determine what effects various options would have on federal tax revenue during the ten-year budget window, taking into consideration the effect of the various options on economic activity.

Transfer taxes are taxes on saving and capital formation. As such, they reduce the size of the capital stock (plant, equipment, buildings, and other structures), economic output, and income. Labor is less productive when it has less capital to work with, and wages and hours worked are lower. Eliminating or reducing the estate tax would reduce revenue from that source. However, it would enable more capital to be formed and would raise GDP. Income and consumption would be higher, and taxes on income, on payroll, excise taxes, and tariffs would all be higher.

When the Joint Tax Committee (JCT), the Congressional Budget Office, and the Treasury estimate the budget cost of reducing or eliminating the estate tax, they count only the reduction in estate tax revenue. They assume that the economy is unchanged by the change in the tax, and do not count the increase in revenue from other taxes that would be collected on the higher GDP. This estimation technique, based on an unchanged economy, is called "static scoring".

In an earlier paper prepared for the American Family Business Foundation, we estimated the amounts by which different levels of estate taxation alter economic output. We netted the difference in the estate tax revenue against the differences in other revenues due to the economic changes. This estimation technique, allowing for changes in GDP, is called "dynamic scoring".[1] The model used in that study is one of "comparative statics", that is, it considers how the economy for a single given year would differ from the base case if the estate tax had been altered, and enough time had elapsed, to allow for a full adjustment in behavior and capital formation. It shows the ultimate effect of the tax change on a year's output and federal revenue, but not the output and revenue paths over time.

In this paper, the tax is assumed to be changed in 2011, and the ultimate percentage differences in GDP for the various estate tax levels shown in the previous paper are spread out over eleven years, from 2011 through the end of the CBO ten year budget window in 2021, deriving a path over time for the change in output and federal revenue for various alternatives measured against the GDP and revenue expected under current law. Our baseline is the GDP, revenue, and deficit forecast in the CBO's January, 2011 budget estimates.[2] In that baseline, CBO assumes that the estate tax will revert to a top rate of 55% and an exempt amount of $1 million in 2013.

The Methodology

The tables present annual and total, ten-year budget window static and dynamic revenue estimates for the estate tax changes, which are assumed to take effect in 2011. In the top block of figures in the tables, "CBO revenue" is the CBO forecast for total federal revenue from 2011 through 2021. The 2011 revenue is the starting point. The totals on the right are for the ten years of the CBO budget window, 2012-2021 inclusive. The "estate and gift" tax revenue figures are the CBO estimates for the estate and gift tax. We assume the "estate tax share" is 91% of the total. These are the baseline amounts for current law.

The "weighted growth factor" is the divergence of the GDP from the baseline under the alternative estate tax regimes. It starts at 1 times the baseline in 2011, and rises to its full height of 1 plus the percentage GDP increase estimated for the tax change ten years later, in 2021. "Revenue growth ex corporate tax" includes gains due to higher GDP in the individual income tax, payroll tax, tariffs, and excises, as well as the residual gift and estate taxes where applicable. Payroll taxes, tariffs, and excise taxes grow in line with the change in GDP. The individual income tax grows faster than GDP as higher incomes move taxpayers into higher tax brackets. The capital stock rises faster than GDP, which increases capital gains tax revenue and the remaining estate taxes faster than GDP.

The corporate tax is displayed separately from other revenue; it will not rise in line with the GDP, because the higher rate of investment that drives the GDP growth will result in larger depreciation allowances. Income of non-corporate businesses is included in other taxes, so a separate adjustment for higher depreciation claimed against that income is subtracted from revenue. In the cases where not all of the tax is eliminated, the remaining tax would rise over some time frame as the capital stock and saving rise with GDP, but we did not include that small effect nor estimate its timing.

The second block of figures presents the static and dynamic revenue changes (- for a loss, + for a gain) from ending or lowering the estate tax portion (retaining the gift tax). The first line is the "static loss" of lowering the estate tax. For complete elimination, the static loss is 100% of the estimated estate tax revenue shown above. For partial elimination, the estimated static revenue loss is reduced by the "percent eliminated" fraction. The "revenue from growth" and the "net dynamic revenue change" are shown next. Reduction of the tax in 2011 would start to affect estate tax revenue collections in 2012 and beyond because of the time lag between a death and an estate tax filing.

