

20 Effect of the Federal Estate Tax on Rural Landholdings in the USA

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Introduction

There is considerable evidence to indicate that the effect of the federal estate tax on transfers of rural landholdings is increasing (see the box below for a description of the tax). The number and percentage of estates in general that owe federal estate tax is increasing year by year (Internal Revenue Service, 1996; Herman, 2001). Urban expansion (US Department of Commerce, 1992; Harris and DeForest, 1994) and gentrification of the areas surrounding cities have driven up the value of much of the nation's rural land. Sharply increased stumpage prices (Morrow and Fritschi, 1997) have also driven up the timber component of forestland value. And the stringent requirements for 'special use' valuation – which permits working land to be appraised for estate tax purposes at its value in use rather than its highest and best use – make it difficult for managed forestland to qualify for and remain under the provision.

Particularly for forest estates, little information is available on the actual magnitude of the effect. A handful of case studies used hypothetical families and forest holdings to investigate aspects of the transfer of forestland from one generation to another: the size of a forest that can be transferred without incurring the estate tax (Sutherland, 1978), the effect of the estate tax on returns to forest management (Sutherland and Tedder, 1979), the

effect of using 'special use' valuation on the net value of a forest estate (Gardner *et al.*, 1984), the effect of form of forest ownership and assets used to pay the estate tax on returns from the forest (Howard, 1985) and the interaction between federal and state death taxes (Walden *et al.*, 1987; Peters *et al.*, 1998). Additionally, there have been two empirical studies of large forest estates in the USA: one in the South, to determine whether estates over 1400 ha (3500 acres) had to liquidate forest assets pay the federal estate tax (Lucas, 1963), and one in the Northeast, to determine whether the estate tax figured in landowners' decisions to sell parcels over 200 ha (500 acres; Northern Forest Lands Council, 1994).

The Forest and Wildlife Research Center of Mississippi State University and the Forest Law and Economics Research Unit of the USDA Forest Service Southern Research Station, have cooperated in a study to gauge the effect of the federal estate tax on non-industrial private forests and other rural landholdings. This research represents the first effort of its kind to quantify the effect of the federal estate tax on landholdings.

Methods

Data for the study were collected by means of a mailed questionnaire, using the Dillman (1978)

Box 20.1. The Federal Estate Tax.

Until enactment of the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA), the federal estate and gift taxes were combined into a single, unified tax on transfers of wealth. Gifts up to \$10,000 per recipient per year were excluded from the tax. During the years surveyed in this study, the 'unified credit' also shielded larger lifetime gifts and estate values up to a total of \$600,000 in value from tax. Large gifts and estates over \$600,000 in value were taxed at rates that increased from 37% on amounts up to \$750,000 to 55% on amounts over \$3 million.

The Taxpayer Relief Act of 1997 scheduled a gradual increase in the amount shielded by the unified credit, to a target of \$1 million in 2006. EGTRRA, however, divided the gift and estate taxes and established separate effective exemption amounts for each. The effective exemption amount for gifts shields lifetime gifts up to a total of \$1 million, beginning in 2002. The effective exemption amount for estates increases in steps from \$1 million beginning in 2002 to \$3.5 million beginning in 2009. EGTRRA also gradually reduces the top rate for federal estate and gift taxes from 55 to 45% by 2009. It eliminates the estate tax entirely and sets the top tax rate for gifts equal to the top individual income tax rate beginning in 2010. However, EGTRRA itself is scheduled to retire at the end of 2010, returning estate and gift taxes to prior law.

- Rural landowners nationwide, from a database developed by J.D. Esseks, Northern Illinois University.

Questionnaire recipients were asked to respond for transfers of estates that occurred between 1987 and 1997. Usable responses were received from 758 of the 1273 National Woodland Owner Association members surveyed, 466 of the 1380 Tree Farm System members, and 672 of the 3077 other rural landowners, giving an overall response rate of 33%.

χ^2 tests at the $\alpha = 0.05$ level of significance were used to test for differences between the responses from members of the two forest owner associations. No differences were found except for the responses regarding location of the land and value of the gross taxable estate. Stratifying the results by region (North, South and West) accounted for the differences. Accordingly, the responses for the two forest owner associations were combined, with the results for the questions on location of the land and value of the gross taxable estate cast by region.

