Gift taxes and lifetime transfers: time series evidence

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Received 20 November 2002; received in revised form 16 June 2003; accepted 18 June 2003

Abstract

The tax treatment of lifetime transfers was altered on a number of occasions since the enactment of gift tax six decades ago. Trends in gifts by the wealthy show a dramatic response to these changes. In this paper, I examine this trend and gauge its response to taxes, transitory and permanent, over a period of 65 years. Results suggest that gifts are highly elastic with respect to taxes, particularly in the short run. Tax minimization seems to be an important consideration in the timing of intergenerational transfers.

Published by Elsevier B.V.

JEL classification: D19; H31
Keywords: Gift tax; Estate tax; Capital gains tax; Gifts; Bequests

1. Introduction

When Congress enacted the gift tax in 1932, it deliberately set the tax rate schedule well below that of the estate tax applied to bequests. The intent was to create incentives for the wealthy to substitute gifts for bequests and accelerate the flow of revenues to the cash-starved depression-era Treasury. In the same vein, and in subsequent years, legislated tax increases were at times deliberately made effective at a date later than the enactment date to further enhance this acceleration. The anecdotal evidence reported in Harriss (1940, p. 147) on the 1930s, and Joulfaian (1998, Table 17) on the 1940s and the 1970s, suggests that the wealthy may be extremely responsive to anticipated changes in gift tax in timing their transfers.

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A small but growing body of the literature has addressed the effects of estate tax on a number of economic activities. Of particular relevance are the effects of estate taxation on lifetime gifts (Page, 1997; McGarry, 1999, 2000; Poterba, 2001; Bernheim et al., 2001). With the exception of Joulfaian (2000a), however, the direct effects of gift taxation, or the tax treatment of lifetime transfers in general, have yet to be fully explored. To the extent that the tax treatment of gifts is different from that of bequests, it is important to understand the effect of this differential on the timing and size of transfers of wealth, or economic activity in general. The importance of this differential is best illustrated by the dramatic surge in gifts in 1976, when transfers grew 4-folds. By virtue of legislation enacted in 1976, Congress reduced tax rates in 1977 which reduced the incentive for gifts and wealth de-accumulation. By focusing on the estate tax alone, one is puzzled by the large acceleration in gifts. This puzzle, however, is easily resolved once the concomitant increase in gift tax rates that went into effect in 1977 is considered.

Joulfaian (2000a) takes advantage of cross-sectional variations in state gift, inheritance, and capital gain tax rates to gauge the responsiveness of gifts to taxes. State taxes introduce significant heterogeneity in the measured tax price of gifts, as well as of other activities (Burman and Randolph, 1994). Their use, however, is not without its critics (Bernheim et al., 2001). In addition, it is not possible to separate transitory and permanent responses to taxes using cross-sectional data. In this paper, I resort to time series data on gifts made during the years 1933 through 1998 to evaluate the effect of taxes on lifetime transfers. The period under study witnessed a number of tax increases and decreases. Aside from the natural experiment aspects, these changes allow for the estimation of transitory and permanent responses, a task not possible with cross-sectional data.

This paper is organized as follows. Section 2 provides a brief description of the federal tax treatment of gifts and bequests, and changes enacted over a period of 65 years. Section 3 addresses how taxes affect transfers. It also describes the data and the underlying trend in lifetime transfers. Section 4 provides empirical evidence on the effects of taxes. These are found to be important considerations in determining lifetime gifts. A concluding comment is provided in Section 5.

2. Developments in tax treatment of transfers

As noted earlier, the current gift tax was enacted in 1932, and applies to transfers of cash, stocks, bonds, real estate, and businesses, among other assets. The tax is computed annually by applying the tax rate schedule to gifts, over some threshold, cumulated over life. As in the case of gifts, bequests are also subject to taxation under the estate tax, which was enacted in 1916. Since 1977, the gift tax has been integrated with the estate tax, sharing a common tax rate schedule. The tax typically applies to the wealthiest segment of society.

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1 These include effects on saving (Poterba, 1997) and wealth accumulation (Kopczuk and Slemrod, 2001), lifetime charitable contributions (Greene and McClelland, 2001; Joulfaian, 2001; Auten and Joulfaian, 1996) and charitable bequests (Barthold and Plotnick, 1984; Clotfelter, 1985; Joulfaian, 2000b).

