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# WHAT DO WE KNOW ABOUT THE BEHAVIORAL EFFECTS OF THE ESTATE TAX?

DAVID JOULFAIAN\*

**Abstract:** Few estates are subject to the estate tax, which accounts for only a small portion of federal revenues. Even so, those whose estates may be subject to the tax tend to have access to high-quality advice and to engage in long-term tax planning. Because of this, the presence of the estate tax has a broad impact on the economic activity of those who are likely to be subject to the tax (as well as those who stand to benefit from those estates). This Article explores some of the choices that those who are affected by the estate tax may face, and contemplates what might happen were the estate tax to change or be repealed.

## INTRODUCTION

At its one-hundredth anniversary, the estate tax continues to generate passionate debates reminiscent of those leading up to its enactment in 1916. The tax retains much of its original structure, albeit with a different rate schedule and a much-expanded size of exempted estates.<sup>1</sup> In its current form, the tax contributes less than one percent of total federal government revenues.<sup>2</sup> It also directly impacts the estates of less than one percent of decedents.<sup>3</sup>

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\* U.S. Department of the Treasury. The views expressed do not necessarily represent those of the Department of the Treasury.

<sup>1</sup> The estate tax exemption was \$5 million in 2011. I.R.C. § 2010(c)(3)(A) (2012). The exemption was \$50,000 in 1916, the equivalent of slightly over \$1 million in 2011 dollars. Revenue Act of 1916, Pub. L. No. 64-271, § 203(a)(2), 39 Stat. 756, 777 (providing 1916 exemption); David Joulfaian, *The Federal Estate Tax: History, Law, and Economics 6-7 & tbl.6.3* (June 2013) (unpublished manuscript), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1579829](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1579829) [<https://perma.cc/2GEC-B9YN>] (discussing 2011-equivalent dollars).

<sup>2</sup> Computed from revenue figures reported in historical tables. OFFICE OF MGMT. & BUDGET, FISCAL YEAR 2017 HISTORICAL TABLES, BUDGET OF THE U.S. GOVERNMENT tbls. 2.1 & 2.5, <https://www.whitehouse.gov/sites/default/files/omb/budget/fy2017/assets/hist.pdf> [<https://perma.cc/962Z-DFE6>]

<sup>3</sup> There were 10,568 estate tax returns filed in 2013, compared to 2.6 million deaths. STATISTICS OF INCOME DIV., INTERNAL REVENUE SERV., ESTATE TAX RETURNS FILED IN 2013, BY TAX STATUS AND SIZE OF GROSS ESTATE (2014), <https://www.irs.gov/pub/irs-soi/13es01fy.xls> [<https://perma.cc/WT23-A6NX>] (reporting on the number of estate tax returns in 2013); Jiaquan Xu et al., *Deaths: Final Data for 2013*, 64 NAT'L VITAL STATISTICS R., no. 2, Feb. 16, 2016, at 1, 1, [http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64\\_02.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf) [<https://perma.cc/C4B7-54LX>] (reporting on the number of deaths in 2013).

The estate tax can be viewed as a hybrid inheritance tax. It is a tax on inheritances withheld at the source,<sup>4</sup> but with tax rates that vary by type of relationship, form of asset held, and time of transfer (gifts versus bequests). It can also be viewed as a deferred income tax on bequest-motivated wealth accumulations, either as a backstop to leakages from the income tax or simply as another layer of taxes to bolster the progressivity of the tax system to apply at death.<sup>5</sup>

Ultimately, however it is viewed, the estate tax is a tax on bequest-motivated savings, or capital. It applies to the wealthiest of estates of individuals and addresses concerns related to tax progressivity and wealth concentration.<sup>6</sup>

Yet despite its limited scope, the tax continues to draw attention with passionate calls for its repeal. This dichotomy raises interesting questions related to the burden imposed by the tax, actual or perceived, that is shaping these views. It also raises questions about the behavioral effects of the tax. Only a very small number of individuals are subject to the estate tax, but as a group they are particularly tax-savvy or otherwise have access to highly competent tax planners.

This Article proceeds in two Parts. Part I explores the change over time in the scope and budgetary importance of the estate tax and in how it relates to other taxes imposed on taxed estates.<sup>7</sup> Part II then reviews the economics literature and the empirical evidence showing how the varying burden of an estate tax affects other financial decisions made by those whose estates may become subject to the tax.<sup>8</sup>

## I. THE SCOPE OF THE TAX AND ITS BURDEN

### A. Trends in Tax Revenues

How important is the estate tax for governmental finances? At one point in time, the estate tax represented an important source of revenues as it accounted for about ten percent of the federal government's tax revenues.<sup>9</sup> Today

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<sup>4</sup> For a discussion of whether the estate tax is borne by the decedent or by the heir, see Melanie B. Leslie & Stewart E. Sterk, *Revisiting the Revolution: Reintegrating the Wealth Transmission System*, 56 B.C. L. REV. 61, 95–101 (2015).

<sup>5</sup> The estate tax can be converted to annual accrual income tax on earnings that would leave the heirs indifferent between the estate tax and an income tax that would apply to the earnings on bequest-motivated savings as they accrue. See David Joulfaian, *The Behavioral Response of Wealth Accumulation to Estate Taxation: Time Series Evidence*, 59 NAT'L TAX J. 253, 259–63 (2006) (explaining how and why such a conversion would be calculated).

<sup>6</sup> See Michael J. Graetz, *To Praise the Estate Tax, Not to Bury It*, 93 YALE L.J. 259, 270 (1983); James R. Repetti, *Democracy, Taxes, and Wealth*, 76 N.Y.U. L. REV. 825, 851–52 (2001).

<sup>7</sup> See *infra* notes 9–21 and accompanying text.

<sup>8</sup> See *infra* notes 23–85 and accompanying text.