χ^2 tests also were used to test for differences between the responses for forest owners and other rural landowners. This report summarizes the results of those tests. In addition, it provides initial estimates of the total forest area affected by the key findings.

Results

Descriptive statistics

During the survey period, 9% of forest owner respondents and 14% of other rural landowners were involved in the transfer of an estate. These results differ statistically (Table 20.1a), which may indicate that other rural landowners – primarily farmers and ranchers – tend to be older, on average, than forest owners. Applying the estimated number of private forest ownership units from Birch (1996) to the survey findings, an estimated 84,000 transfers of forest estates occur each year, nationwide.

Among the respondents who had been involved in the transfer of an estate, 83% of those in the forest owner sample and 94% of those in the other rural landowner sample were family members of the decedent. These results also differ

Total Design Method. Questionnaire recipients received a first mailing with a covering letter from the cooperating organization encouraging them to respond. Recipients who had not responded within 2 weeks of the initial mailing received a postcard reminder; those who had not responded within 4 weeks of the initial mailing received another reminder with a second copy of the questionnaire.

The questionnaire was pre-tested using a 100% survey of individual members of the Mississippi Forestry Association. Following the pre-test, random samples were surveyed from three national groups of landowners:

- Members of the American Tree Farm System;
- Members of the National Woodland Owners Association;

Table 20.1. Summary of survey results.

	Forest owners		Other rural landowners	
	Number	Percentage	Number	Percentage
a. Involved in the transfer of an estate ^a				
<i>n</i>	1224	—	672	—
No	1110	90.7	578	86.0
Yes	114	9.3	94	14.0
b. Relationship to the deceased ^a				
<i>n</i>	109	—	90	—
Family member	90	82.6	85	94.4
Friend or business associate	11	10.1	4	4.4
Professional (deceased a client)	8	7.3	1	1.1
c. Location of the land ^b				
<i>n</i>	111	—	87	—
North	50	45.0	48	55.2
South	38	34.2	27	31.0
West	23	20.7	12	13.8
d. Form of ownership in which land was held ^b				
<i>n</i>	113	—	94	—
Individual	57	50.4	55	58.5
Joint	30	26.5	26	27.7
Partnership	11	9.7	1	1.1
Corporation	8	7.1	4	4.3
Other (e.g. FLP, LLC)	7	6.2	8	8.5
e. Value of the gross taxable estate – North ^b				
<i>n</i>	49	—	47	—
LT \$600,000	26	53.1	34	72.3
GE \$600,000, but LT \$1,000,000	12	24.5	7	14.9
GE \$1,000,000, but LT \$2,000,000	4	8.2	4	8.5
GE \$2,000,000, but LT \$3,000,000	3	6.1	1	2.1
GE \$3,000,000	4	8.2	1	2.1
f. Value of the gross taxable estate – South ^{b,c}				
<i>n</i>	36	—	24	—
LT \$600,000	22	61.1	17	70.8
GE \$600,000, but LT \$1,000,000	4	11.1	4	16.7
GE \$1,000,000, but LT \$2,000,000	5	13.9	1	4.2
GE \$2,000,000, but LT \$3,000,000	1	2.8	0	0.0
GE \$3,000,000	4	11.1	2	8.3
g. Value of the gross taxable estate – West ^{b,c}				
<i>n</i>	22	—	12	—
LT \$600,000	4	18.2	6	50.0
GE \$600,000, but LT \$1,000,000	6	27.3	1	8.3
GE \$1,000,000, but LT \$2,000,000	5	22.7	3	25.0
GE \$2,000,000, but LT \$3,000,000	4	18.2	0	0.0
GE \$3,000,000	3	13.6	2	16.7
h. Total area ^b				
<i>n</i>	111	—	82	—
LT 40 ha (100 acres)	27	24.3	23	28.0
GE 40 ha (100 acres), but LT 200 ha (500 acres)	53	47.7	35	42.7
GE 200 ha (500 acres)	31	27.9	24	29.3