2 In 1999, for instance, the maximum gift tax rate was 21% in New York compared to no gift tax in California.
A unique feature of the gift tax is that it applies on a tax-exclusive basis. To illustrate the implications of this, consider an individual facing estate and gift tax rates of $\tau_e=\tau_g=0.5$ with wealth of US$300. He transfers US$200 to his children and pays US$100 in gift tax, for total transfers of US$300; the effective tax rate is 0.33, or 100/300, well below the statutory rate. In contrast, the tax liability would be $150 under the estate tax. In other words, the effective gift tax rate is $\tau_g/(1+\tau_g)$.

Capital gains taxation provides another critical difference in the treatment of gifts and bequests. Accrued capital gains are carried over in the case of gifts, but stepped up at death. Thus, donees may become subject to capital gains taxes after the sale of assets received as gifts, but escape taxation on inheritances. To avoid double taxation, and subjecting accrued gains to both gift and income taxation, basis is stepped up for gift taxes paid. Prior to 1977, basis was increased by the full amount of the gift tax, but not to exceed the selling price. Effective in 1977, however, basis is increased only by the gift tax prorated to accrued gains. Thus, if the share of accrued gains is defined as $\beta$ and $\tau_g$ is the gift tax rate, then taxable gains are defined as $\beta(1-\tau_g)$ prior to 1977, and $\beta(1-\tau_g)$ in later years.

The gift tax evolved over the past six decades. A number of taxes were increased in 1932 to bolster the finances of the Treasury. On June 6, 1932, the maximum estate tax rate was increased to 45%. As part of the same enabling legislation, the gift tax was introduced, where the rate schedule was set at 75% of the rates prevailing under the estate tax, for a maximum tax rate of 33.75%. The gift tax rate was deliberately set below that of the estate tax so as to create incentives for the wealthy to accelerate their transfers. The benefit to the wealthy from such acceleration is that paying the gift tax would be equivalent to pre-paying the estate tax, but at a significant discount. The more immediate benefit is that gifts likely to have been made in the future are now made during a regime of lower tax rates.

On May 11, 1934, the maximum estate tax rate was increased to 60%, and the gift tax to 45%. The legislated gift tax increase, however, was made effective on January 1, 1935, some 7 months after the enactment date. On August 31, 1935, estate and gift tax rates were raised to 70% and 52.50%, respectively. Once again, the change in the gift tax was made effective at the beginning of the following year for a delay of 4 months.

On June 25, 1940, a surtax of 10% on estate and gift taxes was introduced. This had the effect of increasing the maximum gift tax rate from 52.50% to 57.75%, and the estate tax rate from 70% to 75.4%. These increases were temporary in nature and set to expire at the end of 1945. Unlike earlier legislation, the enacted increases went into effect almost immediately. Given that Congress had deliberated these changes as early as May 28 of 1940, however, there was a small window of opportunity for savvy planners to avoid the impending tax increase. Legislation enacted in September 1941 further raised rates except in the case of transfers in excess of US$50 million, with maximum estate and gift tax rates set at 77% and 57.75%, respectively. Not surprisingly, gift tax increases once again did not take effect until the beginning of the following calendar year.

Through 1976, estate and gift taxes operated independently. As part of the Tax Reform Act of 1976 (TRA76), however, the estate and gift tax rate schedules were unified with a
maximum tax rate of 70% effective January 1, 1977. The statutory estate tax rate is reduced from 77% and applied to cumulative gifts and bequests\(^5\), while it is raised from 57.75% in the case of gifts. Consistent with the earlier pattern, these changes took effect some 3 months after the enactment date.

\(^5\) This change has the effect of raising the estate tax rate on gift donors. Through 1976, gifts made in contemplation of death were added to the estate. This created significant opportunities for donors to make gifts prior to estate tax increases, as it was invariably difficult to prove motive. Beginning in 1977, as the two taxes were unified, all gifts made within 3 years of the date of death are added back to the estate.
The Economic Recovery Tax Act of 1981 (ERTA81) further reduced the maximum tax rate to 50% phased in over a 4-year period beginning in 1982. These changes, enacted on August 31, 1981, set the maximum rate at 65% in 1982, 60% in 1983, 55% in 1984, and 50% in later years. Legislation enacted in 1984, however, froze the scheduled rate reduction at 55% for a period of 3 years. The rate was again frozen at 55% in 1987 for another 5 years, and set to 55% permanently in 1993.

