Original Article

Charitable estate planning and subsequent wealth accumulation: Why percentage gifts may be worth more than we thought

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ABSTRACT Educational institutions receive a disproportionately large share of their gift income from estates. Charitable estate plans often donate a share of the total estate, rather than a specific dollar amount. The value of this type of planned gift depends not only on the value of the estate at the time the plan is signed, but also on the individual's tendency to accumulate or consume wealth afterwards. An analysis of 28 111 individuals in the 1995–2006 Health and Retirement Study using ordinary least squares and individual growth modeling indicated that the rate of subsequent wealth accumulation for those who entered the study with a charitable estate plan was 50–100 percent greater than for those who entered the study without a charitable estate plan. This finding suggests that the ultimate value of percentage-based planned gifts is greater than what would be expected using standard estate growth projections. *International Journal of Educational Advancement* (2010) 10, 24–32. doi:10.1057/ijea.2010.2

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INTRODUCTION

Estate gifts can be an important part of fundraising strategy for any non-profit organization. In 2007, charitable

bequests in the United States were estimated at US\$23.15 billion or 7.6 percent of giving as a whole (Giving USA Foundation, 2008). In comparison, giving from corporations was \$15.69 billion, making charitable bequests a larger source of gift income by almost 50 percent (Giving USA

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Foundation, 2008). Although estate gifts are important for charitable organizations in general, they are particularly important for educational institutions. For colleges and universities as a whole, estate gifts have constituted from one-fifth to nearly one-fourth of total giving during the last several years (Council for Aid to Education, 2007; Giving USA Foundation, 2008). Further, total estate gifts have been increasing in recent years for charities in general and educational institutions in particular (Council for Aid to Education, 2007; Giving USA Foundation, 2008).

Despite the importance of charitable estate gifts to educational institutions, it can be difficult for advancement professionals to estimate the future value of current charitable estate plans. The ultimate valuation of such gifts is critical for managers in educational advancement when comparing the results of different potential fundraising activities. One source of this valuation difficulty is that many charitable plans donate a share of the total estate. However, estate values can fluctuate over time, thus changing the ultimate value of the estate gift. While estimates of future estate values can be calculated based upon general trends in asset accumulation over the life cycle, these estimates will be incorrect if those with planned estate gifts tend to build or consume wealth at a different rate than the general population. If planned estate donors consume their wealth more quickly, then standard estimates will overvalue such future gifts. Conversely, if, subsequent to executing a charitable estate plan, these donors accumulate wealth more rapidly than the general population, then standard estimates will undervalue the future planned gifts.

There are reasons to suspect that those with charitable estate plans may subsequently accumulate wealth faster than the general population. Brooks (2007) presented evidence that charitable behavior can indirectly lead to greater prosperity for the donor. Further, a charitable estate plan could encourage wealth accumulation by adding a pro-social or moral dimension to wealth holding. As 80-year old billionaire T. Boone Pickens recently commented, 'I'm not doing this to make money. Whatever I make from this will go to my estate, and all of my estate will go to charity when I go' (Faerstein, 2008). Such growth-oriented business owners with charitable inclinations may prefer estate giving to current giving as a way to have a charitable impact without limiting their current resources for investment and growth. Thus, subsequent wealth accumulation might be greater because of the re-characterization of the importance of wealth holding, the selection of wealth-building individuals into charitable estate planning rather than purely current giving, or both.

This article presents the first analysis comparing the wealth growth trajectories of those with planned estate gifts with the wealth growth trajectories of those without such gifts. By analyzing data tracking the wealth accumulation of planned givers and non-givers over many years, it provides insight for advancement professionals into the ultimate value of estate percentage-based planned gifts. As such, it adds to the existing knowledge about charitable estate planning. While some research has investigated factors associated with having a charitable estate plan (Sargeant *et al*, 2005), as

well as factors associated with adding or dropping a charitable estate plan (James, 2009), most academic research related to charitable estate planning has focused on the effects of tax policy. Such tax-related research has generally supported the idea that estate taxes increase charitable estate giving (Clotfelter, 1985; Joulfaian, 1991, 2000; Bakija and Gale, 2003; Kopczuk and Slemrod, 2003). In general, charitable estate giving has been more common among the wealthy, although estate giving to religious organizations has been less responsive to wealth differences (Barthold and Plotnick, 1984; Joulfaian, 2000).