The third block of figures shows the CBO baseline GDP, the new GDP after the tax change, and the gain each year from lowering the estate tax. The lowest block shows the derivation of the growth factor used to derive the GDP path. It utilizes the ultimate increase in GDP for each case as estimated in the previous study, and assumes that the economy will gradually attain that additional output over ten years. The growth path rises somewhat more rapidly in the first five years than in years six through ten. This is due to the assumption that the higher levels of equipment are achieved in five years, and the higher levels of structures are achieved over ten years.

The Alternative Estate Tax Cases

Levels of tax revenue are estimated relative to the CBO baseline (a $55% top rate and a $1 million exempt amount) for four alternative scenarios:

1. Permanent elimination of the estate tax (but retention of the gift tax).
2. A large reduction (top estate tax rate of 15%, credit offsets tax on $5 million), in which the top estate tax rate equals the rate on long-term capital gains.
3. The 2011-2012 levels of the tax (top estate tax rate of 35%, credit offsets tax on $5 million), if it were to be extended through the budget period.
4. A return to 2009 levels (top estate tax rate of 45%, credit offsets tax on $3.5 million), as the President has proposed.

RESULTS

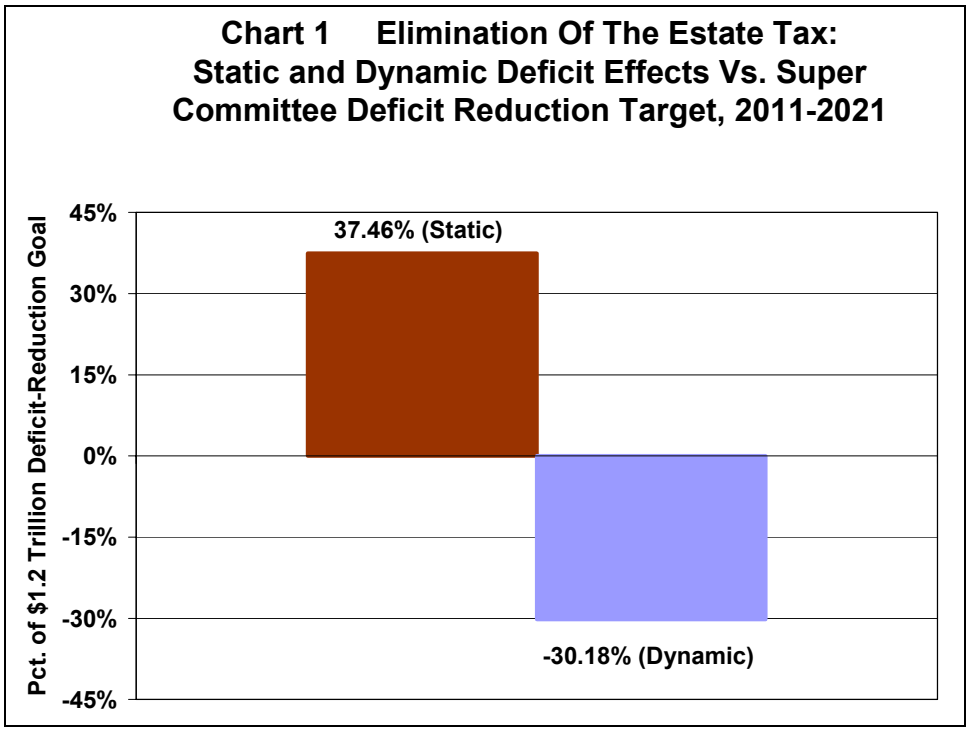
Scenario #1: No estate tax (but retention of the gift tax)

CBO statically scores the elimination of the estate tax as costing a total of $450 billion over 10 years, with an annual revenue loss of $66 billion in 2021.

Under our dynamic analysis, we estimate a 2.26% gain in GDP that would lead to an offsetting increase of $812 billion in federal revenue gains from growth over the period. GDP would be nearly $3 trillion higher over the period, up by $538 billion at an annual rate in 2021. There would be a net increase in revenue of $362 billion totaled over the period on a dynamic scoring basis, with an annual revenue gain of $88 billion in 2021. There would be net revenue gains as early as 2013. The low net revenue gain for 2014 reflects the assumed return in the policy baseline to the 55% top tax rate and $1 million exempt amount in 2013. Annual dynamic gains rise thereafter (as for all the proposals).