<sup>9</sup> See *infra* note 17 (Figure 1).

it is close to one percent.<sup>10</sup> It has declined both in terms of its contribution to government finances as well as the size of the population it touches.

Contributions to tax receipts peaked in 1936 at ten percent of collections.<sup>11</sup> Contributions to tax revenues, in nominal terms, peaked in fiscal year 2000 at about \$29 billion before the dot-com bubble burst and stock market valuations crashed.<sup>12</sup> About 50,000 of the estates in 2001, out of 2.4 million decedents, reported a positive tax liability.<sup>13</sup> This declined to about 5200 estates in 2014, which reported tax liabilities of \$16.4 billion.<sup>14</sup>

According to Gregory Mankiw, then-Chairman of President George W. Bush's Council of Economic Advisers, "The estate tax . . . raises little, if any, federal revenue."<sup>15</sup> Whether the estate tax, even with the recently expanded exemption,<sup>16</sup> raises "little" revenue is in the eye of the beholder. Other things being equal, and particularly in the absence of the estate tax, the revenue shortfall will have to be made up elsewhere and at the expense of other taxpayers. What is clear, however, is that the burden of the tax is extended to a very small group of taxpayers who are at the top of the distribution of wealth.

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<sup>10</sup> See *infra* note 17 (Figure 1)

<sup>11</sup> See *infra* note 17 (Figure 1)

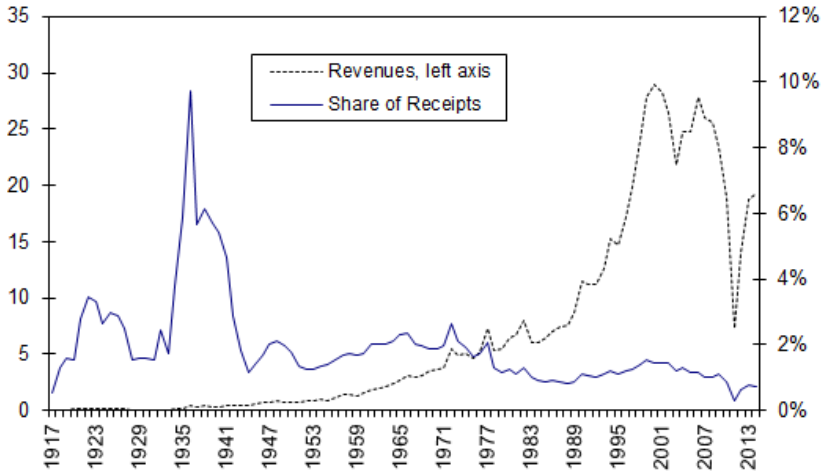
<sup>12</sup> See *infra* note 17 (Figure 1).

<sup>13</sup> STATISTICS OF INCOME DIV., INTERNAL REVENUE SERV., ESTATE TAX RETURNS FILED FOR 2001 DECEDENTS, VALUES FOR TAX PURPOSES, BY TAX STATUS AND SIZE OF GROSS ESTATE (2007), <https://www.irs.gov/pub/irs-soi/01es02yd.xls> [<https://perma.cc/9CHV-MQA3>]. For number of deaths, see Xu et al., *supra* note 3, at 1, 17 tbl.1.

<sup>14</sup> STATISTICS OF INCOME DIV., INTERNAL REVENUE SERV., ESTATE TAX RETURNS FILED IN 2014, BY TAX STATUS AND SIZE OF GROSS ESTATE (2015), <https://www.irs.gov/pub/irs-soi/14es01fy.xls> [<https://perma.cc/28VK-B3RV>].

<sup>15</sup> N. Gregory Mankiw, Chairman, Council of Econ. Advisers, Remarks at the National Bureau of Economic Research Tax Policy and the Economy Meeting (Nov. 4, 2003), <http://georgewbush-whitehouse.archives.gov/cea/NPressClub20031104.html> [<https://perma.cc/SYM5-CBPB>] (arguing that the estate tax, as other taxes on capital, would reduce capital and hence likely generate little revenue, if any).

<sup>16</sup> Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, Pub. L. No. 111-312, § 302(a), 124 Stat. 3296, 3301 (codified as amended at I.R.C. § 2010(c) (2012)) (raising the exemption to \$5 million).

Figure 1. Trends in estate and gift tax revenues.<sup>17</sup>

### B. Comparing the Estate Tax to the Income Tax Paid

Another observation often encountered is that individuals pay little in taxes, as the estate tax is riddled with preferences and complexities. Although the effective estate tax rate is bound to be lower than that suggested by the statutory tax rates, this does not shed light on how important or burdensome the estate tax is.

One way to gauge the perceived importance of the estate tax is to compare it to the income tax. This is perhaps more of a mental exercise where the estate tax liability of estate taxpayers is compared to that of the personal income tax they face prior to death. The premise here is very simple; the greater the estate tax relative to the income tax paid, the more important the estate tax is perceived.

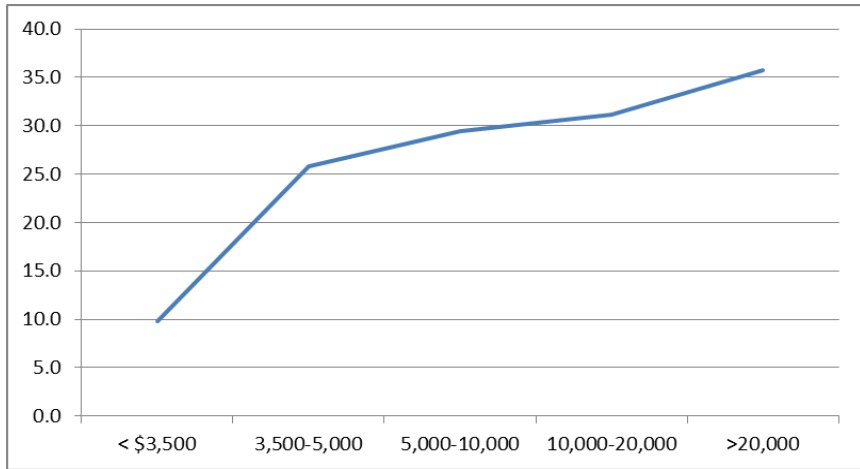
The Statistics of Income Division (“SOI”) of the Internal Revenue Service (“IRS”) prepared a sample of estate tax returns filed in 2008 and linked it to the income tax returns of the decedents filed in the preceding years (by either spouse for married individuals).<sup>18</sup> The SOI tabulated estate and income tax information by size of estate. For the smallest estates of filers in 2008, those