DATA

Data come from the 1995–2006 Health and Retirement Study (HRS). The HRS is sponsored by the National Institute of Aging (grant number NIA U01AG009740) and is conducted by the University of Michigan. The HRS is a nationally representative longitudinal dataset for people over the age of 50 years.

Other researchers have also used the HRS to study different aspects of estate planning. For example, Palmer *et al* (2006) used the HRS to examine the impact of life events on the decision to adopt a will or trust. Also using the HRS, Cox and Stark (2005) examined the connection between receiving an inheritance from parents and leaving an inheritance to children. Greene and McClelland (2001) used the HRS to explore the impact of estate taxes on current giving. James (2009) explored the determinants of charitable estate planning with HRS data.

The current HRS is the result of an amalgamation of several cohorts. Before 1998, the Study of Asset and Health Dynamics among the Oldest Old (AHEAD) tracked adults born before 1923, and the original HRS followed participants born from 1931 to 1941. In 1998, these two cohorts were merged and combined with two new cohorts of participants in order to create a sample representing the entire US population over the age of 50 years. Since 1998, the survey has been conducted every 2 years. In 2004 a new, younger cohort, born from 1948 to 1953 was added to insure that the study would continue to represent the population over the age of 50 years.

Beginning in 1995 with AHEAD and 1996 with the original HRS, respondents with a will or trust were asked, ‘Have you made provisions for any charities in your will or trust?’ In the following analyses, those who answered ‘yes’ were categorized as having a charitable estate plan. The total wealth variable included the total value of all assets less the value of all debt. This variable also incorporated imputed wealth estimates generated by the RAND organization, which included adjustments for non-response (RAND, 2008). All wealth levels were inflation adjusted to constant 2006 dollars using the Consumer Price Index. In log-transformed models, wealth levels were rescaled to \$10 000 units (for example, inflation-adjusted wealth of 230 500 would have been recorded as 23.05).

METHODS AND RESULTS – ORDINARY LEAST SQUARES

Table 1 presents results from a comparison of wealth at entry into the panel with final wealth reported in 2006.

Table 1: Ordinary least squares regression comparing initial and final wealth in the 1995–2006 Health and Retirement Study

<i>Independent variables</i>	(1) <i>Outcome=2006 wealth</i>	(2) <i>Outcome=Log of 2006 wealth</i>	(3) <i>Outcome=Log of 2006 wealth</i>
Years (between initial and 2006 wealth)	\$20 874*** (\$5203)	0.0706*** (0.006)	0.0820*** (0.0175)
Years*initial charitable plan	\$37 562*** (\$8699)	0.0346*** (0.0099)	0.0350*** (0.0100)
Initial wealth	\$1.36*** (0.02)	—	—
Log of initial wealth	—	0.6646*** (0.0053)	0.6726*** (0.0126)
Years*log of initial wealth	—	—	–0.0011 (0.0016)
Intercept	–\$42 177 (\$46 063)	3.5524*** (0.0749)	3.4688*** (0.1415)
N	16 969	16 524	16 524
R ²	0.163	0.496	0.496

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

Members of the AHEAD panel (born before 1923) are considered to have ‘entered’ in 1995 as this was the first year AHEAD members were asked the question about charitable estate planning. Similarly, the earliest HRS panel members (born 1931–1941) are considered to have ‘entered’ in 1996, their first year of being asked the charitable estate planning question. Those born during 1924–1930 or 1942–1947 entered the panel in 1998, while those born from 1948 to 1953 entered the panel in 2004.

The initial ordinary least squares analysis presented in Table 1 classified respondents based on whether they indicated the presence of a charitable estate plan at entry into the survey panel. All wealth changes were measured after the respondent’s initial indication regarding the presence of a charitable estate plan. It is significant that the presence of a charitable estate

plan was measured before, and not contemporaneous with, wealth changes. Increases in wealth naturally lead to charitable estate planning. As wealth increases, the estate tax advantages of charitable planning increase and the needs of non-charitable beneficiaries may be fulfilled. However, this causal path from wealth growth to charitable estate planning was excluded from the current analysis because the charitable estate planning status was measured before measuring subsequent wealth changes.

Independent variables in the model included wealth at entry into the panel (initial wealth) and the years between entry into the panel and the final survey in 2006. This ‘Years’ variable was calculated to the nearest month based upon the year and month of the initial survey and the year and month of the 2006 survey. In order to test whether wealth growth differs among

those entering the panel with a charitable estate plan, the model included a 'Years*Initial Charitable Plan' interaction variable. This interaction variable, equal to zero when no charitable plan existed at entry, and equal to the 'Years' variable otherwise, tested whether or not annual growth differed for those with an initial charitable estate plan.