The Tax Reform Act of 1986 introduced a generation skipping transfer tax on direct transfers that skip more than one generation. This had the effect of raising the effective gift and estate tax rates on direct transfers to grandchildren to

$$\frac{\tau_g}{1 + \tau_g} + \frac{\tau_g}{(1 + \tau_g)^2}$$

and

$$\tau_e + \tau_e(1 - \tau_e)$$

respectively. The second term reflects the additional gift and estate taxes levied on generation-skipping transfers. This change was coupled with an exemption of US$2 million per donee set to expire in 1989. These and a number of other changes are summarized in Table 1.7

3. Modeling the determinants of gifts

3.1. The tax price of transfers

Consider a parent who is contemplating making transfers to his children. He may choose to make gifts during life (G), or bequeath his wealth at death (B). In choosing between the two modes of transfers, he may compare their respective tax prices but is otherwise indifferent to the timing. The donor may also compare the tax consequences of current and future gifts (G1,G2). More formally, the parent decides on the allocation of transfers so as to maximize his utility subject to his budget constraint (W), or:

$$\text{Max } U = (G_1, G_2, B) \quad \text{s.t. } P_{G_1}G_1 + P_{G_2}G_2 + P_BB = W$$ (3)

The first-order conditions would show that gifts in period 1 may depend on own price, as well as the prices of future gifts and bequests, as individuals set the marginal rates of substitution equal to the relative prices, i.e.

$$\frac{U_{G_1}}{U_{G_2}} = \frac{P_{G_1}}{P_{G_2}}$$
and
\[
\frac{U_{G_1}}{U_B} = \frac{P_{G_1}}{P_B}
\]

In the case of bequests in period \( t+n \), and following Boskin (1976), the tax price at period \( t \) is defined as:
\[
P_B = \frac{(1 + \delta)^n}{(1 - \tau_c)(1 + \pi)^n}
\]

(4)

where \( \tau_c \) is the estate tax rate, \( \pi \) is the rate of return on the underlying asset, and \( \delta \) the discount rate. When the asset appreciates at the individual’s discount rate, i.e. \( \pi = \delta \), the price simplifies to:
\[
P_B = \frac{1}{1 - \tau_c}
\]

(4’)

At a tax rate of 0.5, the bequest price is 2; it costs the donor US$2 for US$1 in inheritance. The price of gifts of cash in period \( t \) is:
\[
P_G = \frac{(1 + \tau_g)(1 + \delta)^n}{(1 + \pi)^n}
\]

(5)

Again setting \( \pi = \delta \), and following Joulfaian (1991), the tax price of gifts becomes:
\[
P_G = 1 + \tau_g
\]

(5’)

At a tax rate of 0.5, the price of gifts is 1.5.

When the underlying asset is stock, real estate, or some other appreciable property, then the gift tax price becomes more complicated, as capital gains taxes may apply (Adams, 1978; Kuehlwein, 1994). When capital gains taxes are considered at period \( t+n \), the price of gifts in period \( t \) for pre-1977 years becomes:
\[
P_G = \frac{\left(1 + \tau_g + \frac{\tau_c \beta \tau_g}{1 - \tau_c \beta}\right) (1 + \delta)^n}{(1 + \pi)^n - \tau_c (\beta - \tau_g) - \tau_c [(1 + \pi)^n - 1]}
\]

(6)

or, for post-1976 years:
\[
P_G = \frac{\left(1 + \tau_g + \frac{\tau_c \beta \tau_g}{1 - \tau_c \beta}\right) (1 + \delta)^n}{(1 + \pi)^n - \tau_c \beta (1 - \tau_g) - \tau_c [(1 + \pi)^n - 1]}
\]

