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Dominic P. Parker

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DOMINIC P. PARKER*

Land Trusts and the Choice to Conserve Land with Full Ownership or Conservation Easements

ABSTRACT

Land trusts are nonprofit organizations that conserve environmental amenities on private land. Trusts can conserve land by owning it outright or holding conservation easements. This article describes the economic tradeoffs of these two conservation methods. Relative to full ownership by a land trust, conservation easements generate higher transaction costs. The trust and landowner will exert time and money to specify, monitor, and enforce the terms of the easement throughout its duration. Conservation easements, however, facilitate more economical production of commodities such as crops and beef because a separate landowner generally has a specialization advantage in managing agricultural land. Data from the Land Trust Alliance show that trusts tend to hold easements when transaction costs are low and gains from landowner specialization are high. For example, most trusts use easements to preserve scenic views over large parcels of agricultural land and use full ownership to enhance ecological functions on non-agricultural land. The desire to help donors of land and easements capitalize on tax benefits, however, sometimes outweighs transaction cost and specialization considerations and can militate against the use of cost-reducing conservation methods.

I. INTRODUCTION

Land trusts are nonprofit organizations that preserve or enhance environmental amenities, such as wildlife habitat and scenic views, on private land. Over 1200 land trusts operate in local regions across the United States.¹ These organizations may influence land use indirectly by

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1. See Table 1 and accompanying notes.

lobbying for zoning regulations² or brokering land sales to government agencies.³ Most, however, influence land use directly by holding property rights in one of two ways.

Land trusts may conserve land by owning it outright, thereby acquiring the full property interest. Alternatively, trusts might hold a conservation easement, which is a partial interest in land.⁴ Conservation easements typically prohibit subdivision and commercial development while permitting some agricultural and residential land uses.⁵ Many land trusts still rely primarily on outright ownership, but conservation easements have become more prevalent in recent years.⁶ Using economic analysis, this article examines why conservation easements have become more prevalent and why ostensibly similar land trusts control land use with full ownership instead of conservation easements and vice versa.

In examining the tradeoffs of these conservation methods, the article focuses on two important economic concepts: transaction costs and specialization. Relative to full ownership by a land trust, conservation easements generate higher transaction costs. That is, the land trust and landowner will exert time and money to specify, monitor, and enforce the terms of the divided ownership arrangement.⁷ Conservation easements, however, may facilitate more economical production of commodities such as crops and beef. A separate landowner is likely to have a specialization advantage in managing

2. See Land Trust Alliance (LTA) website, *Can Land Trusts Lobby?*, at <http://www.lta.org/publicpolicy/lobby.htm> (last visited July 30, 2004).

3. Of the 760 state and local land trusts that had conserved land by 1998, approximately 24 percent had transferred some acreage to government agencies. Only eight percent, however, had transferred more than 50 percent of their acreage to government agencies. LAND TRUST ALLIANCE, 1998 NATIONAL DIRECTORY OF CONSERVATION LAND TRUSTS (1998) (on file with author) [hereinafter 1998 NATIONAL DIRECTORY].

4. See *infra* notes 39–58 and accompanying text for a brief discussion of conservation easements. For a more thorough legal analysis of conservation easements and their relationship to common law easements and covenants, see Gerald Korngold, *Privately Held Conservation Servitudes: A Policy Analysis in the Context of in Gross Real Covenants and Easements*, 63 TEX. L. REV. 433, 435–40 (1984); Andrew Dana & Michael Ramsey, *Conservation Easements and the Common Law*, 8 STAN. ENVTL. L.J. 2, 4–21 (1989); Peter M. Morrisette, *Conservation Easements and the Public Good: Preserving the Environment on Private Lands*, 41 NAT. RESOURCES J. 373, 379–96 (2001).

5. For a list of permitted and prohibited uses in a sample of recently acquired conservation easements, see Dominic P. Parker, *Estimating the Costs of Stewarding Disparate Conservation Easements: A Case Study of Western Land Trusts*, 9 THE BACKFORTH: THE NWSL OF LAND CONSERVATION L. (Hastings College of Law), Summer 2003, at 1, 3.

6. See Table 1 and accompanying notes.

7. See *infra* Part III and accompanying notes 84–87 (discussing the concept of transaction costs); see *infra* text accompanying notes 92–97 (applying specifically to conservation easements); see also *infra* Part IV and text accompanying notes 110–113.

agricultural land.⁸ This article fleshes out these tradeoffs and describes factors that lower the transaction costs of holding easements.

If land trusts had perfect incentives to minimize the long-run costs of providing environmental amenities, and transaction costs and specialization were the only considerations, we should expect these tradeoffs to dominate their choice of conservation method. Of course, land trusts have imperfect incentives and other factors motivate their decisions. Most prominently, land trusts anxious to conserve land have incentives to help donating landowners maximize tax benefits.⁹ Yet the conservation method that maximizes tax benefits may not be the same as that which minimizes the costs of providing environmental amenities over the long run. In addition to examining whether transaction costs and specialization are generally important considerations in land trust decisions, this article examines the extent to which these factors enter the decision calculus when trusts rely exclusively on donations from landowners.

The article proceeds as follows. Section II briefly reviews the history of the land trust movement in the United States. This section describes land trusts, delineates land trust and easement growth trends, and highlights changes in state legislation and federal tax incentives that have (presumably) affected conservation decisions. Section III describes the concepts of transaction costs and specialization and how they help explain whether a firm contracts for or owns assets. This section also applies these concepts in a land trust setting. Section IV uses transaction cost theory to generate predictions about land trust behavior. The section emphasizes key differences in the costs of each conservation method when land trusts enhance, rather than simply preserve, environmental amenities. Section V describes "land trust census data" compiled by the Land Trust Alliance.¹⁰ These data are used to assess the extent to which trusts' portfolios of land and easements mitigate transaction costs and exploit gains from specialization. Also using data described in section V, section VI examines the extent to which various tax incentives trump these considerations. Finally, section VII concludes the article with a simple policy prescription for encouraging cost-effective conservation decisions.

8. See *infra* Part III and text accompanying notes 88-89 (describing the concept of landowner specialization); see *infra* text accompanying notes 90-91 (applying specifically to land trusts); see also *infra* Part IV and text accompanying notes 113-114.

9. Federal and state tax benefits are discussed in text accompanying notes 61-80 in Part II.

10. See *infra* Part V and accompanying notes 119-121.

II. THE LAND TRUST MOVEMENT

The Land Trust Alliance (LTA) defines a land trust as a “nonprofit organization that, as all or part of its mission, actively works to conserve land by undertaking or assisting direct land transactions—primarily the purchase or acceptance of donations of land or conservation easements.”¹¹ Most enjoy charitable status and exemption from federal and state income taxes and are governed by an unpaid board of trustees charged with the responsibility of managing land trust assets. Trustees cannot enrich themselves with trust assets and are supposed to manage the assets for trust beneficiaries.¹² Because land trusts enjoy charitable status and the attendant tax privileges, their beneficiaries are often broadly defined to include the general public.¹³ The most conspicuous public beneficiaries, however, are those who reside in the region in which a land trust operates and include people who have regular physical or scenic access to land conserved by land trusts.

A. Growth of Land Trusts

The first land trust was probably the Massachusetts Trustees for Reservation, formed in 1891.¹⁴ The motivation for the trust was to “establish an organization with a board of trustees that would have power to hold lands free of taxes...for the use and the enjoyment of the public.”¹⁵ Other organizations with similar doctrines, such as The Block Island Land Trust in Rhode Island (1896) and The Society for the Protection of New Hampshire Forests (1901), emerged shortly thereafter.¹⁶

11. LAND TRUST ALLIANCE, 2000 NATIONAL LAND TRUST CENSUS, at <http://www.lta.org/about/census.shtml> (last visited July 30, 2004) [hereinafter 2000 LAND TRUST CENSUS].

12. The term *land trust*, however, is somewhat of a misnomer. See SALLY K. FAIRFAX & DARLA GUENZLER, CONSERVATION TRUSTS 21 (2001) (“Because land trusts hold land or easements that are generally intended to benefit the public, critical elements of a fiduciary relationship are apparent. However, not many [land trusts] are structured as true trusts or even operate under any semblance of trust principles.”).