Column 1 of Table 1 reports results from a simple linear regression of wealth. The coefficient of the 'Years' variable suggests that, on average, respondent wealth for those entering the panel without a charitable estate plan increased by \$20 874 per year. The coefficient of the 'Years*Initial Charitable Plan' interaction variable suggests that those entering the panel with a charitable estate plan increased their wealth by an additional \$37 562 per year, for a grand total of \$58 436 increase per year. While not conclusive, this initial examination suggests that those with charitable estate plans were subsequently accumulating wealth faster than other panel members were. Indeed, these preliminary results suggest that those with initial charitable estate plans experienced more than double the wealth growth seen in others.

Because of the typically skewed distribution of wealth, and to avoid the overweighting of results at the very high end of the wealth spectrum, column two reports regression results where wealth, both initial and final, has been replaced with the log of wealth. Where wealth is negative (debts exceed assets), the log of wealth was set to zero for all subsequent regressions. Column 2 of Table 1 shows that the effects of an initial charitable estate plan on subsequent

wealth growth remained highly significant in this alternative specification. Those entering the panel with charitable estate plans experienced about 50 percent greater growth than others did. Using the approximation of percentage growth generated by this type of semi-log model, those without charitable estate plans increased wealth by approximately 7 percent per year, while those with charitable estate plans increased wealth by about 10.5 percent per year (7 percent + 3.5 percent). Finally, column three controls for the possibility of a time interaction with the natural log of the original level of assets, and produces a roughly similar result.

METHODS AND RESULTS – INDIVIDUAL GROWTH MODELING

While the ease of interpretation makes the initial ordinary least squares model attractive, several disadvantages suggest the need for additional analysis. The HRS provides many waves of data, but the previous approach uses only the first observation and the last (2006) observation. This approach excludes any respondents not represented in both the first and last survey waves for their cohort. These respondents are excluded even though they may have reported information in many other waves. Further, even those included in the analysis have all intermediate waves of data excluded, thus restricting the analysis to only 2006 wealth outcomes. Analyzing the information from all waves of data collection would be preferable as it incorporates all respondents as well as wealth outcomes for all reported years.

Table 2: Multi-level individual growth model of all changes in wealth in the 1995–2006 Health and Retirement Study

Independent variables	Outcome=log (wealth)		
	(1)	(2)	(3)
(Age-50)	0.0378*** (0.0021)	0.0368*** (0.0021)	0.0940*** (0.0063)
(Age-50) ²	-0.0015*** (0.0001)	-0.0015*** (0.0001)	-0.0023*** (0.0002)
(Age-50)*(Initial charitable plan)	—	0.0346*** (0.0068)	0.0365*** (0.0069)
(Age-50) ² *(Initial charitable plan)	—	-0.0006** (0.0002)	-0.0006** (0.0002)
(Age-50)*(Log of initial wealth)	—	—	-0.0053*** (0.0006)
(Age-50) ² *(Log of initial wealth)	—	—	0.00008*** (0.00002)
Log of initial wealth	2.1836*** (0.0339)	0.7945*** (0.0027)	0.8418*** (0.0048)
Intercept	0.7965*** (0.0027)	2.2037*** (0.0340)	1.6956*** (0.0535)
Total observations	115704	115704	115704
Total individuals	28111	28111	28111
Variance in rate of change (age-50)	0.0022*** (0.0001)	0.0022*** (0.0001)	0.0024*** (0.0001)
Variance in initial status (intercept)	0.8450*** (0.0285)	0.8434*** (0.0285)	0.9043*** (0.0303)
Within-person variance (residual)	3.4252*** (0.0165)	3.4258*** (0.0165)	3.4076*** (0.0165)

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

However, the incorporation of this additional information into a simple ordinary least squares model would violate the underlying error covariance assumptions. For example, the error in predicting the asset growth for a particular person in the first time period would likely be correlated with the error in predicting the asset growth for that person in later time periods. Further, the size of those errors in prediction may grow as time increases. In order to accommodate these issues of heteroscedasticity and error covariance, the next set of analyses use individual growth modeling (a.k.a.,

hierarchical linear modeling). This approach allows the incorporation of every observation from the panel, rather than merely the first and final observations. The error covariance structure permits correlation and heteroscedasticity in errors among observations drawn from the same person at different times, which an ordinary least squares approach does not (Singer and Willett, 2003).