<sup>17</sup> Computed from revenue figures reported in historical tables of the budget of the U.S. government.

<sup>18</sup> See, e.g., STATISTICS OF INCOME DIV., INTERNAL REVENUE SERV., SELECTED DATA FROM FORMS 706 FILED IN 2008 AND FROM THE FORM 1040 FILED BY THE DECEDENT IN THE YEAR PRIOR TO DEATH, INDIVIDUALS WITH A NON-MARRIED FORM 1040 FILING STATUS, BY TAX STATUS AND SIZE OF GROSS ESTATE (2011), <https://www.irs.gov/pub/irs-soi/08es02lk.xls> [<https://perma.cc/V372-BCF9>]. For more tables from this series, see *SOI Tax Stats—Linked Estate Tax-Form 1040 Data Tables*, INTERNAL REVENUE SERV. (last updated May 30, 2014), <https://www.irs.gov/uac/SOI-Tax-Stats-Linked-Estate-Tax-Form-1040-Data-Tables> [<https://perma.cc/64K8-2AKV>].

estates under \$3.5 million of non-married individuals, the estate tax liability is about ten times as large as that of the income tax liability.<sup>19</sup> This ratio grows with the size of the estate. For those with estates in excess of \$20 million, the ratio becomes about thirty-six percent.<sup>20</sup> Overall, the estate tax is twenty-six times as large as the income tax liability in the preceding year.<sup>21</sup>

Figure 2. Estate tax liability to income tax liability multiple.<sup>22</sup>



Comparisons of the estate tax liability to the income tax liability in the year prior to the date of death can be criticized on the ground that the latter may not be truly representative of the income tax burden an individual faces over the life cycle; the income reported prior to the date of death can be viewed as artificially low for a variety of reasons, including poor health. As an alternative, the author has compared the estate tax liability of widowed decedents to the income tax paid over a period of ten years, and not just one year. For this alternative measure, the estate tax liability is equal to about 2.2 times the nominal sum of income taxes paid in the preceding years. In other words, the estate tax is equivalent to doubling the income tax liability over the ten years preceding death.

<sup>19</sup> STATISTICS OF INCOME DIV., *supra* note 18. Figure 2, *infra* note 22, depicts this ratio between estate tax liability and income tax liability as it varies by size of estate.

<sup>20</sup> STATISTICS OF INCOME DIV., *supra* note 18.

<sup>21</sup> *Id.* A similar exercise was carried out for 1989 decedents in David Joulfaian, *Taxing Wealth Transfers and Its Behavioral Consequences*, 53 NAT'L TAX J. 933 (2000). To the extent that the filing threshold was much lower in 1989 (\$600,000), the estate-income tax multiple is lower, but otherwise the qualitative findings are similar.

<sup>22</sup> Computed from estate tax returns filed in 2008 and prior year income tax return filed. The mean is 26.

## II. BEHAVIORAL EFFECTS OF THE ESTATE TAX

### A. *What Does Economic Theory Have to Say?*

Traditional concerns over the behavioral effects of inheritance taxes date back at least to Adam Smith.<sup>23</sup> Do parents save less because of the tax? And do they retire early or reduce their labor efforts in response to the tax? We rely on economic theory as a guide to how taxpayers respond to taxes. Yet, economic theory is generally ambiguous on the effect of the estate tax given the offsetting income and substitution effects.

The effect of the estate tax on the donors' or parents' wealth accumulation critically depends on the nature of the bequest motive. In response to the estate tax, altruistic parents may save more in order to adequately provide for their heirs; i.e., they may save more to make up for the estate tax they face. They may not dissave or retire early.

Similar questions arise as to whether the heirs save less and retire early in the absence of the tax. Estate taxes, as they reduce the size of inheritances, may also affect the heirs' work effort and saving. Theoretically, individuals choose between work and leisure subject to a budget constraint. Inheritances, by expanding or, rather, relaxing the household budget constraint, may lead to a reduction in labor supply and an expansion in leisure. Estate taxes, by reducing such transfers, may counteract the effects of inheritances on the trade-off between work and leisure. The effects of the estate tax on heirs would also depend on whether they anticipated the tax; we may not observe any change in behavior if inheritances were fully anticipated.

Indeed, it is important to consider the effects on heirs, as their behavioral responses to the estate tax may offset those of their parents. The net effect is likely to reflect the underlying bequest motives. As an example, two scholars evaluate the potential effects of estate taxation under various bequest motives.<sup>24</sup> They conclude that the effects on savings (by donors and donees) depend on the underlying bequest motive.<sup>25</sup>

In addition to the effects on savings and labor supply, the estate tax operates on different margins as well. Because of its differential treatment of timing of transfers, forms of assets held, and nature of beneficiaries, the estate tax may have incentive effects that go well beyond the traditional concerns over saving and labor supply.

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<sup>23</sup> See, e.g., 2 ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 862 (R.H. Campbell et al. eds., Oxford Univ. Press 1976) (1784).