13. *Id.* at 26.

14. Gordon Abbot, Jr., *Historic Origins*, in PRIVATE OPTIONS: TOOLS AND CONCEPTS FOR LAND CONSERVATION 150–52 (Barbara Rushmore et al. eds., 1982).

15. *Id.* at 150.

16. 1998 NATIONAL DIRECTORY, *supra* note 3, at 119.

The major growth in the number of land trusts began in the second half of the twentieth century. As Table 1¹⁷ illustrates, there were approximately 53 land trusts in 1950, 308 in 1975, 887 in 1990, and 1263 in 2000.¹⁸ Of the 1263 local and regional land trusts identified, most are located in the Northeast (39 percent), Midwest (15 percent), and the Mid-Atlantic regions (14 percent). From 1990 to 2000, the greatest percentage increase in the number of land trusts occurred in the South Central (127 percent) and Southwest (119 percent) regions.¹⁹

The growth in the acres controlled by state and local land trusts is also impressive.²⁰ The acres held in full-interest and conservation easements increased from approximately 737,000 in 1985²¹ to almost 866,000 in 1990 and up to 3.8 million acres by 2000.²² State and local land trusts in the Northeast region control the most acres (1.4 million) and land trusts in the South Central region control the least (72,356).²³ The greatest percentage increase in acreage controlled has occurred in the Southwest, Southeast, and South Central regions.²⁴ On a statewide basis, land trusts in Montana and New York control the most acres with 454,689 and 416,194 respectively.²⁵ Land trusts in Hawaii and Arkansas control the least with 8 and 953 acres respectively.²⁶ From 1990 to 2000, the most rapid growth in acres controlled by state and local land trusts occurred in South Dakota (803,900 percent) and Nevada (53,207 percent) and negative growth occurred in Alabama (-60 percent), Mississippi (-19 percent), and New Hampshire (-2 percent).²⁷

Relative to fee-simple ownership, conservation easements have gained prevalence in recent years. From 1990 to 2000, the percent of land controlled by state and local land trusts held in conservation easements

17. Data for Table 1 were gathered from LAND TRUST ALLIANCE, SUMMARY DATA FROM THE NATIONAL LAND TRUST CENSUS, at http://www.lta.org/newsroom/census_summary_data.htm (last visited Aug. 5, 2004) [hereinafter SUMMARY DATA].

18. 2000 LAND TRUST CENSUS, *supra* note 11.

19. See Table 1 for sources and regional definitions.

20. Land that is "controlled" by land trusts excludes the 2.4 million acres of land that has been transferred to government agencies. See SUMMARY DATA, *supra* note 17.

21. LAND TRUST EXCHANGE, 1985-86 NATIONAL DIRECTORY OF LOCAL AND REGIONAL LAND CONSERVATION ORGANIZATIONS viii (compiled by Pamela K. Stone, 1985).

22. SUMMARY DATA, *supra* note 17. For perspective, consider that 3.8 million acres is larger than three states—Connecticut, Delaware, and Rhode Island. This acreage, however, does not include at least 1.75 million acres of land controlled by national land trusts such as The Nature Conservancy and Ducks Unlimited. 1998 NATIONAL DIRECTORY, *supra* note 3.

23. SUMMARY DATA, *supra* note 17.

24. *Id.*

25. *Id.*

26. *Id.*

27. *Id.* The loss in acreage presumably occurred because land trusts in each state transferred a significant amount of their land to government agencies during the 1990s.

increased from 52 to 68 percent.²⁸ During the same period, land held in conservation easements increased 475 percent while fee-simple land increased only 186 percent.²⁹ Land trusts in six of the eight regions now control over half of their land with conservation easements and, from 1990 to 2000, the percent of acres controlled with conservation easements increased in five of the eight regions.³⁰

While these figures illustrate a general trend towards the use of conservation easements, their prevalence varies across regions and states. The smallest percentage of acres held in easements occurs in the Midwest (41 percent) and in the Pacific (44 percent) regions.³¹ The largest percentage occurs in the Northwest (96 percent) and the Southeast (77 percent).³² On average, about 56 percent of land controlled by land trusts in each state is held in conservation easements varying from zero percent in Oklahoma, Nevada, and North Dakota to nearly 100 percent in Montana, Minnesota, Louisiana, and Colorado.³³

Land trusts provide a variety of environmental amenities on the land they control. More than half of state, local, and regional land trusts report protecting wetlands and river corridors.³⁴ Over 40 percent of trusts report protecting watersheds, farmlands, ranchlands, or endangered species habitat.³⁵ Less than 40 percent of trusts report protecting amenities such as scenic views, recreational trails, and timberland (working forests).³⁶

Finally, some land trusts do more than provide environmental amenities by controlling land use. In 2000, 72 percent of land trusts said that they offered programs in environmental education and 51 percent said they participate in land use planning.³⁷ In an earlier study, almost 50 percent of land trusts reported involvement in ecological restoration, biological monitoring and research, or management activities for rare species.³⁸

28. SUMMARY DATA, *supra* note 17.

29. *Id.*

30. *Id.*

31. *Id.*

32. *Id.*

33. SUMMARY DATA, *supra* note 17.

34. *Id.*

35. *Id.*

36. *Id.*

37. *Id.*

38. 1998 NATIONAL DIRECTORY, *supra* note 3.

TABLE 1: STATE, LOCAL, AND REGIONAL LAND TRUST TRENDS

Geographic Region	Total Number of Land Trusts					Total Number of Acres			% of Acres Held in Conservation Easements		
	% Growth 1990-2000					1990	2000	% Growth 1990-2000	1990	2000	2000
	1950	1975	1990	2000	% Growth 1990-2000	865,907	3.8 million	343%	52%	68%	
United States	53	308	887	1,263	42%						
Northeast			433	497	15%	476,073	1.4 million	196%	42%	66%	
Mid Atlantic			105	174	66%	134,801	423,514	214%	71%	75%	
Southeast			62	115	85%	41,617	221,660	433%	35%	77%	
Midwest			119	186	56%	61,731	218,958	255%	12%	41%	
South Central			11	25	127%	7,176	72,356	908%	85%	75%	
Northwest			50	69	38%	103,315	536,244	419%	84%	96%	
Southwest			26	57	119%	18,134	601,873	3,219%	71%	61%	
Pacific			79	139	76%	43,842	367,398	738%	58%	44%	
Individual States											
Maximum				143		157,117	454,689	803,900%	100%	99.9%	
				MA		NH	MT	SD	LA, MS, SD	MN	
Median				15		5,657	22,432	293%	22%	61%	
				OR, TN		IA, TX	ID, DE	NJ, RI	CT, NJ	FL, HI	
Minimum				1		0	8	-60%	0%	0%	
				4 States		8 States	HI	AL	5 States	NV, ND, OK	

Northeast States: CT, MA, RI, ME, NH, NY, PA, VT. Mid-Atlantic States: DE, NJ, WV, VA, MD. Southeast States: AL, TN, FL, KY, NC, GA, SC.
 Midwest States: IN, IA, ND, NE, MO, WI, MI, IL, OH, KS, SD, MN. South Central States: AR, OK, TX, LA. Northwest States: AK, WA, ID, WY, OR, MT.
 Southwest States: NM, AZ, UT, CO. Pacific States: CA, HI, NV.