The outcome variable in all columns of Table 2 was the natural log of wealth. Controls included the natural log of wealth reported at the first observation, meaning that the analysis

produced results modeling the change in the natural log of wealth from the initial observation through each subsequent observation. For ease of interpretation and convergence, the age variable was rescaled to age-50. (So, for example, the age-50 variable would equal 5 for someone who was 55 years old.)

The larger number of intra-individual observations also encourages modeling change over time in a life cycle model. In the life cycle model, accumulation or consumption of wealth relates not just to the passage of time, but also to one's age (Ando and Modigliani, 1963). Typically, a person might build wealth until retirement, say at about the age of 65 years, and then consume that wealth during retirement. To test this general idea, column 1 of Table 2 presents results from modeling change in wealth as a curved relationship (second order polynomial) with age. The positive coefficient on age-50 suggests increasing wealth in the early years. The negative coefficient on age-50 squared shows that this wealth building eventually peaks (at about the age of 63 years) and turns net wealth consumption. (Although not displayed in Table 2, a comparison of log likelihoods with a model based on years in the study rather than age showed that the age-based model does fit the data better.)

Did those who entered the panel with a charitable estate plan differ in their wealth growth trajectory? To explore this question, column 2 of Table 1 introduced an interaction variable of age and initial charitable planning. This interaction variable multiplied the age of the respondent (less than 50 years) by the presence

(1) or absence (0) of a charitable estate plan upon entry to the panel. Consequently, for those without an initial charitable estate plan, this variable was always zero. The coefficient thus represents the difference in how wealth changed with age for those who entered the panel with a charitable estate plan. In order to model the same peaked wealth–age relationship shown in column 1, this model included initial charitable estate plan interaction variables for both age-50 and the square of age-50. As before, the initial charitable estate planning variable did not change over time. It was a measure of the presence of charitable estate planning before the period of wealth growth or wealth consumption. This is important, as any contemporaneous measurement of charitable estate planning might have shown an association with wealth accumulation simply because wealth accumulation leads to charitable estate planning. In contrast, measuring charitable estate planning before wealth changes means that any association was not driven by wealth changes causing charitable estate planning, but rather by wealth accumulation following charitable estate planning.

Column 2 shows that individuals who entered the panel with a charitable estate plan did indeed experience subsequent wealth accumulation trajectories significantly different from those who entered with no charitable estate plan. For example, at the age of 50 years, those without a charitable estate plan had a projected wealth growth rate of about 3.5 percent (0.0368–0.0014). At the same age, those with a charitable estate plan had a projected growth rate of about

Figure 1: Wealth growth trajectories from 50–90 years of age in the 1995–2006 Health and Retirement Study.

7 percent ($0.0368 - 0.0014 + 0.0346 - 0.0006$). At older ages, this gap narrowed slightly, so that those with charitable estate plans did not grow at twice the rate of others throughout the entire life cycle. Nevertheless, there was a clear difference in the wealth accumulation rates of those with charitable estate plans. To see how these wealth accumulation trajectories differed over the life cycle, Figure 1 shows the predicted growth pattern from the age of 50 years to the age of 90 years for prototypical persons who entered the panel with and without a charitable estate plan. As demonstrated in Figure 1, those entering the panel with a pre-existing charitable estate plan experienced more rapid wealth growth and that growth continued until a much older age. As a final control, column 3 adjusted for the possibility of an age–wealth interaction and produced similar results for the charitable estate planning coefficients.

The analyses presented in Table 2 did not include a variety of other socio-demographic controls. This is because the unadjusted analysis is the most relevant for advancement

professionals seeking to understand the value of future potential estate transfers. The core question is not whether the increased growth in wealth by those with charitable estate plans was generated by differences in education, income, age at retirement, gender, race, religious practice, future-orientation and so on, but rather whether those with charitable estate plans do, in fact, subsequently grow their estates at a significantly greater rate than others.

SUMMARY

The results presented suggest that those with charitable estate plans experienced significantly greater subsequent wealth growth than others did. This result is not only statistically significant but also large in magnitude. Depending on the model selected, those with charitable estate plans experienced rates of subsequent wealth growth more than double those with no charitable estate plans. While this single component is not sufficient to create a perfect valuation for revocable estate gifts, it suggests that the acquisition of estate-percentage planned gifts is potentially far more valuable than would otherwise be expected. Advancement professionals may do well to incorporate this information of differential estate appreciation into their estimates of the value of such planned giving efforts.

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