<sup>24</sup> See William G. Gale & Maria G. Perozek, *Do Estate Taxes Reduce Saving?*, in RETHINKING ESTATE AND GIFT TAXATION 216, 217 (William G. Gale et al. eds., 2001); see also Wojciech Kopczuk, *Incentive Effects of Inheritances and Optimal Estate Taxation*, 103 AM. ECON. R.: PAPERS & PROC. 472, 476–77 (2013).

<sup>25</sup> Gale & Perozek, *supra* note 24, at 217.

The preferential treatment of transfers to charities creates incentives for charitable giving relative to transfers to heirs, so parents may in response give more to charity. But this can be offset by the income effect as the estate tax reduces the parents' wealth and induces more bequests to heirs. The net of the income and substitution effects is ambiguous a priori. The estate tax will have similar effects on lifetime contributions as well, with the exception that the former interacts with the income tax treatment of itemizers.

Because lifetime gifts are taxed on a tax-exclusive basis, among other reasons, the estate tax generally creates incentives for gifts over bequests. This suggests that altruistic parents may make more gifts. If, however, parents are strategic and want to retain some control over the conduct of their children,<sup>26</sup> this preferential treatment may have little if any effect on the choice between gifts and bequests notwithstanding the tax advantages.

### *B. What Do We Learn from the Empirical Evidence?*

Because economic theory may provide little guidance on how the estate tax may shape the behavior of donors, empirical evidence is often sought to guide policy.

#### 1. Saving by Parents

A question often raised is whether the estate tax reduces the savings of parents, or donors, in general. Exploring this question requires data on the wealth of individuals and how it trends as estate tax laws change over time. One 2001 article employs data from the 1992 Health and Retirement Study ("HRS").<sup>27</sup> It examines how wealth varies among states with their varying estate and inheritance tax rates. That article finds a negative correlation between wealth accumulation and state tax rates.<sup>28</sup> But, as the survey data did not capture the very wealthy, the authors conclude, "Because our estimates are based on data that do not contain the highly affluent who are most highly affected by the estate tax, this suggests substantial burdens that merit additional study."<sup>29</sup>

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<sup>26</sup> See generally B. Douglas Bernheim et al., *The Strategic Bequest Motive*, 93 J. POL. ECON. 1045 (1985) (discussing and modeling bequests as means to influence behavior of potential beneficiaries).

<sup>27</sup> Douglas Holtz-Eakin & Donald Marples, *Distortion Costs of Taxing Wealth Accumulation: Income vs. Estate Taxes* 14 (Nat'l Bureau of Econ. Research, Working Paper No. 8261, 2001), <http://www.nber.org/papers/w8261> [<https://perma.cc/2L6R-AQ9C>].

<sup>28</sup> *Id.* at 22.

<sup>29</sup> *Id.* at 28.



Using pooled estate tax returns, another article also finds reported wealth to be negatively correlated with estate tax rates.<sup>30</sup> This result is robust for a number of estimated specifications. The estimated negative response is even more pronounced when the estate tax rate is measured over the course of a lifetime; the marginal tax rate at the age of forty-five proved both economically and statistically significant.<sup>31</sup> An estate tax rate of 50% would reduce the reported net worth of the richest half percent of the population by 10.5% when its effect is realized after many years.<sup>32</sup>

Taking an alternative approach, another study converts estate tax to an equivalent income tax in examining the effect of the tax on wealth accumulation.<sup>33</sup> More specifically, this study uses time series data on federal estate tax revenues over a period of fifty years and gauges how it varied with estate tax rates.<sup>34</sup> This study also finds a ten percent reduction in reported wealth because of the estate tax.<sup>35</sup> At the outset, it is not clear whether these findings from both studies suggest a reduction in saving or are simply reflective of tax avoidance.

## 2. Saving by the Heirs

In addition to parents and other donors, the estate tax may affect the saving behavior of heirs as well. Indeed, for any critical assessment of the effect of the estate tax on aggregate saving, it is important to consider the combined, and at times offsetting, savings by donors and beneficiaries.

Reflecting on data availability, there are different approaches to exploring the effects of the estate tax on savings. In one approach, the focus can be on changes in personal consumption in the aftermath of receiving an inheritance. Using the University of Michigan's Panel Study of Income Dynamics ("PSID") data, one such study finds that consumption increased after the receipt of inheritances.<sup>36</sup> Another approach focuses on the change in individual wealth after receiving an inheritance. One such study examines the wealth of heirs before and after the receipt of inheritances in 1989 and 1990.<sup>37</sup> The study first employs income tax records to capitalize income to generate a measure of

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<sup>30</sup> Wojciech Kopczuk & Joel Slemrod, *The Impact of the Estate Tax on the Wealth Accumulation and Avoidance Behavior of Donors* 15 (Nat'l Bureau of Econ. Research, Working Paper No. 7960, 2000), <http://www.nber.org/papers/w7960> [<https://perma.cc/MGA4-K65U>].

<sup>31</sup> *See id.* at 32.

<sup>32</sup> *Id.* at 32–33.

<sup>33</sup> Joulfaian, *supra* note 5, at 266.

<sup>34</sup> *Id.* at 263.

<sup>35</sup> *Id.* at 266.

<sup>36</sup> David Joulfaian & Mark O. Wilhelm, *Inheritance and Labor Supply*, 29 J. HUM. RESOURCES 1205, 1207 (1994).