B. Conservation Easements and Statutory Legislation

A classic analogy is useful for describing a conservation easement. Think of land as a bundle of sticks. Each stick represents a right to use land, or exclude others from using the land, in a particular manner. A conservation easement transfers some sticks from the land-owner's bundle to the land trust for a specified duration (usually perpetuity). A more comprehensive definition is found in the Uniform Conservation Easement Act:

"Conservation easement" means a nonpossessory interest of a holder in real property imposing limitations or affirmative obligations the purposes of which include retaining or protecting natural, scenic, or open-space values of real property, assuring its availability for agricultural, forest, recreational, or open-space use, protecting the natural resources, maintaining or enhancing air or water quality, or preserving the historical, architectural, archeological, or cultural aspects of real property.³⁹

A conservation easement may prevent landowners from activities such as developing, subdividing, clear-cutting, over-grazing, or erecting billboards. An easement may require landowners to build fences, maintain trails, or perform other tasks. Finally, an easement may grant the land trust rights to construct recreational structures, conduct scientific studies, and plant or remove vegetation.⁴⁰

The rights conveyed in conservation easements "run with the land." That is, successor landowners (and possibly successor land trusts) are generally bound to the terms of the easement agreed upon by the original parties. As John Walliser notes, "It is this intention to bind persons succeeding the original landowner that distinguishes conservation servitudes from other contractual arrangements."⁴¹ Indeed, this distinction is a reason why conservation easements are property rights, not contractual rights, and helps explain why enforcement of conservation easements is dubious under a common law regime.⁴²

Most conservation easements, as a primary objective, restrict landowners from engaging in certain land uses. Yet the common law does not generally recognize negative easements.⁴³ Cases in which the benefits of negative easements accrue to owners of adjacent parcels are

39. UNIF. CONSERVATION EASEMENT ACT § 1(1), 12 U.L.A. 51 (1981).

40. For a discussion of provisions common to conservation easements, see Parker, *supra* note 5, at 3; JANET DIEHL & THOMAS S. BARRETT, *THE CONSERVATION EASEMENT HANDBOOK* 156-208 (1988); STEVEN BICK & HARRY L. HANEY, JR., *THE LANDOWNER'S GUIDE TO CONSERVATION EASEMENTS* 41-78 (2001).

41. John Walliser, *Conservation Servitudes*, 13 J. NAT. RESOURCES & ENVTL. L. 47, 48 (1997).

42. See Dana & Ramsey, *supra* note 4, at 12-21 (describing enforcement problems under a common law regime).

43. *Id.* at 13 ("Under traditional common law regime, the only negative easements allowed were (1) against blocking 'light and air' to a building, (2) against removing subjacent and lateral support for a building on adjacent property, and (3) against interfering with the flow of an artificial stream.").

treated as exceptions,⁴⁴ but conservation easements are intended to benefit a broader range of public beneficiaries.⁴⁵ For this reason, courts equating conservation easements to negative easements under common law are unlikely to enforce agreements on successive landowners. Alternatively, courts may interpret conservation easements as restrictive covenants under a common law regime.⁴⁶ Covenants are often used to prevent undesirable development within residential neighborhoods. If courts liken a conservation easement to a restrictive covenant, however, then they will probably still be reluctant to enforce the agreement when the property changes ownership. Common law courts do not allow covenants to “run with land” unless the covenant’s beneficiaries own adjacent land and, again, the benefits of conservation easements are not supposed to be concentrated among adjacent landowners.⁴⁷

Because of these and more subtle common law obstacles,⁴⁸ most modern conservation easements rely on statutory law for enforcement.⁴⁹ (However, Oklahoma, Pennsylvania, North Dakota, and Wyoming still lacked easement enabling statutes as of 2000.⁵⁰) Easement enabling statutes generally include basic enforcement provisions that override common-law defenses⁵¹ and delineate the type of amenities easements can protect along with acceptable duration.⁵²

In an attempt to standardize easement-enabling statutes, the National Conference of Commissioners on Uniform State Laws adopted

44. *Id.* at 14 (arguing that only negative easements with “appurtenant” benefits, e.g., easements in which the benefits run to adjacent landowners, are likely to be enforced by U.S. courts under a common law regime).

45. Land trust beneficiaries include the general public. See FAIRFAX & GUENZLER, *supra* note 12, at 25–26.

46. Dana & Ramsey, *supra* note 4, at 15–16.

47. *Id.*

48. *Id.* at 12–21. See also Walliser, *supra* note 41, at 57–115.

49. See Roderick H. Squires, *Introduction to Legal Analysis*, in PROTECTING THE LAND: CONSERVATION EASEMENTS PAST, PRESENT AND FUTURE 69–77 (Julie Ann Gustanski & Roderick H. Squires eds., 2000).

50. *Id.* at 72–73. Note that land trusts in Pennsylvania and Wyoming held almost 100,000 acres of conservation easements in aggregate despite not having easement enabling statutes. See SUMMARY DATA, *supra* note 17.

51. Delaware’s easement-enabling statute, for example, notes that a conservation easement is valid even though (1) it is not appurtenant to an interest in real property, (2) it can be or has been assigned to another holder, (3) it is not of a character that has been recognized traditionally at common law, (4) it imposes a negative burden, (5) it imposes affirmative obligations upon the owner of an interest in the burdened property or upon the holder, (6) the benefit does not touch or concern real property, or (7) there is no privity of estate or of contract. DEL. CODE ANN. tit. 7, § 6904 (2003).

52. Todd D. Mayo, *A Holistic Examination of the Law of Conservation Easements*, in PROTECTING THE LAND: CONSERVATION EASEMENTS PAST, PRESENT AND FUTURE 26–54 (Julie Ann Gustanski & Roderick H. Squires eds., 2000).

the Uniform Conservation Easement Act (UCEA) in 1981.⁵³ The UCEA provided a blueprint for how state legislatures could take advantage of the federal tax-code and overcome some of the common-law problems associated with the enforceability of conservation easements.⁵⁴ Since 1981, 21 states have adopted the UCEA—many with local variations.⁵⁵ However, easement-enabling statutes in 25 states are not modeled on the UCEA.⁵⁶

Land trusts in UCEA states probably benefit from easier enforcement. As Table 2 depicts, UCEA statutes tend to be much more explicit than non-UCEA statutes about what conservation easements may protect.⁵⁷ More explicit statutes tend to be easier to enforce, although this may not necessarily be the case always.⁵⁸

53. UNIF. CONSERVATION EASEMENT ACT, 12 U.L.A. 51 (1981).

54. Squires, *supra* note 49, at 70–71.

55. *Id.* at 72–73.

56. *Id.*

57. Mayo, *supra* note 52, at 28–30.

58. In Northeastern states, for example, case law has been used to strengthen easement statutes that are not explicit relative to UCEA statutes. See Karin Marchetti & Jerry Cosgrove, *Conservation Easements in the First and Second Federal Circuits*, in PROTECTING THE LAND: CONSERVATION EASEMENTS PAST, PRESENT AND FUTURE 78–101 (Julie Ann Gustanski & Roderick H. Squires eds., 2000). In non-UCEA states lacking such precedent, however, protection of environmental amenities with conservation easements can be cumbersome because the easements must be carefully drafted to circumvent legal barriers and maintain enforceability. For example, statutes in 15 states, including Montana, do not explicitly allow conservation easements to be used to preserve agricultural land. Because Montana's statute does allow for the preservation of open space, however, conservation easements in the state are often granted over agricultural lands to preserve open space. See generally William T. Hutton, *Conservation Easements in the Ninth Federal Circuit*, in PROTECTING THE LAND: CONSERVATION EASEMENTS PAST, PRESENT AND FUTURE 354–91 (Julie Ann Gustanski & Roderick H. Squires eds., 2000).

TABLE 2: CONSERVATION EASEMENT ENABLING STATE STATUTES			
	State statutes that are not modeled after the UCEA (% of total)	State statutes that are modeled after the UCEA (% of total)	States with statutes* (% of total)
Total	25 (100)	21 (100)	46 (100)
Enacted original statute prior to UCEA (1981)⁵⁹	18 (72)	4 (19)	22 (48)
Explicitly allow easements to protect following amenities:⁶⁰			
Holder's purpose	15 (60)	19 (90)	34 (74)
Natural	9 (36)	18 (86)	27 (59)
Scenic	6 (24)	19 (90)	25 (54)
Open space	9 (36)	18 (86)	27 (59)
Agricultural	12 (48)	19 (90)	31 (67)
Silvicultural	0 (0)	2 (10)	2 (4)
Forest	7 (28)	18 (86)	25 (54)
Recreational	4 (16)	19 (90)	23 (50)
Air quality	4 (16)	19 (90)	23 (50)
Water quality/water	11 (44)	19 (90)	30 (65)
Historical	14 (21)	19 (90)	33 (72)
Architectural	5 (20)	19 (90)	24 (52)
Archeological	5 (20)	19 (90)	24 (52)
Paleontological	0 (0)	2 (10)	2 (4)
Cultural	4 (16)	18 (86)	22 (48)
Conservation of land	2 (8)	0 (0)	2 (4)
Protecting natural resources	10 (40)	18 (86)	28 (61)
* As of October 1, 1998, the following states did not have easement enabling statutes: Oklahoma, North Dakota, Pennsylvania, and Wyoming. The Uniform Conservation Easement Act (UCEA) was adopted by the National Conference of Commissioners on Uniform State Laws in 1981.			