Static scoring would estimate repeal to raise the budget deficit by 6.54% over the period, but dynamic scoring would show it reducing the deficit by 5.19% over the period, and by 11.49% annually in 2021. Relative to the $1.2 trillion in deficit reduction that the Super Committee has been charged with finding, the static loss would appear to add 37.46% to the required savings, but the dynamic change would actually reduce the required savings by 30.18% (charted below).

The complete data table is available on page 10.



Scenario #2: A top rate equal to the top rate on long-term capital gains (top estate tax rate of 15%, credit offsets tax on $5 million)

We estimate that a capital gains rate alternative would cost a total of $420 billion over 10 years on a static basis, with an annual revenue loss of $62 billion in 2021. We estimate a 1.95% gain in GDP would lead to an offsetting increase of $704 billion in federal revenue gains from growth over the period. GDP would be more than $2.5 trillion higher over the period, up by $464 billion at an annual rate in 2021. There would be a net increase in revenue of $284 billion totaled over the period on a dynamic basis, with an annual revenue gain of $72 billion in 2021.

Static scoring would estimate the 15% top rate would raise the budget deficit by 6.02% over the period, but dynamic scoring would show it reducing the deficit by 4.08% over the period, and by 9.40% annually in 2021. Relative to the $1.2 trillion in deficit reduction that the Super Committee has been charged with finding, the static loss would appear to add 34.98% to the required savings, but the dynamic change would actually reduce the required savings by 23.69%.

The complete data table is available on page 11.

Scenario #3: 2011-2012 levels (top estate tax rate of 35%, credit offsets tax on $5 million)

Relative to the baseline, we estimate the 2011-2012 levels of the estate tax and credit would cost a total of $332 billion over 10 years on a static basis, with an annual revenue loss of $49 billion in 2021. We estimate a 1.54% gain in GDP would lead to an offsetting increase of $558 billion in federal revenue gains from growth over the period. GDP would be over $2 trillion higher over the period, up by $367 billion at an annual rate in 2021. There would be a net increase in revenue of $225 billion totaled over the period on a dynamic basis, with an annual revenue gain of $57 billion in 2021.

Static scoring would estimate the 2011 levels to raise the budget deficit by 4.77% over the period, but dynamic scoring would show it reducing the deficit by 3.23% over the period, and by 7.46% annually in 2021. Relative to the $1.2 trillion in deficit reduction that the Super Committee has been charged with finding, the static loss would appear to add 27.70% to the required savings, but the dynamic change would actually reduce the required savings by 18.79%.

The complete data table is available on page 12.

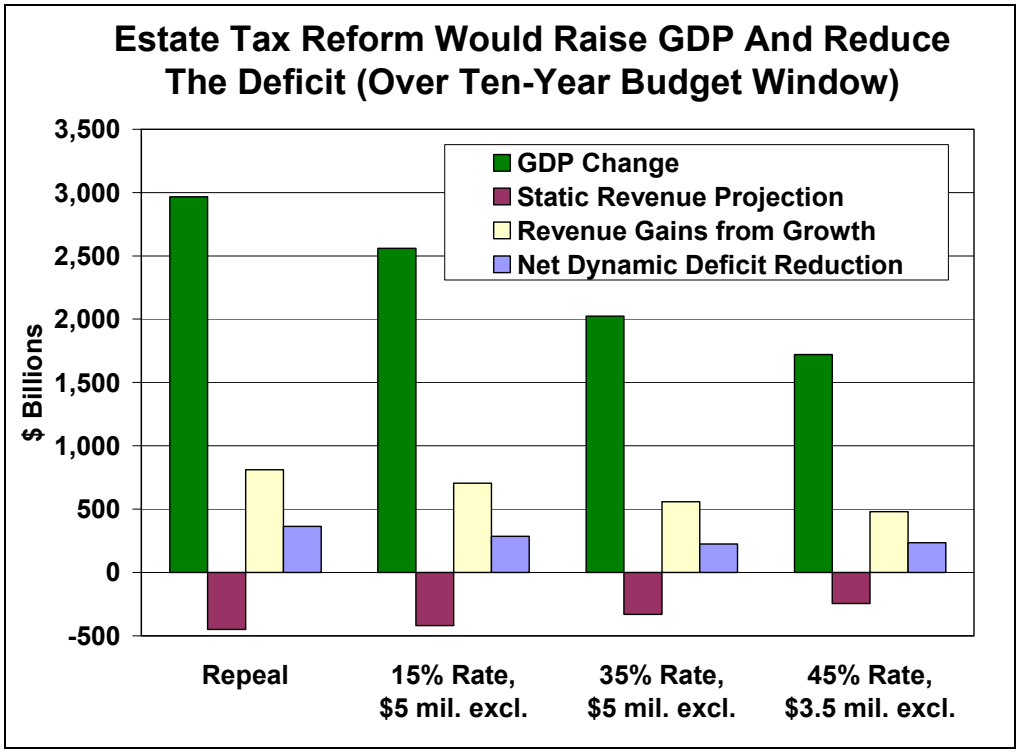
Scenario #4: 2009 levels (top estate tax rate of 45%, credit offsets tax on $3.5 million)