continued

Table 20.1. *Continued.*

	Forest owners		Other rural landowners	
	Number	Percentage	Number	Percentage
i. Forest area ^a				
<i>n</i>	103	—	23	—
LT 40 ha (100 acres)	38	36.9	16	69.6
GE 40 ha (100 acres), but LT 200 ha (500 acres)	38	36.9	7	30.4
GE 200 ha (500 acres)	27	26.2	0	0.0
j. Cropland area ^a				
<i>n</i>	40	—	60	—
LT 40 ha (100 acres)	27	67.5	26	43.3
GE 40 ha (100 acres), but LT 200 ha (500 acres)	11	27.5	24	40.0
GE 200 ha (500 acres)	2	5.0	10	16.7
k. Grazing area (pasture and range) ^a				
<i>n</i>	43	—	50	—
LT 40 ha (100 acres)	29	67.4	21	42.0
GE 40 ha (100 acres), but LT 200 ha (500 acres)	10	23.3	13	26.0
GE 200 ha (500 acres)	4	9.3	16	32.0
l. Professional helped in estate planning ^b				
<i>n</i>	111	—	91	—
Yes	72	64.9	65	71.4
No	36	32.4	26	28.6
Don't know	3	2.7	0	0.0
m. Professional help reduced the tax due ^a				
<i>n</i>	72	—	65	—
Yes	44	61.1	49	75.4
No	22	30.6	8	12.3
Don't know	6	8.3	8	12.3
n. Qualified for 'special use' valuation ^b				
<i>n</i>	112	—	88	—
Yes	36	32.1	21	23.9
No	58	51.8	52	59.1
Don't know	18	16.1	15	17.0
o. Used 'special use' valuation ^{b,c}				
<i>n</i>	36	—	21	—
Yes	28	77.8	16	76.2
No	7	19.4	5	23.8
Don't know	1	2.8	0	0.0
p. Asset(s) valued using 'special use' valuation ^{a,c}				
<i>n</i>	28	—	16	—
Land only	8	28.6	12	75.0
Timber only	0	0.0	0	0.0
Both land and timber	20	71.4	4	25.0
q. Federal estate tax paid ^b				
<i>n</i>	102	—	78	—
None	65	63.7	56	71.8
Tax on \$600,000 to \$1 million gross estate value	16	15.7	14	17.9
Tax on \$1 million to \$2 million gross estate value	12	11.8	4	5.1
Tax on \$2 million to \$3 million gross estate value	3	2.9	2	2.6
Tax on more than \$3 million gross estate value	6	5.9	2	2.6
r. Assets used to pay the federal estate tax ^{a,c}				
<i>n</i>	37	—	20	—
Insurance or other assets	22	59.5	17	85.0
Sold timber to pay part or all of the tax	9	24.3	0	0.0
Sold land to pay part or all of the tax	6	16.2	3	15.0

Table 20.1 *Continued.*

	Forest owners		Other rural landowners	
	Number	Percentage	Number	Percentage
s. Reason(s) sold timber ^d				
<i>n</i>	9	—	0	—
Had to – no other assets were available	6	66.7	0	—
High market value	1	11.1	0	—
Management plan called for a harvest	2	22.2	0	—
t. Reason(s) sold land ^{b,c}				
<i>n</i>	7	—	2	—
Had to – no other assets were available	4	57.1	2	100.0
Was the least profitable asset	1	14.3	0	0.0
Heirs not interested in continuing use	1	14.3	0	0.0
Other	1	14.3	0	0.0
u. Current use of land that was sold ^{b,c}				
<i>n</i>	7	—	3	—
Still in original use	5	71.4	3	100.0
Partially or fully developed	1	14.3	0	0.0
Other	1	14.3	0	0.0
Don't know	0	0.0	0	0.0

^aThe samples differ statistically at the $\alpha = 0.05$ level of significance.

^bThe samples do not differ statistically.

^cTest results are based on a small sample.

^dNo test: no 'Other Rural Landowners' observations.

statistically (Table 20.1b), with respondents for forest estates more likely to be a friend, business associate, or professional who served the decedent and those for other rural estates more likely to be a family member.

Other descriptive information – location of the land, form of ownership in which it was held, value of the gross taxable estate, and total area – did not differ between the groups (Table 20.1c–h). They did differ, however, on use of the land, with forest owners more likely to own substantial forestland (Table 20.1i), and other rural landowners more likely to own substantial crop- and grazing land (Table 20.1j,k). Forest owners' forest holdings ranged in size from 3 to 8100 ha (8–20,000 acres), with a mean of 414 ha (1024 acres) and a median of 63 ha (156 acres). Expanding this finding, an estimated 34.8 million ha (85.9 million acres) of forestland are transferred each year at the death of their owners.