(6’)

where \((\beta - \tau_g) \geq 0\). Here the donor pays the gift tax, plus capital gains taxes on assets liquidated to fund the gift tax. The donee pays taxes on the gains accrued by the donor, the second term in the denominator, as well as gains accrued over the \(n\) years.8

3.2. Data

The discussion in Section 2 above makes it clear that much of the changes in the Federal tax treatment of gifts took place in the early 1930s, 1941, 1976, and 1980s. Yet annual data, particularly for these years, on the size and composition of gifts made by the wealthy, cross-sectional or otherwise, are not available. What is available is time series data of federal government revenues collected from the gift tax. Such annual data provide information on taxes paid on gifts made in a given year. The data can be obtained from a number of sources including the annual report of the Treasury and unpublished IRS data.

Tax data are usually reported on a fiscal year basis reflecting the flow of revenues to the government. Hence, I first convert the stream of revenues to calendar year basis. This is simply done by using the lead value of reported data; fiscal year 1995, for instance, becomes calendar year 1994. For each year, I first employ the maximum current and expected gift and estate tax rates in calculating tax prices, assuming all wealth is held in cash. Because some of the legislated rate changes were to take place over a number of years, I set the expected rate to the fully phased-in rate. As an example, the maximum gift (and estate) tax rate was set to decrease in 5 percentage point increments from 70% in 1981 to 50% in 1985. While the rate in 1982 was set at 65%, 60% in 1983, and so on, I set the expected future rate in 1981 to 50%, the fully phased in law. I extend a similar treatment to capital gains taxes as well. I exclude the 1932 observation as the gift tax was enacted in the middle of the year.

Using the maximum tax rates to construct prices may not be totally satisfactory. The maximum gift tax rate in the early part of 1941, for instance, was 57.75% and applied to transfers in excess of US$50 million. The changes introduced in the latter part of that year also set the maximum rate at 57.75% on such transfers. In contrast, and in the case of transfers slightly in excess of US$500,000, the marginal tax rate increased from 18.98% to 26.25%. Thus, as an alternative to the maximum tax rate, I derive a measure of the tax price using the marginal tax rate on a fixed amount of gifts. Based on information reported on estate tax returns of decedents in 1995, the conditional average amount of gifts reported by donors was US$6 million. Using this amount, adjusted for growth in real GDP and available exemptions, I calculate marginal tax rates.

Of course not all gifts and bequests take the form of cash. Some of the gifts are likely to be transfers of stock or real estate ownership. In such instances, the recipient of gifts may become subject to capital gains taxes if and when the assets are sold, as in Eqs. (6) and (6'). Such taxes do not matter in the case of bequests, as assets are stepped up in value at death. Assuming all gifts are held in the form of corporate equity, or appreciable property in general, the price of gifts is modified to account for the capital gains tax. Four critical assumptions are made in measuring tax price. First, assets are assumed to appreciate at the

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8 A number of factors such as the recapture of gift taxes made within 3 years of death, among others, are omitted from Eq. (6'). See Joulfaian (2000a) for an expanded discussion of the derivation of Eq. (6).
rate of 7% (\(\pi=0.07\)). Second, individual life expectancies are set at 20 years (\(n=20\)). Third, and in order to allow for consistent comparisons between gifts and bequests, donees are assumed to sell assets in period \(t+n\). Third, assets are assumed to appreciate at the donor’s discount rate, i.e. \(\pi=\delta\), with share of accrued gains of \(\beta=0.5\) (Auten and Wilson, 1999).\(^9\)

Finally, I assume that assets held by the wealthy are 30% cash, or equivalent, and 70% non-cash, which reflects the average portfolio reported on estate tax returns. This allocation is then applied to Eqs. (5) and (6) in constructing a weighted price for gifts.

To account for the expiration of the US$2 million per donee exemption in 1989 under the GST tax introduced in 1986, I set a dichotomous variable equal to one in 1989. Ideally, the GST should be reflected in the gift price to grandchildren and similar or younger generations using Eqs. (1) and (2). Unfortunately, and given the aggregate nature of the data, we do not observe the size of generation-skipping transfers. This, and the temporary nature of the per donee exemption, makes it rather difficult to use a separate price measure for grandchildren.