Relative to the baseline, we estimate the 2009 levels would cost a total of $245 billion over 10 years on a static basis, with an annual revenue loss of $36 billion in 2021. We estimate a 1.31% gain in GDP would lead to an offsetting increase of $478 billion in federal revenue gains from growth over the period. GDP would be $1.7 trillion higher over the period, up by $312 billion at an annual rate in 2021. There would be a net increase in revenue of $233 billion totaled over the period on a dynamic basis, with an annual revenue gain of $55 billion in 2021.

Static scoring would estimate the 2009 levels to raise the budget deficit by 3.51% over the period, but dynamic scoring would show it reducing the deficit by 3.34% over the period, and by 7.18% annually in 2021. Relative to the $1.2 trillion in deficit reduction that the Super Committee has been charged with finding, the static loss would appear to add 20.42% to the required savings, but the dynamic change would actually reduce the required savings by 19.43%. The complete data table is available on page 13.

A Comprehensive Overview of All Four Estate Tax Scenarios

The following chart summarizes the results of options 1 through 4.



CONCLUSION

Reducing or eliminating the estate tax would appear to cost revenue as scored by static estimation techniques. However, any decrease in estate taxes would lead to higher growth of GDP over a decade. Revenue from other taxes would increase. There would be a small revenue loss for the first two to five years, followed by revenue gains in later years.

Over the budget window, total federal revenue would rise by between $200 billion and $400 billions on a dynamic basis. The revenue gains would lower the budget deficit, helping the Super Committee to reach its targets.

Potential long term gains to GDP and income from reduction or elimination of the tax would range from over $1.7 trillion to nearly $3 trillion over the 2012-2021 period, with greater increases the greater the cuts in the tax. At an annual rate, by 2021, these gains in GDP range from $312 to $538.

These gains are free for the taking and would actually help the federal budget. In the process, every worker and saver, at all income levels, would be made better off. Elimination of the estate tax is as close as one gets to a free lunch in economics. It is time to take advantage of it.

Table 1: Elimination of the estate tax.

Estimated revenue change from reducing or ending the estate tax, using static and dynamic scoring, versus the CBO baseline.

The spreadsheet assumes an additional amount of GDP is generated over a decade in the percentage amount specified below in the assumed "Growth added by year 10, in %" cell.

The increase in GDP is driven by a gradual accumulation of additional equipment made profitable by the tax reduction, taking five years to complete, and accumulation of additional structures taking ten years to complete.