Some 68% of the decedent landowners had used the services of a financial or legal professional to plan their estate, a finding that did not differ statistically between the groups (Table 20.1l). Their heirs differed, however, on whether they believed professional help reduced the amount of estate tax

due, with 75% of other rural landowners but only 65% of forest owners responding 'yes' (Table 20.1m).

'Special use' valuation

'Special use' valuation reduces the gross value of an estate by permitting the executor to appraise assets used for farming or in a trade or business – including timber production – according to their value in use rather than their highest and best use. For both forest owners and other rural landowners, about 28% of the estates qualified for and 22% elected to use 'special use' valuation (Table 20.1n,o).

With a forest holding, 'special use' valuation can be applied to the land only, the timber only, or both. The groups differed in this regard, with forest owners much more likely to apply 'special use' valuation to both land and timber, and other rural landowners much more likely to apply it to the land only. No respondents in either group applied 'special use' valuation to timber only (Table 20.1p).

During the survey period, the maximum reduction in gross estate value from using 'special use' valuation was capped at \$750,000. The actual reductions reported were similar between the two groups and averaged well below the maximum. For forest owners they ranged from \$0 to \$750,000, with a mean of \$279,583 and a median of \$200,000; for other rural landowners they ranged from \$0 to \$625,600, with a mean of \$322,225 and a median of \$300,000. Expanding this finding, an estimated 21,000 forest estates elect to use 'special use' valuation each year, resulting in a combined total reduction in their gross estate value of \$7.0 billion.¹

Assets used to pay the federal estate tax

About 33% of the estates in both groups paid federal estate tax (Table 20.1q). The assets used, however, differed. Nearly identical proportions – 16% of forest owners and 15% of other rural landowners – sold land to pay part or all of the estate tax. Of the remaining owners, a large fraction of forest owners sold timber to pay part or all of the tax, but all other rural landowners used only insurance or other assets (Table 20.1r).

In 33% of the cases where forest owners sold timber to pay part or all of the estate tax, the primary reason for the sale was that their management plan called for a harvest or that timber prices were favourable. In 67% of the cases, however, timber had to be sold because other assets were not adequate to pay the tax (Table 20.1s).

The need to sell timber was not a characteristic of small holdings, nor was the area harvested inconsequential. The forest size of ownerships that needed to sell timber to pay part or all of the estate tax ranged from 40 to 800 ha (100–2000 acres), with a mean of 312 ha (770 acres) and a median of 198 ha (490 acres). The area harvested ranged from 2 to 445 ha (5–1100 acres), with a mean of 201 ha (498 acres) and a median of 174 ha (430 acres). Expanding these findings, an estimated 4900 forest estates need to sell timber each year to pay part or all of their federal estate tax, and the forest area harvested is 1.0 million ha (2.5 million acres).¹

For most of the forest owners and all of the other rural landowners who sold land to pay part or

all of the estate tax, the sale was necessary because other assets were not adequate to pay the tax (Table 20.1t). The forest size of ownerships that needed to sell land was larger than those that needed to sell timber, with a range of 32 to 4047 ha (79–10,000 acres), a mean of 1228 ha (3034 acres) and a median of 271 ha (670 acres). The amount of land sold, however, was somewhat smaller, with a range of 65–316 ha (160–780 acres), a mean of 157 ha (387 acres) and a median of 89 ha (220 acres). Expanding these findings, an estimated 3300 forest estates need to sell land each year to pay part or all of their federal estate tax, and the amount of land sold is 0.5 million ha (1.3 million acres).¹

In about 80% of the cases where land was sold to pay part or all of the estate tax, the land sold was still in its original use. But in the remaining 20% of cases, the land had been developed or converted to another use (Table 20.1u). Expanding this finding, an estimated 0.2 million ha (0.4 million acres) of forestland are developed or otherwise converted each year because other assets are not adequate to pay the federal estate tax.¹

Discussion and Conclusions

Drawing conclusions from this analysis requires two caveats. First, the forest owner results are from surveys of two forest owner associations, so the results may not be entirely representative of non-industrial forest owners in general. Second, many of the estimates calculated from the survey results are based on small samples and should be considered indicators of order of magnitude rather than scientific estimates.