<sup>37</sup> David Joulfaian, *Inheritance and Saving* 7 & n.7 (Nat'l Bureau of Econ. Research, Working Paper No. 12,569, 2006), <http://www.nber.org/papers/w12569> [<https://perma.cc/E6JY-ZSK9>].

wealth.<sup>38</sup> Next, this derived measure of wealth and the observed changes in its value over the years are observed as inheritances are received.<sup>39</sup> The findings suggest that wealth declines with size of inheritance.<sup>40</sup> Using the HRS panel data, another study also arrives at a similar finding.<sup>41</sup>

### 3. Labor Supply of Heirs

As discussed earlier, whether the estate tax (or its repeal) influences the labor supply of the beneficiaries is an empirical question. Using matched estate and beneficiary income tax records—the Estate Collation data—for decedents in 1982, another study examines the change in the labor force participation of heirs after receiving an inheritance.<sup>42</sup> The Collation data allows for the comparison of labor income (and its presence) of heirs before and after the receipt of an inheritance.<sup>43</sup> The findings from this study suggest that large inheritances speed up retirement.<sup>44</sup> Single individuals who dropped out from the labor force by 1985 had received greater inheritances than those who remained employed.<sup>45</sup> An examination of joint filers reveals similar results.<sup>46</sup>

The above evidence using 1982 estate tax data is also replicated in another study using data on bequests in 1989,<sup>47</sup> and studies using PSID survey data have reported similar findings, albeit with smaller effects.<sup>48</sup> Even for those heirs who remain in the labor force, a reduction in labor supply or earnings can be observed. These labor supply reductions, however, are generally small.<sup>49</sup>

### 4. Choice Between Lifetime Gifts and Bequests

Although estate and gift taxes were unified in 1976,<sup>50</sup> the effective gift tax rate is generally lower than the estate tax rate. The latter reflects the tax-

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> *See id.* at 10 (finding that those with large inheritances saw their wealth increase by less than the amount of the inheritance, whereas those with small inheritances saw their wealth increase by more than the amount of the inheritance).

<sup>41</sup> Jeffrey R. Brown et al., *The Effect of Inheritance Receipt on Retirement* 20 (Nat'l Bureau of Econ. Research, Working Paper No. 12,386, 2006), <http://www.nber.org/papers/w12386> [<https://perma.cc/UN6K-X2FV>].

<sup>42</sup> Douglas Holtz-Eakin et al., *The Carnegie Conjecture: Some Empirical Evidence*, 108 Q.J. ECON. 413, 413 (1993).

<sup>43</sup> *Id.* at 415.

<sup>44</sup> *See id.* (finding that large inheritances depress labor supply).

<sup>45</sup> *Id.* at 418–20.

<sup>46</sup> *Id.* at 420.

<sup>47</sup> Joulfaian, *supra* note 37, at 7.

<sup>48</sup> Joulfaian & Wilhelm, *supra* note 36, at 1207.

<sup>49</sup> *See* Holtz-Eakin et al., *supra* note 42, at 415; Joulfaian & Wilhelm, *supra* note 36, at 1207.

<sup>50</sup> Tax Reform Act of 1976, Pub. L. No. 94-455, § 2001, 90 Stat. 1520, 1846–54 (codified as amended at I.R.C. § 2001 (2012)) (unifying calculation of estate tax and of gift tax).

exclusive nature of the gift tax,<sup>51</sup> as well as the fact that any future appreciation in transferred property escapes future estate tax. Of course it gets a bit more complicated in the case of gifts of appreciated assets as future capital gains taxes may apply, which are sheltered by the step-up in basis in the case of the estate tax.

Making use of information on gifts reported on estate tax returns, one study examines the factors that shape the allocation of transfers between gifts and bequests.<sup>52</sup> Accounting for the estate, gift, and capital gains taxes, as well as recapture of gift tax in case of deaths within three years of date of gift, the findings suggest that the tax treatment is a significant factor in influencing the choice between gifts and bequests.<sup>53</sup> In the absence of estate and gift taxes, the findings suggest that gifts may decline by over sixty-four percent.<sup>54</sup>

## 5. Timing of Gifts

The pattern of lifetime gifts is shaped not only by differences between estate and gift taxes, but also by changes in gift tax rates, which may lead to the acceleration or deferral of gifts. Using data on historical gift tax receipts, one study explores how gift tax rates affect the timing of lifetime transfers and examines how the pattern of gifts responds to changes in tax rates.<sup>55</sup> The findings suggest that lifetime gifts are highly responsive to changes in gift tax rates.<sup>56</sup> Indeed, Figure 3 below is quite suggestive of this responsiveness. Similar findings are reported in another study that employs estate tax returns of decedents in 1992 linked to all lifetime gift tax returns.<sup>57</sup>

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<sup>51</sup> Consider a parent wishing to transfer \$1.00 to a child. At an estate tax rate of 0.50, the parent would have to save and forgo \$2.00 to transfer \$1.00 to the heir (and pay \$1.00 in taxes). In contrast, and at a gift tax rate of 0.50, the parent would have to save and give up \$1.50 for every dollar in gifts received by the child, making gifts some 25% less costly than bequests.

<sup>52</sup> David Joulfaian, *Choosing Between Gifts and Bequests: How Taxes Affect the Timing of Wealth Transfers*, 89 J. PUB. ECON. 2069, 2069–70 (2005).

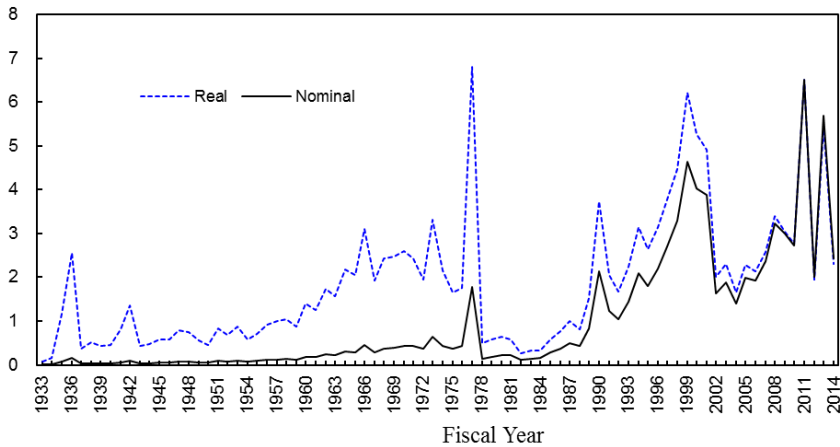
<sup>53</sup> *Id.* at 2089.