Dollars in billions (small differences due to rounding)												Total
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2012-21
CBO revenue	$2,228	$2,555	$3,090	$3,442	$3,651	$3,832	$4,075	$4,275	$4,489	$4,712	$4,963	$39,084
Estate and gift	$11	$12	$14	$42	$48	$53	$57	$61	$65	$69	$73	$494
Estate share (est @ 91%)	$10	$11	$13	$38	$44	$48	$52	$56	$59	$63	$66	$450
Corporate tax	$201	$279	$343	$428	$398	$370	$413	$417	$420	$420	$437	$3,925
Other revenue ex estate & corp	$2,017	$2,265	$2,734	$2,976	$3,209	$3,414	$3,610	$3,802	$4,010	$4,229	$4,460	$34,709
Weighted GDP growth factor	1	1.0030	1.0060	1.0090	1.0121	1.0151	1.0166	1.0181	1.0196	1.0211	1.0226	
Revenue growth ex corporate tax	$0	$10	$24	$39	$57	$75	$88	$102	$117	$134	$152	$798
Corporate tax growth gross	$0	$1	$2	$4	$5	$6	$7	$8	$8	$9	$10	$58
Corp tax with depreciation adj., net	$0	$0	$1	$1	$1	$2	$2	$2	$2	$3	$3	$18
Non-corp bus. depreciation adj.	$0	$0	$0	$0	$0	$0	$0	-$1	-$1	-$1	-$1	-$4
Percent of estate tax eliminated	100.0%											
Static loss = -estate tax share	$0	-$11	-$13	-$38	-$44	-$48	-$52	-$56	-$59	-$63	-$66	-$450
Revenue from growth	$0	$10	$24	$40	$58	$77	$90	$104	$119	$136	$154	$812
Net dynamic revenue change	$0	-$1	$12	$2	$14	$29	$38	$48	$60	$73	$88	$362
CBO deficit forecast	-$1,480	-$1,100	-$704	-$533	-$551	-$659	-$617	-$610	-$696	-$739	-$763	-$6,972
% change in deficit, static loss basis	0.00%	0.99%	1.81%	7.17%	7.93%	7.32%	8.41%	9.10%	8.50%	8.50%	8.71%	6.45%
% change in deficit, dynamic basis	0.00%	0.10%	-1.65%	-0.34%	-2.54%	-4.33%	-6.19%	-7.94%	-8.63%	-9.89%	-11.49%	-5.19%
CBO baseline GDP	$15,034	$15,693	$16,400	$17,258	$18,195	$19,141	$20,033	$20,935	$21,856	$22,817	$23,810	$196,138
Post-policy change GDP	$15,034	$15,740	$16,499	$17,414	$18,414	$19,429	$20,365	$21,314	$22,284	$23,298	$24,348	$199,106
Increase in GDP	$0	$47	$99	$156	$219	$288	$332	$379	$428	$481	$538	$2,968
Growth added by year 10, in %	**2.26%**											
Year	0	1	2	3	4	5	6	7	8	9	10	
Growth path to full value												
Structures over 10 years, weight 2/3	1.0000	1.0015	1.0030	1.0045	1.0060	1.0075	1.0090	1.0105	1.0121	1.0136	1.0151	
Equipment over 5 years, weight 1/3	1.0000	1.0015	1.0030	1.0045	1.0060	1.0075	1.0075	1.0075	1.0075	1.0075	1.0075	
Combined weighted. growth factor	1.0000	1.0030	1.0060	1.0090	1.0121	1.0151	1.0166	1.0181	1.0196	1.0211	1.0226	

Table 2: 15% top rate with $5 million exemption.

Estimated revenue change from reducing or ending the estate tax, using static and dynamic scoring, versus the CBO baseline.

The spreadsheet assumes an additional amount of GDP is generated over a decade in the percentage amount specified below in the assumed "Growth added by year 10, in %" cell.

The increase in GDP is driven by a gradual accumulation of additional equipment made profitable by the tax reduction, taking five years to complete, and accumulation of additional structures taking ten years to complete.