C. Tax Incentives for Donating Conservation Easements

Federal and state tax incentives have almost certainly contributed to the growth in conservation easements in recent years.⁶¹ The amount of taxes deductible from conservation easement donations

59. Squires, *supra* note 49, at 69, 72-73. The dates presented by Squires conflict with those presented in other sources. See Antony W. Dnes & Dean Lueck, Common Law, Statute Law and the Conservation Easement (draft 2003).

60. Mayo, *supra* note 52, at 26, 27-30.

61. See Stephen J. Small, *An Obscure Tax Code Provision Takes Private Land Protection in the Twenty-First Century*, in PROTECTING THE LAND: CONSERVATION EASEMENTS PAST, PRESENT AND FUTURE 55-66 (Julie Ann Gustanski & Roderick H. Squires eds., 2000).

depends (at least in part) on the appraised value of the easement.⁶² Although several alternatives exist,⁶³ the most common appraisal method is to value conservation easements as the difference between the land's unencumbered value and its encumbered value.⁶⁴ Consider, for example, a conservation easement that allows only one residence on a parcel that would otherwise be developed and sold as ten separate housing lots. If the value of the ten housing lots equals \$2 million in aggregate and the encumbered residence is worth \$500,000, then the conservation easement would be valued at \$1.5 million. Of course, this example assumes the appraisal is conducted without error, which may not happen in practice.⁶⁵

Federal recognition of the deductibility of conservation easement donations officially began in 1976 with the passage of the Tax Reform Act.⁶⁶ The legislation codified the deductibility of historic preservation and conservation easements from federal income taxes.⁶⁷ This initial statute required a 30-year easement duration to be eligible and included a "sunset" provision, which meant that, absent legislative action, the deductibility of easements would be eliminated in 1981.⁶⁸ In 1977, the 1976 Act was amended to require that eligible easements be donated in perpetuity.⁶⁹ Finally, in 1980, Congress permanently eliminated the "sunset" provision and specified that easements must meet certain conservation purposes to be eligible for tax deductions.⁷⁰ The present regulatory requirements are as follows:

62. See BICK & HANEY, *supra* note 40, at 38-39.

63. See James H. Boykins, *Valuing Scenic Land Conservation Easements*, 68 APPRAISAL J. 420, 422-26 (2000).

64. See DIEHL & BARRETT, *supra* note 40, at 8; BICK & HANEY, *supra* note 40, at 38-39.

65. There may also be conceptual problems with this appraisal methodology. See Abebayehu Tegene et al., *Irreversible Investment Under Uncertainty: Conservation Easements and the Option to Develop Agricultural Land*, 50 J. AGRIC. ECON. 203, 215-17 (1999) (arguing that conventional appraisals exaggerate potential urban returns and ignore the option value of waiting to decide whether to develop or grant an easement).

66. Small, *supra* note 61, at 56.

67. Tax Reform Act of 1976, Pub. L. No. 94-455, § 2124(e), 90 Stat. 1520, 1919-20 (1976). The Act gives a landowner two options. An annual federal income tax deduction can be claimed for up to 30 percent of adjusted gross income if the "fair market value" of the land is used to compute the easement value. Alternatively, if the landowner elects to use the property's basis (the value of the property when it was acquired) instead of the "fair market value," an annual income tax deduction can be claimed for up to 50 percent of adjusted gross income. In either case, if any excess value remains, it can be carried over for up to six years. *Id.*

68. Small, *supra* note 61, at 56.

69. Tax Reduction and Simplification Act of 1977, Pub. L. No. 95-30, § 309, 91 Stat. 126, 154 (1977).

70. Small, *supra* note 61, at 57.

- i) the preservation of land areas for outdoor recreation by, or the education of, the general public or;
- ii) the protection of a relatively natural habitat of fish, wildlife, or plants, or similar ecosystems or;
- iii) the preservation of open space (including farmland and forest land) where such preservation is:
 - a) for the scenic enjoyment of the general public; or
 - b) pursuant to a clearly delineated federal, state, or local governmental conservation policy, and will yield a significant public benefit; or
- iv) the preservation of an historically important land area or a certified historic structure.⁷¹

An additional tax incentive was introduced when President Clinton signed the Taxpayer Relief Act of 1997. Congress allowed reduction of federal estate taxes if the taxpayer had donated (or sold) an easement that qualified for an income tax deduction under section 170(h).⁷² In addition to meeting the eligibility criteria under section 170(h), the 1997 Act required that property under easement be either (1) within 25 miles of an area defined by the federal Office of Management and Budget as a metropolitan area, (2) within 25 miles of an area designated as part of the National Wilderness Preservation System, or (3) within ten miles of a U. S. Department of Agriculture Forest Service designated Urban National Forest.⁷³ If these requirements were met, the taxpayer was eligible to exempt up to 40 percent of the value of the property encumbered by a conservation easement from the total (unencumbered) estate value.⁷⁴ The amount that could be excluded, however, was capped.⁷⁵ In 2001, Congress deleted the geographic requirements for eligibility and provided an additional estate tax exclusion of up to \$500,000.⁷⁶

In addition to federal tax incentives, many individual states provide incentives for donating conservation easements. Because a conservation easement lowers property values, landowners may realize property tax reductions after encumbering their land. The actual amount

71. IRS, 26 C.F.R. § 1.170A-14(d) (2004).

72. Taxpayer Relief Act of 1997, Pub. L. No.105-34, § 508, 111 Stat. 788, 857-60 (1997).

73. *Id.*

74. *Id.*

75. The maximum amount excludable from an estate was \$100,000 in 1998, increasing by \$100,000 each year until reaching the total allowable exclusion of \$500,000 in 2002. Small, *supra* note 61, at 61.

76. Economic Growth and Tax Relief Reconciliation Act of 2001, Pub. L. No. 107-16, § 551, 115 Stat. 38, 86 (2001).

of the reduction depends on state laws and "personal attitudes of local officials and assessors."⁷⁷ Seventeen states, however, have statutes that require that local assessors reduce property value assessments when a conservation easement encumbers land.⁷⁸ About ten states offer income tax credits for donated easements.⁷⁹ With the exception of North Carolina, these tax credit programs were all initiated after 1998.⁸⁰

III. LAND TRUST DECISIONS AND ECONOMIC THEORIES OF OWNERSHIP

Having described land trusts, conservation easements, and tax benefits, this section introduces the transaction cost and specialization tradeoffs that conserving land with full ownership or conservation easements generate. To help illustrate these sometimes subtle tradeoffs, the issues are introduced using an analytical framework that extends from economic models of the firm.⁸¹ Land trusts are analogized to producers that acquire inputs (land) from suppliers (landowners). With these inputs, the trust produces outputs (environmental amenities) for its customers (land trust beneficiaries).

Whether engaged in amenity preservation or enhancement, land is the key input in the production process.⁸² But thinking of land as an input is far too general to have much analytical utility. Because environmental amenities can be produced without full ownership of

77. DIEHL & BARRETT, *supra* note 40, at 9.

78. See DEFENDERS OF WILDLIFE, STATE GOVERNMENT INCENTIVES FOR HABITAT CONSERVATION: A STATUS REPORT (2002), at <http://www.biodiversitypartners.org/pubs/CinAReport/Results1.shtml#tax> (last visited July 30, 2004).

79. *Id.* In Colorado, for example, landowners are entitled to a tax credit equal to the full value of the donation up to \$260,000. Each dollar of donation creates one dollar of tax credit. See COLO. DEPT. OF REVENUE, GROSS CONSERVATION EASMENT CREDIT, at <http://www.revenue.state.co.us/fyi/html/income39.html> (last visited July 30, 2004).

80. DEFENDERS OF WILDLIFE, *supra* note 78. For a numerical example of the extent of the tax benefits combined, see Dominic P. Parker & Walter N. Thurman, *The Private and Public Economics of Land Trusts*, NC STATE ECONOMIST, July/Aug. 2004, at 1, 3, available at http://www.ag-econ.ncsu.edu/VIRTUAL_LIBRARY/ECONOMIST/julyaug04.pdf (last visited Aug. 31, 2004).