<sup>54</sup> *Id.* at 2088.

<sup>55</sup> David Joulfaian, *Gift Taxes and Lifetime Transfers: Time Series Evidence*, 88 J. PUB. ECON. 1917, 1917–18. (2004).

<sup>56</sup> *Id.* at 1927.

<sup>57</sup> David Joulfaian & Kathleen McGarry, *Estate and Gift Tax Incentives and Inter Vivos Giving*, 57 NAT'L TAX J. 429, 438, 442 (2004).

Figure 3. Trend in gift tax receipts: FY 1933–2014 (in billions of dollars).<sup>58</sup>

In more recent work currently in progress, this author traces the universe of gift tax returns filed for gifts made over the years 2002 through 2012.<sup>59</sup> The observed pattern shows considerable expansion in transfers. Although taxable gifts ranged from \$20 billion to \$30 billion in value over the years 2002–2010, they dramatically spiked in 2012 at approximately \$440 billion, as shown in Figure 4 below. These do not include gifts to spouses or charities, gifts for medical and educational purposes, or the annual exclusion (\$14,000 for tax year 2015<sup>60</sup>).<sup>61</sup> The surge in gifts in 2012 reflects an acceleration in gifts into 2012 in anticipation of the gift (and estate) tax rates reverting to 2001 law with a lower exemption (\$1 million compared to \$5 million) and higher tax rates (0.35 versus 0.55).<sup>62</sup>

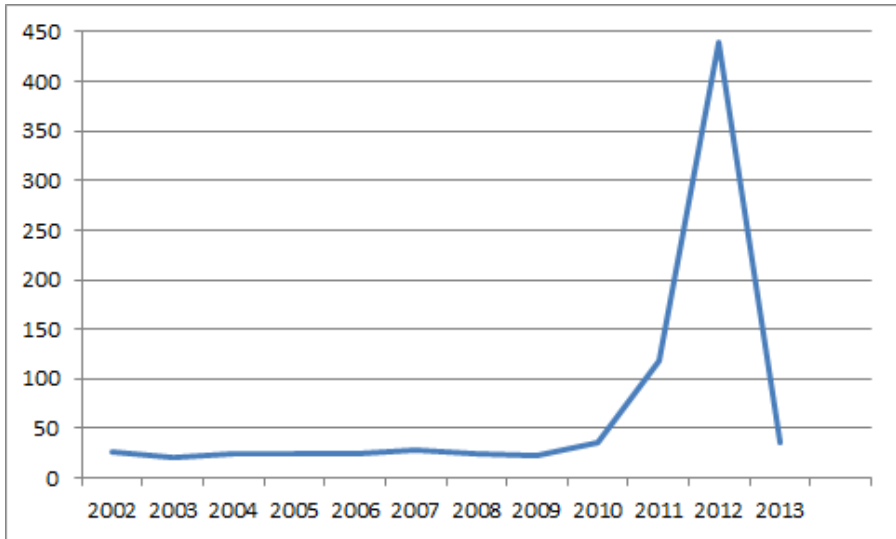
<sup>58</sup> OFFICE OF MGMT. & BUDGET, *supra* note 2, tbls.2.1 & 2.5; *see also* Joulfaian, *supra* note 1 (adjusting for inflation).

<sup>59</sup> David Joulfaian, *Intergenerational Transfers Under an Uncertain Estate Tax 2* (Aug. 2014) (unpublished manuscript), <http://ssrn.com/abstract=2489245> [<https://perma.cc/V8RU-2HK4>].

<sup>60</sup> *What's New—Estate and Gift Tax*, INTERNAL REVENUE SERV. (last updated Mar. 30, 2016), <https://www.irs.gov/Businesses/Small-Businesses-&-Self-Employed/Whats-New-Estate-and-Gift-Tax> [<https://perma.cc/RMK8-RUWE>].

<sup>61</sup> Joulfaian, *supra* note 59, at 2; *accord infra* note 63 (Figure 4).

<sup>62</sup> Joulfaian, *supra* note 59, at 3–4, 11. Note that despite this anticipation, the exemption did not decrease and the rates did not increase for 2013. *Id.* at 4.

Figure 4. Taxable gifts: 2002–2013 (in billions of dollars).<sup>63</sup>

Although the spike in gifts observed in 2011–2012 is nothing short of spectacular, this is not the first time we have seen gift surges. Indeed, a cursory look at gift tax revenues from 1933 onward reveals several ups and downs consistent with an acceleration in gifts aimed at avoiding future tax increases. The most prominent of these is the surge in 1976 shaped by gift tax rate increases from a maximum of 0.5775 to 0.7 in 1977.<sup>64</sup>

## 6. Charitable Bequests

Charitable bequests are fully deductible in computing the taxable estate. Thus, and relative to transfers to heirs, it is less expensive to make bequests to charities; the price or cost of bequeathing one dollar to a charity is one minus the estate tax rate. Notwithstanding this incentive effect of the deduction, the estate tax reduces wealth available to the heirs, which in turn induces more bequests to them and less to charities.

Estate tax returns are the primary source of data on charitable bequests. As such, these tax returns can be employed to gauge the above net offsetting effects of the estate tax, wealth and substitution, and the likely changes in charitable bequests absent an estate tax. Elsewhere, the author employs samples of

<sup>63</sup> Joulfaian, *supra* note 59, 19 fig.2.