Dollars in billions (small differences due to rounding)												Total
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2012-21
CBO revenue	$2,228	$2,555	$3,090	$3,442	$3,651	$3,832	$4,075	$4,275	$4,489	$4,712	$4,963	$39,084
Estate and gift	$11	$12	$14	$42	$48	$53	$57	$61	$65	$69	$73	$494
Estate share (est @ 91%)	$10	$11	$13	$38	$44	$48	$52	$56	$59	$63	$66	$450
Corporate tax	$201	$279	$343	$428	$398	$370	$413	$417	$420	$420	$437	$3,925
Other revenue ex estate & corp	$2,017	$2,265	$2,734	$2,976	$3,209	$3,414	$3,610	$3,802	$4,010	$4,229	$4,460	$34,709
Weighted GDP growth factor	1.0000	1.0026	1.0052	1.0078	1.0104	1.0130	1.0143	1.0156	1.0169	1.0182	1.0195	
Revenue growth ex corporate tax	$0	$8	$21	$34	$49	$65	$77	$89	$102	$116	$132	$692
Corporate tax growth gross	$0	$1	$2	$3	$4	$5	$6	$7	$7	$8	$9	$50
Corp tax with depreciation adj., net	$0	$0	$1	$1	$1	$1	$2	$2	$2	$2	$3	$15
Non-corp bus. depreciation adj.	$0	$0	$0	$0	$0	$0	$0	$0	$0	-$1	-$1	-$4
Percent of estate tax eliminated	93.4%											
Static loss = -estate tax share	$0	-$10	-$12	-$36	-$41	-$45	-$48	-$52	-$55	-$59	-$62	-$420
Revenue from growth	$0	$8	$21	$35	$50	$67	$78	$90	$103	$118	$134	$704
Net dynamic revenue change	$0	-$2	$9	-$1	$9	$21	$30	$38	$48	$59	$72	$284
CBO deficit forecast	-$1,480	-$1,100	-$704	-$533	-$551	-$659	-$617	-$610	-$696	-$739	-$763	-$6,972
% change in deficit, static loss basis	0.00%	0.93%	1.69%	6.69%	7.40%	6.83%	7.85%	8.50%	7.93%	7.93%	8.13%	6.02%
% change in deficit, dynamic basis	0.00%	0.16%	-1.30%	0.19%	-1.67%	-3.26%	-4.80%	-6.28%	-6.92%	-8.02%	-9.40%	-4.08%
CBO baseline GDP	$15,034	$15,693	$16,400	$17,258	$18,195	$19,141	$20,033	$20,935	$21,856	$22,817	$23,810	$196,138
Post-policy change GDP	$15,034	$15,734	$16,485	$17,393	$18,384	$19,390	$20,319	$21,262	$22,225	$23,232	$24,274	$198,699
Increase in GDP	$0	$41	$85	$135	$189	$249	$286	$327	$369	$415	$464	$2,561
Growth added by year 10, in %	**1.95%**											
Year	0	1	2	3	4	5	6	7	8	9	10	
Growth path to full value												
Structures over 10 years, weight 2/3	1.0000	1.0013	1.0026	1.0039	1.0052	1.0065	1.0078	1.0091	1.0104	1.0117	1.0130	
Equipment over 5 years, weight 1/3	1.0000	1.0013	1.0026	1.0039	1.0052	1.0065	1.0065	1.0065	1.0065	1.0065	1.0065	
Combined weighted. growth factor	1.0000	1.0026	1.0052	1.0078	1.0104	1.0130	1.0143	1.0156	1.0169	1.0182	1.0195	

Table 3: 35% top rate with $5 million exemption

Estimated revenue change from reducing or ending the estate tax, using static and dynamic scoring, versus the CBO baseline.

The spreadsheet assumes an additional amount of GDP is generated over a decade in the percentage amount specified below in the assumed "Growth added by year 10, in %" cell.

The increase in GDP is driven by a gradual accumulation of additional equipment made profitable by the tax reduction, taking five years to complete, and accumulation of additional structures taking ten years to complete.

Dollars in billions (small differences due to rounding)												Total
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2012-21
CBO revenue	$2,228	$2,555	$3,090	$3,442	$3,651	$3,832	$4,075	$4,275	$4,489	$4,712	$4,963	$39,084
Estate and gift	$11	$12	$14	$42	$48	$53	$57	$61	$65	$69	$73	$494
Estate share (est @ 91%)	$10	$11	$13	$38	$44	$48	$52	$56	$59	$63	$66	$450
Corporate tax	$201	$279	$343	$428	$398	$370	$413	$417	$420	$420	$437	$3,925
Other revenue ex estate & corp	$2,017	$2,265	$2,734	$2,976	$3,209	$3,414	$3,610	$3,802	$4,010	$4,229	$4,460	$34,709
Weighted GDP growth factor	1.0000	1.0021	1.0041	1.0062	1.0082	1.0103	1.0113	1.0123	1.0133	1.0144	1.0154	
Revenue growth ex corporate tax	$0	$7	$16	$27	$39	$52	$61	$70	$81	$92	$104	$549
Corporate tax growth gross	$0	$1	$1	$3	$3	$4	$5	$5	$6	$6	$7	$40
Corp tax with depreciation adj., net	$0	$0	$0	$1	$1	$1	$1	$2	$2	$2	$2	$12
Non-corp bus. depreciation adj.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	-$3
Percent of estate tax eliminated	73.9%											
Static loss = -estate tax share	$0	-$8	-$9	-$28	-$32	-$36	-$38	-$41	-$44	-$46	-$49	-$332
Revenue from growth	$0	$7	$17	$27	$40	$53	$62	$71	$82	$93	$106	$558
Net dynamic revenue change	$0	-$1	$7	-$1	$7	$17	$24	$30	$38	$47	$57	$225
CBO deficit forecast	-$1,480	-$1,100	-$704	-$533	-$551	-$659	-$617	-$610	-$696	-$739	-$763	-$6,972
% change in deficit, static loss basis	0.00%	0.73%	1.34%	5.30%	5.86%	5.41%	6.22%	6.73%	6.28%	6.28%	6.44%	4.77%
% change in deficit, dynamic basis	0.00%	0.13%	-1.03%	0.15%	-1.32%	-2.59%	-3.81%	-4.98%	-5.49%	-6.36%	-7.46%	-3.23%
CBO baseline GDP	$15,034	$15,693	$16,400	$17,258	$18,195	$19,141	$20,033	$20,935	$21,856	$22,817	$23,810	$196,138
Post-policy change GDP	$15,034	$15,725	$16,467	$17,364	$18,344	$19,338	$20,259	$21,193	$22,148	$23,145	$24,177	$198,160
Increase in GDP	$0	$32	$67	$106	$149	$197	$226	$258	$292	$328	$367	$2,022
Growth added by year 10, in %	**1.54%**											
Year	0	1	2	3	4	5	6	7	8	9	10	
Growth path to full value												
Structures over 10 years, weight 2/3	1.0000	1.0010	1.0021	1.0031	1.0041	1.0051	1.0062	1.0072	1.0082	1.0092	1.0103	
Equipment over 5 years, weight 1/3	1.0000	1.0010	1.0021	1.0031	1.0041	1.0051	1.0051	1.0051	1.0051	1.0051	1.0051	
Combined weighted. growth factor	1.0000	1.0021	1.0041	1.0062	1.0082	1.0103	1.0113	1.0123	1.0133	1.0144	1.0154	