81. The firm is an entity that seeks to maximize its profits in traditional economic models. It does so by choosing how much output to produce, given the cost of its inputs (e.g., land, labor, and capital) and the value of its output to consumers. Such models can be found in virtually any microeconomics textbook. See, e.g., DAVID D. FREIDMAN, PRICE THEORY: AN INTERMEDIATE TEXT 200-46 (2d ed. 1990); JACK HIRSHLEIFER & DAVID HIRSHLEIFER, PRICE THEORY AND APPLICATIONS 159-89 (6th ed. 1998).

82. Enhancement of environmental amenities is the more typical production process because it involves active employment of inputs such as land, labor, and seed. Although less intuitive, preservation is also like a production process because it involves passive employment of land, which has an opportunity cost of use in another capacity.

land, the key inputs are actually specific rights to land.⁸³ Viewed in this context, a land trust might produce open space or recreational trails, for example, by acquiring development or public access rights to several adjacent tracts of land.

A. Transaction Costs, Specialization, and the Organization of Firms

With this framework in place, analysis of why land trusts choose ownership or easements can be informed by transaction-cost theories of firm organization. These theories posit that businesses are more likely to own, or “vertically integrate,” inputs as the transaction costs of depending on external suppliers increase.⁸⁴ Transaction costs increase when any party to a contract or lease needs to exert more time, effort, or money to specify, monitor, and enforce the terms of the arrangement.⁸⁵ Transaction costs borne by the supplier are directly reflected in increased supply prices. Those borne by the firm implicitly raise the price of external supplies. Hence, when transaction costs are sufficiently high, profit-maximizing firms are more apt to fully own productive inputs.

As a simple example, consider the observed patterns of input ownership among agricultural firms. Farmers are more likely to own, rather than lease, harvesting equipment in areas where harvesting seasons are highly variable. This choice reduces transaction costs because uncertainties over harvest time raise the costs of specifying and enforcing mutually acceptable leasing terms.⁸⁶ Similarly, farmers are also

83. See Ronald Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 44 (1960) (“We may speak of a person owning land and using it as a factor of production but what the landowner in fact possesses is the right to carry out a circumscribed list of actions.”).

84. The reverse is also true—businesses are more likely to contract for inputs if the transaction costs of doing so are low. See generally Ronald Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937); Benjamin Klein et al., *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J.L. & ECON. 297 (1978); OLIVER E. WILLIAMSON, *ECONOMIC ORGANIZATION: FIRMS, MARKETS & POLICY CONTROL* 85–100 (1986); Sanford Grossman & Oliver Hart, *The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration*, 94 J. POL. ECON. 691 (1986); Oliver Hart & John Moore, *Property Rights and the Nature of the Firm*, 98 J. POL. ECON. 1119 (1990); HENRY HANSMANN, *THE OWNERSHIP OF ENTERPRISE* 24–49 (1996); YORAM BARZEL, *ECONOMIC ANALYSIS OF PROPERTY RIGHTS* 3–84 (1997).

85. More precisely, transaction costs are “the resources used to establish and maintain property rights. They include the resources used to protect and capture property rights, plus any deadweight costs that result from any potential or real protecting and capturing.” See Douglas W. Allen, *What Are Transaction Costs?*, in 14 *RESOURCE LAW AND ECONOMICS* 1, 3 (Richard O. Zerbe, Jr. & Victor P. Goldberg eds., 1991).

86. See Douglas W. Allen & Dean Lueck, *Ownership Versus Contracting for the Control of Assets*, in *THE NATURE OF THE FARM: CONTRACTS RISK, AND ORGANIZATION IN AGRICULTURE* 139, 147–48, 156–58 (2003).

more likely to own land used for fruit orchards, nut farms, and vineyards. This choice avoids the potentially high transaction costs of specifying and enforcing leases that call for the diligent pruning that is necessary for sustaining high quality harvests of these crops.⁸⁷

Despite higher transaction costs, however, leasing or contracting for inputs can sometimes increase profits. This is because divided ownership better facilitates gains from specialization. For example, owners of farmland who lack farming experience are more likely to lease their land to an experienced farmer than farm it themselves.⁸⁸ When farming rights are leased to a more capable farmer, the land produces more crops for a given level of farmer effort. Leasing provides a net gain to the landowner as long as the experienced farmer charges less for his time than the value of the landowner's effort in a non-farming capacity. However, in choosing whether to lease his land, the inexperienced farmer must weigh these potential gains from specialization against the costs of specifying, monitoring, and enforcing the lease.⁸⁹

B. Transaction Costs, Specialization, and the Organization of Land Trusts

This tradeoff in the context of land trust conservation is straightforward. Land trusts are not often staffed with an abundance of experienced farmers, ranchers, or loggers.⁹⁰ Because a separate landowner generally has a comparative advantage in producing crops, beef, and timber, conserving these lands with conservation easements will probably facilitate more economical production of non-conservation output.⁹¹ But easements divide ownership, and prohibited land uses will

87. *Id.* at 151-54.

88. *Id.* at 154-55.

89. *Id.* at 146-50. See also BARZEL, *supra* note 84, at 33-64 (hypothesizing that specialization and transaction cost tradeoffs determine if and how asset ownership is divided).

90. Most land trusts are small organizations with limited resources. In 1998, the median budget for a sample of 654 state and local land trusts was only \$18,490. For a slightly smaller sample of land trusts reporting staffing information, the median number of full-time employees was two and the median number of part-time employees was one-and-a-half. 1998 NATIONAL DIRECTORY, *supra* note 3.

91. See, e.g., James Boyd et al., *The Law and Economics of Habitat Conservation: Lessons from an Analysis of Easement Acquisitions*, 19 STAN. ENVTL. L.J. 209, 214 (2000) ("conservators who are not farmers may be less able to maximize the financial value of conservation-compatible land uses...."). See also BRENDA LIND, WORKING RANCHLAND CONSERVATION EASEMENTS 13 (2002) (quoting conservation consultant Story Clark: "Ranchers know more about management for agricultural purposes than land trusts do."). Of course, land trusts can own land outright and lease rights back to farmers, ranchers, or loggers. This strategy also entails transaction costs. See *infra* Part IV and text accompanying notes 115-117.

be costly to monitor and enforce.⁹² Furthermore, in spite of time-consuming efforts to specify provisions, some land uses will not be clearly permitted or prohibited.⁹³ Ambiguous delineation of land rights creates incentives for both parties to try to capture the value of the unclaimed property interests, thereby reducing the net value of the land under divided ownership.⁹⁴

For example, if timber prices rise, the landowner has an incentive to exploit ambiguous descriptions of streamside buffer zones in the easement by claiming a right to harvest more timber. Or, if the number of land trust donors with recreational interests swells, the trust has an incentive to exploit ambiguous restrictions concerning public access by claiming a right to allow more liberal access. To be sure, attorneys can draft conservation easements that mitigate such ambiguity.⁹⁵ Even so, obtaining this assurance can be time-consuming. Furthermore, some land uses that are explicitly prohibited in conservation easements are still costly to monitor and enforce.⁹⁶ In certain instances, therefore, the land trusts' only reliable way of avoiding potentially high transaction costs is to own land outright.⁹⁷

Insofar as land trusts try to reduce the long-run costs of providing environmental amenities, we should therefore observe conservation easements when expected transaction costs are low or when expected gains from specialization are high. For example, we might expect land trusts to hold easements over productive farmland

92. See Boyd et al., *supra* note 91, at 215 (recognizing that "it may be difficult to monitor and enforce the terms of an easement contract"). See also Keith Weibe et al., *Managing Public and Private Land Through Partial Interests*, 15 CONTEMP. ECON. POL. 35, 42 (1997) (explaining that negotiation, monitoring, and enforcement costs are higher for conservation easements than for full interest acquisitions).

93. A conservation easement is like a relational contract that governs an ongoing relationship between a land trust and a series of landowners. See Boyd et al., *supra* note 91, at 219-33. Relational contracts are invariably incomplete, either because they fail to express provisions for all contingencies or because they stipulate future states too rigidly. See Alan Schwartz, *Relational Contracts in the Courts: An Analysis of Incomplete Agreements and Judicial Strategies*, 21 J. LEGAL STUD. 271, 278-81 (1992).