For presentational purposes, and to render the data somewhat comparable over time, I divide gift tax collections by the maximum effective gift tax rate, i.e. \(\text{Gifts=Tax}/[\tau_g/(1+\tau_g)]\). Next, I deflate the adjusted data for inflation using CPI. The resulting trend, reported in Fig. 1, is quite interesting. Here, for instance, we observe that real gifts made in 1935, prior to the increase in tax rates in 1936, exceed the annual gifts made in much of the 1980s and the 1990s. Similarly, gifts made in 1976, in anticipation of the higher tax rates in effect in 1977, surpass those made in any other year since the enactment of the tax.

\(^9\) Following a tax minimization strategy, as in Balcer and Judd (1987), individuals may sell assets with high basis and hold those with low basis until death. Thus, \(\beta\) may very well be larger in the case of assets held at death. Note, however, that the estimates in column one (cash only) would be consistent with the view that capital gains taxes can be avoided painlessly.
If gifts were to be deflated using the Standard and Poor composite index (SP500), or, alternatively, assuming all assets are held in stocks making up the index, then the emerging picture gets even more interesting. Here, gifts made each of 1935 and 1976 exceed the amounts transferred in every year of the entire period under study.

4. Empirical estimates

Taking a casual look at Fig. 1, one cannot help but notice the dramatic upsurge in gifts prior to tax increases taking effect. This pattern is repeated prior to virtually every announced increase in gift tax in the early 1930s and 1940s, and 1976. In 1976, for instance, the maximum gift tax rate was expected to increase from 57.75% to 70% on January 1, 1977. Prior to the effective date, real gifts surged 4-folds. However, the pattern following rate reductions, such as those announced in 1981, is not so clear. A clearer pattern emerges when gift tax receipts are compared to estate tax receipts. The ratio of the former to the latter was 1% in 1981, the year prior to the tax cuts taking effect. This compares to 32% in 1976, 28% in 1941, 73% in 1935, and 51% in 1934.10

While Fig. 1 is quite revealing, it tells us little about the strength of the relationship between gifts and taxes. Consequently, I resort to multivariate analysis to further shed light on the magnitude and timing of the effects of gift taxation. I begin with the log of real gift tax revenues differenced to eliminate the underlying trend.11 This is regressed on current, lagged, and expected gift tax prices measured using the predicted gift tax rates. Control variables include (1) the Standard and Poor index, adjusted for inflation, and Real GDP to control for wealth growth and the underlying business cycle, (2) the real amount of the lifetime gift tax exemption to control for the segment of the population potentially subject to gift tax as well as bracket creep resulting from the lack of indexing the exemption, and (3) a dummy for 1989 when the GST temporary exemption expired. As with the dependent variable, all regressors are first differenced.

Column 1 of Table 2 provides estimates of the determinants of gift tax revenues for the years 1933 through 1998. The estimated OLS coefficient on the current gift tax price is −14.4, with s.e. of 2.9. The estimated coefficient on the lagged tax price is also negative, but not precisely measured. On the other hand, the estimated coefficient on the expected tax price is positive with a value of 13.2, and s.e. of 2.6. These estimates suggest that the gift tax price has a depressing effect on gift tax revenues, but that expected increases may boost gift tax revenues in the short run. The transitory elasticity with respect to the gift tax price is about −14.4 (s.e.=2.90), with a permanent elasticity, defined as the sum of the coefficients on the gift price, that is not precisely measured (−3.47 with s.e.=2.34). The estimated transitory elasticity, while large in absolute value, is in harmony with the pattern observed in Fig. 1. The results also show that the expiration of the GST exemption may have accelerated transfers into 1989.