Table 4: 45% top rate with $3.5 million exemption.

Estimated revenue change from reducing or ending the estate tax, using static and dynamic scoring, versus the CBO baseline.

The spreadsheet assumes an additional amount of GDP is generated over a decade in the percentage amount specified below in the assumed "Growth added by year 10, in %" cell.

The increase in GDP is driven by a gradual accumulation of additional equipment made profitable by the tax reduction, taking five years to complete, and accumulation of additional structures taking ten years to complete.

Dollars in billions (small differences due to rounding)												Total
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2012-21
CBO revenue	$2,228	$2,555	$3,090	$3,442	$3,651	$3,832	$4,075	$4,275	$4,489	$4,712	$4,963	$39,084
Estate and gift	$11	$12	$14	$42	$48	$53	$57	$61	$65	$69	$73	$494
Estate share (est @ 91%)	$10	$11	$13	$38	$44	$48	$52	$56	$59	$63	$66	$450
Corporate tax	$201	$279	$343	$428	$398	$370	$413	$417	$420	$420	$437	$3,925
Other revenue ex estate & corp	$2,017	$2,265	$2,734	$2,976	$3,209	$3,414	$3,610	$3,802	$4,010	$4,229	$4,460	$34,709
Weighted GDP growth factor	1.0000	1.0017	1.0035	1.0052	1.0070	1.0087	1.0096	1.0105	1.0114	1.0122	1.0131	
Revenue growth ex corporate tax	$0	$6	$14	$23	$33	$44	$52	$60	$69	$79	$90	$470
Corporate tax growth gross	$0	$0	$1	$2	$3	$3	$4	$4	$5	$5	$6	$34
Corp tax with depreciation adj., net	$0	$0	$0	$1	$1	$1	$1	$1	$1	$2	$2	$10
Non-corp bus. depreciation adj.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	-$2
Percent of estate tax eliminated	54.5%											
Static loss = -estate tax share	$0	-$6	-$7	-$21	-$24	-$26	-$28	-$30	-$32	-$34	-$36	-$245
Revenue from growth	$0	$6	$14	$24	$34	$45	$53	$61	$70	$80	$91	$478
Net dynamic revenue change	$0	$0	$7	$3	$10	$19	$25	$31	$38	$46	$55	$233
CBO deficit forecast	-$1,480	-$1,100	-$704	-$533	-$551	-$659	-$617	-$610	-$696	-$739	-$763	-$6,972
% change in deficit, static loss basis	0.00%	0.54%	0.99%	3.91%	4.32%	3.99%	4.58%	4.96%	4.63%	4.63%	4.75%	3.51%
% change in deficit, dynamic basis	0.00%	0.02%	-1.03%	-0.50%	-1.83%	-2.86%	-4.01%	-5.08%	-5.47%	-6.22%	-7.18%	-3.34%
CBO baseline GDP	$15,034	$15,693	$16,400	$17,258	$18,195	$19,141	$20,033	$20,935	$21,856	$22,817	$23,810	$196,138
Post-policy change GDP	$15,034	$15,720	$16,457	$17,348	$18,322	$19,308	$20,225	$21,154	$22,104	$23,096	$24,122	$197,858
Increase in GDP	$0	$27	$57	$90	$127	$167	$192	$219	$248	$279	$312	$1,720
Growth added by year 10, in %	**1.31%**											
Year	0	1	2	3	4	5	6	7	8	9	10	
Growth path to full value												
Structures over 10 years, weight 2/3	1.0000	1.0009	1.0017	1.0026	1.0035	1.0044	1.0052	1.0061	1.0070	1.0079	1.0087	
Equipment over 5 years, weight 1/3	1.0000	1.0009	1.0017	1.0026	1.0035	1.0044	1.0044	1.0044	1.0044	1.0044	1.0044	
Combined weighted. growth factor	1.0000	1.0017	1.0035	1.0052	1.0070	1.0087	1.0096	1.0105	1.0114	1.0122	1.0131	