94. See generally BARZEL, *supra* note 84, at 3-6.

95. See Andrew C. Dana, *The Silent Partner in Conservation Easements: Drafting for the Courts*, 8 THE BACKFORTH: THE NWSL. OF LAND CONSERVATION L. (Hastings College of Law), Jan.-Feb. 1999, at 7-8.

96. Because land trusts can only periodically monitor easements, establishing cause-and-effect relationships between landowner actions and changes in the landscape may be difficult. See Boyd et al., *supra* note 91, at 215 ("For example, failure to uphold conservation terms may be difficult to discern if natural changes in land cover are indistinguishable from changes induced by poor management or a change in a farming technique.").

97. See, e.g., Dana, *supra* note 95, at 12 ("[P]roperties that need intensive management to provide significant public values are probably better candidates for acquisition in fee than for conservation easements.").

when the conservation value lies mostly in bucolic scenery. A trust can preserve scenic views simply by prohibiting conspicuous construction. Specifying, monitoring, and enforcing such terms in conservation easements should not be difficult.

If transaction cost theory applies to land trusts, however, they must be motivated to reduce costs in an environment strikingly different than that of profit-seeking firms. Unlike most firms, land trusts do not bear the full costs of providing environmental amenities because their acquisitions are usually financed in part through the tax code.⁹⁸ And land trusts probably do not receive financial rewards that, in the case of profit-seeking firms, are highly correlated with maximizing the difference between long-run benefits and costs.⁹⁹ For these reasons, land trusts may have weak incentives to carefully weigh the tradeoffs of landowner specialization and transaction costs when deciding how to conserve land.¹⁰⁰

At the same time, forces different from those that work on firms may prompt land trusts to consider how the factors affect long-run costs. The success of the private land conservation movement ultimately depends on its ability to make cost-effective decisions. Knowing this, land trusts employ self-regulation devices and disseminate information that guides and coordinates their efforts as a group. For example, the umbrella organization Land Trust Alliance differentiates land trusts that have complied with its Standards and Practices policies.¹⁰¹ The Land

98. See *supra* Part II and accompanying notes 61–80.

99. See, e.g., Henry B. Hansmann, *The Role of Nonprofit Enterprise*, 89 YALE L.J. 835, 838 (1980) (“A nonprofit organization is, in essence, an organization that is barred from distributing its net earnings, if any, to individuals who exercise control over it, such as members, officers, directors, or trustees.”).

100. To be sure, land trusts have strong incentives to consider these factors when their beneficiaries penalize imprudent conservation decisions. Land trust beneficiaries, however, are ill-defined and sometimes lack the information and incentives needed to vigilantly monitor land trusts and carefully critique their conservation decisions. In academic jargon, slack between the land trust (agent) and its beneficiaries (principals) is sometimes loose. As a consequence, land trusts will not be held accountable for every decision they make. See generally Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, J. FIN. ECON. 305 (1976) (describing the principal-agent problem in a for-profit business context).

101. LAND TRUST ALLIANCE, THE STANDARDS AND PRACTICES GUIDEBOOK (1997); see also LAND TRUST ALLIANCE, FIND A LAND TRUST NEAR YOU, at <http://www.lta.org/find/landtrust/index.html> (last visited July 30, 2004) (noting that “S&P” next to a land trust’s listing “indicates adoption of LTA’s Standards & Practices, guidelines for responsible and ethical operation of a land trust”).

Trust Alliance also provides various publications and conferences that teach members easement drafting and stewardship techniques.¹⁰²

The section that follows assumes that self-regulation and training succeed so that land trusts are motivated to reduce the costs of providing a given amenity. This assumption allows me to apply transaction cost theory to generate predictions of different portfolios of full interest land and conservation easements among land trusts. The data discussed in section V imply that this assumption about land trust motives is reasonable.

IV. THE ECONOMIC TRADEOFFS OF EASEMENTS AND FULL OWNERSHIP¹⁰³

Building from transaction cost theories of firm ownership, this section more precisely analyzes the economic tradeoffs generated when land trusts conserve land with full ownership or conservation easements.¹⁰⁴ The analytical framework focuses on economic tradeoffs resulting from changes in the transaction costs of holding conservation easements and from changes in the benefits to be accrued from land trust and landowner specialization.¹⁰⁵ It is worth emphasizing that the framework does not attempt to explain why a land trust is the vehicle for providing open space, wildlife habitat, or any other environmental amenity on private land.¹⁰⁶ Although this question is worthy of analysis, it is peripheral to this article's focus on the economic tradeoffs of conserving land with full ownership or conservation easements.

102. See LAND TRUST ALLIANCE, THE CONSERVATION EASEMENT LIBRARY, at http://www.lta.org/publications/easement_lib.htm (last visited July 30, 2004); See also LAND TRUST ALLIANCE, TRAINING AND CONFERENCES, at <http://www.lta.org/training/index.html> (last visited July 30, 2004).

103. A formal economic model is presented in Dominic P. Parker, Easements or Ownership? Transaction Costs and the Economics of Land Trust Conservation, 8-18 (2004) (unpublished manuscript, on file with author).

104. The framework most closely follows the logic of BARZEL, *supra* note 84, at 3-55.

105. The role of tax benefits in affecting conservation methods is discussed later in this article. See discussion *infra* Part VI.

106. The framework does suggest that land trusts have a comparative advantage over landowners in assembling and coordinating the necessary inputs. For an analysis of why the number of land trusts has surged in some regions but not in others, see Sean Mulholland, *Land Trusts: The Growth of the Non-Profit Land Conservancy Movement*, in INCENTIVES AND CONSERVATION: THE NEXT GENERATION OF ENVIRONMENTALISTS (Daniel K. Benjamin ed., in press) (arguing that increasing distrust of government action and new institutional technologies, e.g., the conservation easement, have spurred the growth of land trusts).

A. Land Trusts as Producers of Environmental Amenities

To begin, assume that a land trust wishes to preserve or enhance environmental amenities (E) on a given landscape.¹⁰⁷ Examples of E include scenic views, wildlife habitat, and recreational trails. In order to produce E, the land trust must acquire and control some of the rights related to the tract of land and dedicate them to amenity production. Rights used to produce E may be negative, such as the right to restrict development or regulate farming practices, or positive, such as the right to plant vegetation or construct trails. In either case, rights employed in the production of E are considered conservation rights.

The remaining non-conservation rights are residual rights and can be used to produce non-conservation output (Y). Non-conservation rights may be positive, such as the right to graze livestock, or negative, such as the right to restrict recreational access. As residual rights, the non-conservation rights are inversely related to conservation rights. That is, a negative conservation right is a *positive* non-conservation right and a positive conservation right is a *negative* non-conservation right. For example, if a land trust acquires (negative) rights to restrict grazing seasons and Animal Unit Months, there is a corresponding decrease in the right to graze animals, which is a positive non-conservation right associated with the parcel. If the land trust acquires (positive) rights to allow public access, there is a corresponding decrease in the right to prohibit public access, which is a negative non-conservation right associated with the parcel.

The total value of land used to produce environmental amenities is positively correlated with the expected value of E plus the expected value of Y. For example, if the tract of land is used to produce corn and to provide public access, the aggregate value of the land is positively related to expected demand for corn and outdoor recreation. Net values depend on the expected costs of producing E (deer) and Y (corn). The opportunity cost of employing conservation rights depends on the

107. The land trust wants to preserve or enhance E on a parcel of land either because of exogenous increases in the demand for amenities or exogenous decreases in the costs of providing them. On the demand side, an increase in the number of recreation enthusiasts, for example, might spur a land trust to expand a hiking trail. On the cost side, increases in the number of volunteers available for trail maintenance might spur a land trust to expand a hiking trail (because labor costs are lowered). These factors can be considered exogenous because they are mostly determined by external factors outside of any particular land trust's control. This is a simplifying assumption, of course, because an entrepreneurial land trust can lower the costs of providing amenities with innovative strategies. For a discussion of such strategies, see Terry L. Anderson, *Viewing Land Conservation through Coarse-Colored Glasses*, 44 NAT. RESOURCES J. 361 (2004).

expected value of *Y*. For example, the opportunity cost of restricting a development project depends on its expected value. Conversely, the opportunity cost of employing non-conservation rights depends on the expected value of *E*. For example, the opportunity cost of developing a wooded parcel depends on the expected value of lost wildlife habitat.