<sup>64</sup> See Tax Reform Act of 1976 § 2001(a)(1), 90 Stat. at 1847 (increasing top gift tax rate to 0.70); *supra* note 58 (Figure 3, demonstrating surge in gifts).

estate tax returns for deaths in 1976 and 1982, and exploits the treatment of non-married individuals.<sup>65</sup>

A number of studies examine the effects of estate taxation and its preferential treatment on charitable bequests.<sup>66</sup> With rare exceptions, these find large price and wealth elasticities. Using data for estates of decedents in 1992, one study finds taxes to be an important consideration in determining transfers to charity.<sup>67</sup> The basic estimates suggest that in the absence of the estate tax, charitable bequests may decline by some twelve percent; the effects of the increase in the tax price are partially offset with an increase in wealth.<sup>68</sup> Another study using pooled 1976 and 1982 data on widowed decedents found the estate tax to have little effect on bequests.<sup>69</sup>

There is one study that reports that an estate tax repeal would reduce bequests by up to 37%.<sup>70</sup> It arrives at this conclusion by employing summary statistics from estate tax returns filed in 2001.<sup>71</sup> Another scholar, though, replicates this analysis and arrives at an estimate of only 20% when a “corrected” measure of “wealth” is used.<sup>72</sup> Furthermore, the study that suggests a 37% reduction employs inconsistent measures of change in tax price and after-tax wealth, ignoring the credit for state taxes in the former and applying it in the latter.<sup>73</sup> Once corrected, that study’s estimated effect is reduced considerably.<sup>74</sup>

## 7. Charitable Contributions

Individuals have the option to make lifetime contributions in addition to bequests. A charitable contribution, in addition to being partially deductible under the income tax for large donors, can be viewed as an accelerated charita-

<sup>65</sup> David Joulfaian, *Estate Taxes and Charitable Bequests: Evidence from Two Tax Regimes* 6 (Office of Tax Analysis, Paper No. 92, 2005), <https://www.irs.gov/pub/irs-soi/11pwcompenaddestate.pdf> [<https://perma.cc/Q377-6D5S>].

<sup>66</sup> See generally David Joulfaian, *Estate Taxes and Charitable Bequests by the Wealthy*, 53 NAT’L TAX J. 743 (2000) (collecting sources); Joulfaian, *supra* note 65 (same).

<sup>67</sup> Joulfaian, *supra* note 66, at 744.

<sup>68</sup> *Id.* at 756.

<sup>69</sup> Joulfaian, *supra* note 57, at 15–16.

<sup>70</sup> JON M. BAKIJA & WILLIAM G. GALE, TAX POL’Y CTR., EFFECTS OF ESTATE TAX REFORM ON CHARITABLE GIVING 5 (2003), [http://www.taxpolicycenter.org/UploadedPDF/310810\\_TaxPolicy\\_6.pdf](http://www.taxpolicycenter.org/UploadedPDF/310810_TaxPolicy_6.pdf) [<https://perma.cc/C6DH-PQD6>]. In their study, Jon Bakija and William Gale use elasticity estimates from Jon M. Bakija et al., *Charitable Bequests and Taxes on Inheritances and Estates: Aggregate Evidence from Across States and Time*, 93 AM. ECON. REV. 366 (2003). See BAKIJA & GALE, *supra*, at 5.

<sup>71</sup> See BAKIJA & GALE, *supra* note 70, at 1–2 & tbl.1.

<sup>72</sup> Robert McClelland, *Charitable Bequests and the Repeal of the Estate Tax* 14 (Cong. Budget Office Technical Paper Series, Paper No. 2004-8, July 2004), <http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/56xx/doc5625/2004-8.pdf> [<https://perma.cc/V388-H7MM>].

<sup>73</sup> BAKIJA & GALE, *supra* note 70, 3–4 & fig.1.

<sup>74</sup> For greater detail, see David Joulfaian, *On Estate Tax Repeal and Charitable Bequests*, 123 TAX NOTES 1221, 1227–28 (2009).

ble bequest as the donated property is removed from the estate. The usual income and substitution effects make it difficult to gauge how the estate tax shapes this contribution.

Using the 1982 estate tax returns linked to income tax returns prior to death, the Estate Collation data, one study finds that estate taxation is an important consideration in determining lifetime contributions.<sup>75</sup> This study estimates a positive price elasticity of 0.6, which suggests that in the absence of the estate tax, lifetime contributions may decline by as much as twelve percent.<sup>76</sup> This author has reported similar findings, comparing bequests to contributions made within ten years of the date of death.<sup>77</sup> Similar results have also been found using survey data.<sup>78</sup>

## 8. Capital Gains Realizations

Under the U.S. tax system, the basis of appreciated assets is stepped-up to the market value at death.<sup>79</sup> Thus, when the heirs sell these assets, gains accrued by the decedents are never subject to the capital gains tax. Economists have long argued that the step-up in basis at death is a major source of the lock-in effect of capital gains taxes, inducing investors to hold onto assets until death to avoid taxation during life.<sup>80</sup> For the wealthy, however, the benefit of the step-up may be partially offset by estate taxes; accrued gains on assets held at death are potentially subject to the estate tax, which may reduce the lock-in effects.

According to one study, empirical evidence suggests that estate taxes may have significant effects on the pattern of capital gains realizations. The study employs data for 1982 linking estate tax returns of decedents to pre-death income tax returns for 1980 and 1981. The authors examine capital gains realizations before and after the enactment of changes in capital gains and estate taxes introduced in 1981. Employing tax rate changes as a natural experiment, the

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<sup>75</sup> Gerald Auten & David Joulfaian, *Charitable Contributions and Intergenerational Transfers*, 59 J. PUB. ECON. 55, 56–67 (1996).

<sup>76</sup> *Id.* at 67.

<sup>77</sup> David Joulfaian, *Charitable Giving in Life and at Death*, in RETHINKING ESTATE AND GIFT TAXATION, *supra* note 24, at 350.