APPENDIX

A more complete description of the model used in this exercise is available in the 2009 paper cited above. Briefly, the economic impacts are estimated using a Cobb-Douglas model of the private business sector of the economy. The modeling exercise is one of comparative statics. That is, we estimate the ultimate effect of the tax change on the economy once all adjustments are completed. These adaptations to changes in the tax on capital take several years. When the tax on capital equipment is altered, it is estimated to take five years for the stock of equipment to grow or shrink to the new equilibrium level. It is estimated to take a decade for the full adjustment in the stock of buildings.

The model is driven by changes in the tax on incremental income of labor and capital. An asset that can cover its costs, including taxes, and still yield a roughly 3 percent after-tax return to the owner is worth acquiring. As the tax rate increases, the gross return needed for an asset to be profitable goes up, and the quantity of capital that can clear that hurdle goes down. As the tax rate falls, the amount of capital that people can afford to operate goes up. As the desired capital stock rises or falls with the tax changes, the quantity of capital in place is adjusted.

The changes in the estate and gift tax are converted to an initial change in the service price of capital. The model then makes a preliminary pass that calculates how much the capital stock must move to restore the normal after-tax rate of return at the new service price. The shift in the capital stock will affect the productivity of labor, the wage, and the labor supply, giving a new level of output and income.

The new levels of capital and labor income will mean a new set of marginal tax rates, which will have a further effect on the service price of capital. The model runs the new income levels through an individual income tax calculator to determine the new tax rates on business income, labor income, and the individual taxes on capital gains and dividends. These then reenter the service price calculator, which produces a new service price estimate to generate a second round of change in income and GDP. Iterations continue until the changes are vanishingly small, and a new equilibrium level of output and factor inputs is displayed.[3]

The change in the capital stock is assumed to alter the size of estates in the same proportion, giving a dynamic adjustment to the initial estimate of the estate and gift tax in the various scenarios. The income tax calculator displays the resulting change in income tax revenues at the new level of income. A change in payroll tax receipts is calculated based on the change in labor compensation. Other taxes are calculated to change in response to the changes in GDP. The total tax change is the sum of the changes in the estate and gift tax and the changes in other taxes as a result of changes in the economy.

Endnotes

[1] See *The Economic Impact of the Estate Tax: Effects of Various Possible Reform Options*, published by the Institute for Research on the Economics of Taxation, Washington, DC, as IRET Policy Bulletin, No. 93, June 4, 2009, available at http://iret.org/pub/BLTN-93.PDF; and by the American Family Business Foundation, available on the Internet at http://www.nodeathtax.org/uploads/view/833/afbf_entin_2009.pdf.

[2] *The Budget and Economic Outlook: Fiscal Years 2011 to 2021*, Congressional Budget Office, January 2011, accessed at http://cbo.gov/ftpdocs/120xx/doc12039/01-26_FY2011Outlook.pdf.

[3] The service price and tax calculators and the marginal estate tax rate data were developed and made available by Gary Robbins of the Heritage Foundation Center for Data Analysis.