An estimated 84,000 forest estates, with an estimated 34.8 million ha (85.9 million acres) of forestland, are transferred each year at the death of their owners. About 50% of the estates were held in fee simple by the decedent and an additional 27% were held jointly with other persons. The average forest area is 414 ha (1024 acres). In 40% of the cases the value of the gross taxable estate exceeds \$600,000 and in 23% of the cases it exceeds \$1 million.

Only 32% of forest estates qualify for and 25% make use of 'special use' valuation to reduce the gross value of the estate for tax purposes. In 71% of the cases when forest owners use 'special use'

valuation, they apply it to both the land and the timber. This strategy may be necessary to meet the percentage tests to qualify for 'special use' valuation, but it precludes harvesting timber for 10 years. The reduction in gross estate value from applying 'special use' valuation to forest estates averages approximately \$280,000, well under the maximum for the provision. From these results, it appears that the number of forest estates that make use of 'special use' valuation is of the order of 21,000 per year, and the combined total reduction in gross estate value is of the order of \$7.0 billion.

We found that 36% of forest estates owe the federal estate tax, compared with roughly 2% for estates in general during the survey period. It appears that in 40% of the cases where federal estate tax is due, timber or land is sold to pay part or all of the tax. It further appears that 67% of the timber sales and 57% of the land sales occur because other assets are not adequate to pay the tax.

The need to sell timber or land to pay part or all of the estate tax is not a characteristic of small holdings, nor are the areas affected inconsequential. The mean forest size of ownerships that need to sell timber is 312 ha (770 acres) and the mean area harvested is 201 ha (498 acres); the mean forest size of ownerships that need to sell land is 1288 ha (3034 acres) and the mean area sold is 157 ha (387 acres). From these results it appears that the amount of forestland that must be harvested to pay the federal estate tax is of the order of 1.0 million ha (2.5 million acres) per year and the amount of forestland that must be sold is of the order of 0.5 million ha (1.3 million acres) per year. Of the forestland sold, it appears that 29% – 0.2 million ha (0.4 million acres) per year – are developed or converted to other uses.

The responses from forest owners and other rural landowners were more remarkable for their similarities than for their differences. The groups differed statistically on nine characteristics. Most of the differences resulted from the different uses members in the two groups make of their land: whether the holding includes substantial forestland, cropland, or grazing land; whether the estate applied 'special use' valuation to both land and timber; and whether timber was sold to pay part or all of the federal estate tax. The remaining points of difference have few clear policy implications: whether the respondent was involved in the transfer of an estate during the survey period,

whether the respondent is a member of the decedent's family, and whether the respondent believes that use of an estate planning professional reduced the amount of estate tax due.

For all other characteristics tested, there was no statistical difference in the responses from the two groups: location of the land, form of ownership in which it is held, value of the gross taxable estate, total size of the ownership, whether the decedent had used a professional estate planner, whether the holding qualified for 'special use' valuation, whether 'special use' valuation was used, amount of federal estate tax paid, reasons land was sold, and current use of land that was sold.

Efforts are underway to address the shortcomings of this survey by obtaining a larger and broader sample of non-industrial private forest owners. In the interim, the results of this study provide an insight into the effect of the federal estate tax on forest and other rural estates. They show that forest and other rural landowners are many times more likely than the US population in general to incur the federal estate tax. And they indicate the magnitude of the effect the federal estate tax has in precipitating unplanned timber harvests and fragmentation and conversion of forest holdings. In addition, the results present several avenues for development of an estate tax relief policy for rural landowners in general. Some elements of such a policy might include:

- A targeted increase in the effective exemption amount for estates that consist largely of land or other working assets;
- Revision of the requirements for 'special use' valuation, to permit timber harvests made in accordance with a management plan developed in consultation with a professional forester;
- Recognition of a form of business for family farms and forests, to ensure that they qualify for business-oriented provisions in the tax code or to facilitate the transfer of working lands.

Endnote

¹ Note that the indicated estimates are calculated from small samples.

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