10 A times series of estate and gift tax receipts is available upon request.
11 The dependent variable could have been defined as gifts derived by dividing gift taxes by the predicted tax rate. The qualitative results, however, would have remained unaffected.
One limitation of the above exercise is that the price of bequests is not considered. As discussed earlier, to the extent that gifts in period $t$ are substitutes for bequests in period $t+n$, differences in these prices may play a critical role in determining the size of lifetime gifts. Consequently, I add the expected price of bequests to column 1 and report the results in column 2. The effect of the bequest price, however, is imprecisely measured as the estimated coefficient is not significantly different from zero. As shown in column 2, the estimated coefficients on the remaining regressors are little affected. One possible explanation for this outcome is that the effects of the bequest price may be reflected in the estimates of the expected gift price, as legislated changes in estate tax are usually enacted concomitantly with changes in the gift tax.\footnote{12}

\footnote{12} Indeed, the coefficient on the expected bequest price is positive and significant in the absence of the expected gift tax price. However, $R^2$ is reduced to 0.3 in this specification.
A number of additional experiments were undertaken as a check on the robustness of the estimates. In one experiment, the predicted gift tax rate is replaced with the maximum tax rate in constructing the tax price. The predicted gift tax rates vary considerably from the applicable maximum tax rates. In 1934, for instance, the maximum tax rate was 33.5%, triggered at transfers in excess of US$50 million. However, the predicted tax rate employed in earlier estimates is only 9.50%. Nevertheless, and as shown in the bottom panel of Table 2, the qualitative results are very similar to those reported earlier. The estimated transitory price elasticity is about $-11$ (s.e. = 2.7), with imprecisely measured permanent elasticity coefficients.

Predicted tax rates are computed assuming mean gifts of US$6 million in 1995. In one test, this is replaced with US$1 million. This is equivalent to taxable gifts of US$34,000 in 1934, which faced a marginal tax rate of 3%. Using these new rates, the estimated coefficient on the tax prices in column 1 of Table 2 becomes 1.04 (se = 0.59), $-20.42$ (se = 2.91), and $18.88$ (se = 2.60), respectively, with $R^2$ of 0.59. This specification yields a larger transitory price elasticity estimate, measured in absolute value, but with a permanent elasticity estimate that is not significantly different from zero.

In another specification, the sample is limited to pre-1984 gifts. Limiting the data to this period is one way to deal with the complications created by the repeated freezing of scheduled tax rate reductions, and the ushering of the GST in 1986 with its temporary exemption. The estimated results are qualitatively similar to those reported earlier.

5. Conclusion

This paper employed time series data on gift tax collections to examine how taxes affect the timing of lifetime transfers. Using data for gifts made in the years 1933 through 1998, the findings suggest that the wealthy are quite responsive to taxes in the timing of their gifts, particularly in the short run. The transitory price elasticity is about $-14$, seemingly large but very consistent with the observed pattern over the past six decades. Not surprisingly, the permanent elasticity is much smaller.

The findings in this paper are qualitatively similar to those of Joulfaian (2000a), which employ cross-sectional data and rely on variations in state estate, gift, and capital gains tax rates. The transitory elasticity coefficient, however, is several folds larger. The advantage of this paper is that it is able to distinguish between transitory and permanent responses to changes in gift, estate, and capital gains taxes by exploiting a number of enacted changes over the sample period. However, it is more likely to be subject to aggregation bias, particularly as it is unable to control for individual circumstances and demographics, as well as to errors in measuring gift tax rates.13

While the literature advances a number of theories to explain the pattern of intergenerational transfers (Cox, 1987; Wilhelm, 1996), the findings in this paper suggest that tax minimization is perhaps another consideration in the timing of such transfers. The timing

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13 Under the current law, for instance, individuals have little incentive to make gifts within 3 years of the date of death as the gift tax itself becomes subject to the estate tax.
of gifts also has implications for modeling wealth accumulation and saving. To the extent that tax-induced realizations of gifts are borrowed from the future, either gifts or bequests, observed measures of wealth over time are likely to understate individual actual saving and wealth holdings. It also has implications for the timing of revenues for the fisc. Under legislation enacted in 2001, for instance, estate and gift tax rates will gradually decline through 2010 and then revert to the higher rates prevailing under prior law. The findings above suggest that gifts would decline substantially in the short run, but, that such transfers are likely to reach unseen levels by the end of the decade, reflecting both postponed gifts and gifts accelerated from 2011 and later years.

Acknowledgements

The paper greatly benefited from comments by Gerald Auten, Roger Gordon, Rob McClelland, Wojciech Kopczuk, and two anonymous referees. In particular, I am grateful to Sarine Zenian for her invaluable research assistance. The views expressed are those of the author and do not necessarily reflect those of the Department of the Treasury.

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