Other relevant costs include those incurred to employ non-conservation and conservation labor. Non-conservation labor inputs are combined with positive non-conservation rights in the production of *Y* (e.g., farming for corn). A land trust that wants to enhance, rather than preserve *E*, will need to acquire positive conservation rights and employ conservation labor (e.g., for ecological restoration or trail maintenance).

Within this traditional production setup, the expected net value of the land is maximized by dedicating the optimal combination of rights towards conservation and employing the optimal units of conservation and non-conservation labor. Given mathematical assumptions about the relationship between input employment and expected values and costs, this model could predict changes in input use with respect to changes in expected values and costs. It is worth emphasizing, however, that the production setup tells us little about factors that would motivate conservation easements or full interest.¹⁰⁸ Under the assumption of zero transaction costs, as the Coase Theorem implies,¹⁰⁹ input use is optimized regardless of whether land trusts control land use with full ownership or with a conservation easement. In other words, land will provide the same combination of amenities and non-conservation output, at the same cost, under either regime.

B. Transaction Costs under a Conservation Easement or Full Ownership Regime

Of course, transaction costs are not zero and they depend on the regime that is used to control land. Under a conservation easement

108. See Yoram Barzel, *Property Rights in the Firm*, in PROPERTY RIGHTS: COOPERATION, CONFLICT, AND LAW 43, 44–46 (Terry L. Anderson & Fred S. McChesney eds., 2003) (discussing how neoclassical models of the firm are not informative with respect to predicting how a firm will control its inputs).

109. As noted by Robert Cooter and Thomas Ulen, “The theorem is suggested, but not explicitly stated, in the classic article by Professor Coase.” Here, I apply one of Cooter and Ulen’s interpretations of the theorem, namely that “[t]he initial assignment of property rights does not matter when transaction costs are zero.” ROBERT COOTER & THOMAS ULEN, LAW & ECONOMICS 101 (1988). Put in the context above, this means that when transaction costs are zero, the same amount of *E* and *Y* will be produced regardless of whether land trusts use easements or ownership.

regime, the land trust acts as the residual claimant to E,¹¹⁰ and a separate landowner is the residual claimant to Y. Divided ownership creates incentives for the landowner or land trust to try to capture the value of the other party's residual claim, as described earlier.¹¹¹ As a result, each party incurs costs to specify, monitor, and enforce their property rights.¹¹²

Two categories of transaction costs are relevant. The first is the cost of specifying, monitoring, and enforcing claims to negative conservation rights. For example, if the negative conservation right is one that regulates residential structures, transaction costs include efforts to define permissible quantities, sizes, and locations and to monitor and enforce compliance. The second is the cost of specifying, monitoring, and enforcing claims to positive conservation rights. For example, if the positive right allows the land trust access to plant or remove vegetation, transaction costs include the efforts to define appropriate access methods, times, and numbers and to monitor and enforce compliance. Notice that under a conservation easement regime the land trust will always incur transaction costs. When the land trust acquires positive conservation rights, however, the landowner also incurs transaction costs associated with asserting her claim to the related residual rights.

Land trust full ownership effectively eliminates these transaction costs.¹¹³ Under this regime, the land trust acts as the residual claimant to both E and Y. It has incentives to use the land in such a way that minimizes the costs of providing environmental amenities. For example, it will not seek to graze cattle in a way that threatens stream banks if it wishes to preserve water quality. It will graze cattle, however, to the extent that water quality is not threatened. Not doing so would be at the opportunity cost of preserving water quality elsewhere.

110. Land trust beneficiaries are technically the residual claimants to E. The land trust, however, will act like the residual claimant to E if it is either monitored scrupulously by its beneficiaries or its employees receive utility positively correlated with the quality and quantity of environmental amenities it provides.

111. See *supra* text accompanying notes 92-97.

112. See, e.g., BARZEL, *supra* note 84, at 3-6.

113. The assumption here is that the land trust does not own the land outright and lease farming, grazing, or logging rights to a third party. Such an arrangement would temporarily divide residual claims to E and Y and create incentives similar to those created by a conservation easement.

C. Specialization under a Conservation Easement or Full Ownership Regime

Although full ownership eliminates these transaction costs, conservation easements offer specialization benefits that may offset their higher transaction costs. Those benefits help explain why conservation easements are prevalent in practice.

Relative to a land trust, a landowner has a comparative advantage in converting positive non-conservation rights into non-conservation outputs (Y). For example, farmers can produce crops at a lower cost than can most land trusts. Under a fee-simple ownership regime, the land trust can use its own labor to generate Y or it can contract with a specialist (*e.g.*, farmer or rancher). If the land trust uses its own labor, it will forego gains from specialization. But if the trust contracts with a specialist, it will have to monitor his or her performance and search for the appropriate rental price. Either scenario implies that the marginal cost of a comparable unit of non-conservation labor is likely to be higher under a land trust ownership regime than it is under a conservation easement regime.

In contrast, relative to a landowner, a land trust generally has a comparative advantage in converting positive conservation rights into conservation outputs (E).¹¹⁴ Under a conservation easement regime, amenity enhancement can be conducted with land trust or landowner labor. If the landowner conducts the labor, gains from specialization generally will be forfeited. If the land trust conducts the labor, the landowner will incur the transaction costs discussed above.

D. Transaction Cost and Specialization Tradeoffs

Table 3 shows the economic tradeoffs of easements versus land trust full interest ownership. The basic tradeoff involved with the preservation of environmental amenities (E) with easements is one of weighing the potential for high land trust transaction costs against the potential benefits derived from landowner specialization. If land trusts are motivated to reduce the costs of preservation, they will be more likely to preserve E with conservation easements when expected transaction costs are low or when potential gains from landowner specialization are high.

114. Land trusts are more likely to have access to ecologists and other environmental scientists as well as volunteer labor. In addition, land trusts are probably better suited to coordinate restoration and other active management activities among distinct landholdings.

In contrast to mere preservation, tradeoffs involved with the enhancement of amenities are more complicated. Potential gains from landowner specialization under an easement regime must be weighed against the potential for high transaction costs incurred by both the land trust and the landowner. In general then, transaction cost theory predicts that land trusts should be less likely to *enhance* E with conservation easements than they are to preserve E. Easements may be justified, however, if potential gains from landowner specialization are sufficiently high to outweigh the potentially high transaction costs.

	Preservation of E		Enhancement of E	
	Easement	Full Interest	Easement	Full Interest
Potential for high land trust transaction costs	Yes	No	Yes	No
Potential for high landowner transaction costs	No	No	Yes	No
Potential gains from landowner labor specialization	Yes	No	Yes	No
Potential gains from land trust labor specialization	No	No	Yes	Yes

It should be emphasized that the tradeoffs in Table 3 are unequivocal only when the land trust does not own the land outright and leases farming, grazing, or logging rights to a third party. Such an arrangement would temporarily divide residual claims to E and Y, allowing specialized non-conservation labor at the expense of efforts to monitor the terms of the lease and search for appropriate rental prices. Whether the transaction costs of owning and leasing are greater than the transaction costs of holding conservation easements will depend on specific characteristics of the land, landowner, and land trust, as well as the legal enforceability of easements.

In general, the transaction costs of easements should be lower than those related to owning and leasing when the land trust is simply engaged in amenity preservation. Conservation easements do not require multiple negotiations (as leases expire), nor do they require vigilance in monitoring a tenants' treatment of soil and other productive attributes of the land.¹¹⁵ In contrast, enhancing amenities with conservation easements may tend to generate higher transaction costs than land trust ownership and leasing. Amenity enhancement calls for

115. Agriculture tenants, especially ones with short-term leases, have incentives to increase current yields at the expense of future yields. See generally ALLEN & LUECK, *supra* note 86.