<sup>78</sup> See Pamela Greene & Robert McClelland, *The Effects of Federal Estate Tax Policy on Charitable Contributions* 2, 10 (Cong. Budget Office Technical Paper Series, Paper No. 2001-2, Mar. 2001), [https://www.cbo.gov/sites/default/files/107th-congress-2001-2002/workingpaper/20012\\_0.pdf](https://www.cbo.gov/sites/default/files/107th-congress-2001-2002/workingpaper/20012_0.pdf) [<https://perma.cc/24R8-QKX7>].

<sup>79</sup> I.R.C. § 1014(a) (2012).

<sup>80</sup> See, e.g., Charles C. Holt & John P. Shelton, *The Lock-in Effect of the Capital Gains Tax*, 15 NAT'L TAX J. 337, 351–52 (1962) (discussing the implications of a large lock-in effect for older taxpayers in high tax brackets); Joseph E. Stiglitz, *Some Aspects of the Taxation of Capital Gains*, 21 J. PUB. ECON. 257, 286 (1983) (noting that a step-up in basis at death can lead an individual near death to postpone realizing a capital gain).

findings suggest that realizations by those potentially subject to the estate tax may decline by some thirty percent.<sup>81</sup>

## 9. Life Insurance Ownership

Individuals acquire life insurance to protect against mortality risk and provide financial stability for their heirs. Although the estate tax may not necessarily influence the demand for life insurance coverage, it may influence the form of ownership by the incentives it creates. Should the parent, the insured, own a life insurance policy, or should the children own it with parental funding? In many ways, the form of ownership is an artifact of the tax code, as life insurance proceeds are subject to the estate tax, but exempt when policies are owned by others. But this tax incentive can be at odds with bequest motives where the ownership choice reflects parental altruism and control.

Given the tension between parental altruism and control, the impact of the estate tax on the form of ownership raises an interesting empirical question. To explore this impact, and disentangle the offsetting effects, one study employs some 25,000 estate tax returns for the years 1989–2003.<sup>82</sup> These returns are restricted to those with estates in excess of \$1 million, adjusted for inflation, as well as to those where the decedent was insured. The latter may represent policies owned by the insured and hence reported on the estate tax return, Form 706. They may also represent policies owned by the beneficiaries and reported on Form 712, and excluded from the estate. The findings suggest that the fraction of insurance policies owned by the insured declines as tax rates rise; the higher the estate tax rate, the smaller the fraction of policies directly owned by the insured. This finding is robust to controls for age, marital status, gender, size of wealth, business ownership, and others. It is also robust to several assumptions on the tax rate regimes at play in shaping the ownership form.

## 10. Other Behavioral Effects

The estate tax is also found to have behavioral effects in a number of other areas. For instance, it may alter the bequest division among heirs in light of the unlimited marital deduction and the generation-skipping transfers; more in spousal bequests,<sup>83</sup> for instance, against less in transfers to grandchildren.<sup>84</sup> It

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<sup>81</sup> Gerald Auten & David Joulfaian, *Bequest Taxes and Capital Gains Realization*, 81 J. PUB. ECON. 213, 222 (2001).

<sup>82</sup> See David Joulfaian, *To Own or Not to Own Your Life Insurance Policy?*, 118 J. PUB. ECON. 120, 122 (2014).

<sup>83</sup> Spousal bequests increased dramatically after the introduction of the unlimited marital deduction in 1982 from the Economic Recovery Tax Act of 1981.

<sup>84</sup> Gifts increased in the late 1980s as the generation-skipping transfer tax exemption was set to expire. See David Joulfaian, *Gift Taxes and Lifetime Transfers: Time Series Evidence*, 88 J. PUB. ECON. 1917, 1925 (2004).



may also shape asset portfolios given the valuation discounts and deferral of taxation available for businesses. Additionally, the interaction of the federal estate tax with state taxes may shape interstate migration patterns,<sup>85</sup> among other behavioral effects.

### CONCLUSION

This Article presents a summary of some of the key findings on the effects of the estate tax in the economics literature.<sup>86</sup> These findings from administrative and survey data suggest a robust behavioral response to estate taxation. In addition, the estate tax liability is considerably larger than the income tax liability some individuals face. The latter observation is potentially an important consideration in shaping the views of opponents to estate taxation.

The estate tax base has been eroded considerably by the expanded exemption and other preferences introduced over the past several decades. The combination of a narrow base and high tax rates, plus the complexity of the tax code, will continue to shape the behavioral response to the tax. In addition, the acceleration of transfers in 2012 may have a prolonged effect on the size of the tax base for years to come.

Despite its narrow tax base, the estate tax continues to contribute to the progressivity of the tax system, albeit with a diminished capacity. Yet its evolving structure is at odds with that of the individual income tax. Whereas the latter treats husbands and wives as two separate taxpayer units by allowing basis to be stepped-up at the death of each, the estate tax treats both spouses as one taxpaying unit, notwithstanding the separation in time (by death), as it accords them an unlimited marital deduction with portability for the exemption.

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<sup>85</sup> See generally Jon Bakija & Joel Slemrod, *Do the Rich Flee from High State Taxes? Evidence from Federal Estate Tax Returns* (Nat'l Bureau of Econ. Research, Working Paper No. 10,645, 2004), <http://www.nber.org/papers/w10645.pdf> [<https://perma.cc/7TLL2-ZNBH>] (examining this possible effect).

<sup>86</sup> The estate tax is likely to have economy-wide consequences as it shapes the behavior of donors and beneficiaries. See generally Craig E. Johnson & David Joulfaian, *A Dynamic Analysis of Estate Tax Repeal*, 100 NAT'L TAX ASS'N PROC. 50 (2007) (examining the possible impacts of a full repeal of the estate tax).