“adaptive management”—a process of experimenting with, and monitoring the outcome of, different natural resource management techniques.¹¹⁶ Land trust ownership with leasing arrangements should be more amenable to adaptive management, particularly because conservation easements are difficult to amend.¹¹⁷

V. OBSERVED BEHAVIOR: ANALYSIS OF LAND TRUST ACREAGE¹¹⁸

Two types of data sets help assess whether land trust ownership patterns respond to the tradeoffs illustrated in Table 3. The first, a time-series data set, is used to examine whether increases in the prevalence of conservation easements over time is explained by decreases in the transaction costs land trusts face when holding them. The second, a cross-section data set, is used to examine whether differences in transaction costs and specialization benefits related to holding easements explain differences in the conservation methods used by individual land trusts at a snapshot in time. For both types of analysis, Land Trust Alliance surveys of state and local land trusts throughout the United States provide the primary data source.¹¹⁹ Time series analysis uses data from surveys conducted in 1984, 1990, 1997, and 2000.¹²⁰ Cross-section analysis employs data from only the 1997 survey.¹²¹

116. See generally George Wilhere, *Adaptive Management in Habitat Conservation Plans*, 16 CONSERVATION BIOLOGY 20, 21 (“[A]daptive management can be defined as the systematic acquisition and application of reliable information to improve natural resource management over time.”). For a discussion of management contracts conducive to adaptive management, see Christopher S. Elmendorf, *Securing Ecological Investments on Other People’s Land: A Transaction-Costs Perspective*, 44 NAT. RESOURCES J. 529 (2004).

117. The Land Trust Alliance cautions land trusts against agreeing to amendments and the IRS tax code disallows amendments that decrease the value of the original donation (providing a tax deduction was taken). See, e.g., DIEHL & BARRETT, *supra* note 40, at 121–25.

118. For a more complete discussion of the data and empirical analysis summarized here, see Parker, *supra* note 103, at 18–31.

119. The surveys attempted to identify the name and mailing address of every land trust operating in the United States. Furthermore, the surveys attempted to quantify the number of acres “protected” by each land trust.

120. Results from the 1984 survey were published in 1985, LAND TRUST EXCHANGE, *supra* note 21; from the 1990 survey in 1991, LAND TRUST ALLIANCE, 1991–92 NATIONAL DIRECTORY OF CONSERVATION LAND TRUSTS (1991); from the 1997 survey in 1998, 1998 NATIONAL DIRECTORY, *supra* note 3; and from the 2000 survey in 2000. In lieu of printing and distributing copies of the 2000 survey results, the LTA has made these data available only through customized responses to specific queries from member organizations. However, extensive summary data are available online. See SUMMARY DATA, *supra* note 17.

121. The 1997 survey is used instead of the 2000 survey because data from the 1997 survey can be matched with other relevant data. For example, the cross-section analysis

A. Land Trust Responses to Changes in Transaction Costs Over Time

Table 1 shows that conservation easement growth outstripped full interest acquisition growth from 1990 to 2000. In 1990, 52 percent of state, local, and regional land trust acreage was held in conservation easements compared with 68 percent in 2000. Across states, the median percentage of acreage held in easements nearly tripled, increasing from 22 percent in 1990 to 61 percent in 2000. These statistics show that the trend towards greater reliance on easements was broadly distributed across states. The trend was driven by mature land trusts—those formed prior to 1990. Roughly 50 percent of the acres held by land trusts established after 1990 were in easements. In comparison, roughly 80 percent of the acres acquired (between 1990 and 2000) by land trusts formed prior to 1990 were in easements (figures not shown in Table 1).¹²²

Although also not shown in Table 1, the 1990 to 2000 increase in the percentage of acres held in easements was calculated for each state. The increase for Colorado, for example, was 31 because 98 percent of land trust acres in the state were in easements in 2000 compared with 67 percent in 1990. This statistic was positive for 38 states, negative for 12 states, and the mean was 21 for all states.¹²³ It is interesting to note that the mean increase was 34 for the 8 states that adopted easement-enabling statutes after 1990 compared to 20 for the 40 states adopting statutes prior to 1990.¹²⁴ The mean increase was 34 for the 29 states that adopted statutes after 1985 compared with 14 percent for those that adopted statutes prior to 1985.

The findings above build some preliminary support for the transaction cost theory. General trends toward more reliance on conservation easements may be explained by declining transaction costs. Better legal technologies and more sophisticated coordination among

employs county-level, U.S. Census of Agriculture data, which were gathered by the U.S. Department of Agriculture in 1997, but not in 2000. See *infra* note 130.

122. Slightly different calculations reveal similar results. For the 198 land trusts that held acres in 1985 as well as 1998, the percentage of their acreage in easements increased from 48 percent in 1985 to 73 percent in 1998. The 1998 percentage of acreage held in easements by land trusts formed after 1985 was 53 percent. These calculations employ data from LAND TRUST EXCHANGE, *supra* note 21; 1998 NATIONAL DIRECTORY, *supra* note 3; and are on file with the author.

123. These calculations employ summary data from the LAND TRUST ALLIANCE, 1991–92 NATIONAL DIRECTORY OF CONSERVATION LAND TRUSTS and the LAND TRUST ALLIANCE, 2000 NATIONAL LAND TRUST CENSUS, at http://www.lta.org/newsroom/census_summary_data.htm (last visited Aug. 2, 2004), and the calculations are on file with the author.

124. These calculations, which are on file with the author, use easement-enabling statute data from Squires, *supra* note 49, at 72–73.

land trusts mean that easements are now less costly to draft, monitor, and enforce. This notion is evidenced—albeit crudely—by the fact that existing land trusts have driven the shift toward more reliance on easements. Assuming that their primary missions remained intact, these land trusts appear to have shifted the means for achieving their goals as the transaction costs of doing so declined. In addition, the finding that land trust reliance on easements increased most rapidly in states that had recently adopted a statute is consistent with the notion that easement-enabling statutes increase the likelihood that courts will enforce conservation easements, thereby triggering an influx of easement acquisitions relative to fee-simple.¹²⁵

B. Individual Land Trust Responses to Transaction Costs and Specialization

The next question is whether differences in transaction costs and specialization benefits explain why individual land trusts, operating in different locations at a given moment in time, hold more of their acres in conservation easements or full ownership. The snap-shot-in-time, cross-section data set is comprised of about 760 land trusts that were established prior to 1999.¹²⁶ All land trusts in the sample hold land in conservation easements, fee-simple, or both. Sample land trusts operate in a region defined either by an entire state, multiple counties within a state, a single county, or a city contained in a county.¹²⁷

1. Measures of Transaction Costs and Specialization Faced by Different Land Trusts

Variations in transaction costs and specialization benefits faced by these land trusts is accounted for by differences in their conservation goals and the characteristics of landholdings and legal statutes in their area of operation. More precisely, variation among land trusts is accounted for by differences in (1) the environmental amenities they provide for beneficiaries; (2) whether they seek to enhance, rather than simply preserve, amenities; (3) the average size of landholdings sought; (4) easement-enabling statutes under which they operate; and (5) the land's capacity to simultaneously produce non-conservation output.

125. This is essentially the argument presented by Dana & Ramsey, *supra* note 4, at 17-21.

126. These data come from the 1998 NATIONAL DIRECTORY, *supra* note 3.

127. Land trusts operating in multiple states, such as the Rocky Mountain Elk Foundation, The Nature Conservancy, and the Forest Trust, are excluded from the sample because their land holdings are not governed by a single state law.

Amenities Provided. In the 1998 *National Directory of Conservation Land Trusts*, land trusts reported providing watersheds/water quality, wetlands, river corridors, trails, greenways, parklands, community gardens, scenic views, scenic roads, rare species habitat, historic and cultural sites, and forests.¹²⁸

Enhancement of Amenities. Some of the land trusts engage in "ecological restoration" or "management activities for rare and endangered species."¹²⁹ These activities distinguish land trusts that simply preserve amenities from those that enhance or create amenities.

Size of Landholdings in Area of Operation. The U.S. Department of Agriculture's 1997 Census of Agriculture¹³⁰ contains information about agricultural land holdings including estimates of the number of farms and acres of farmland by county. This information is used to estimate the average size of agricultural landholdings in the region in which each land trust operates. This variable is a proxy for the average size of private landholdings that a land trust might help conserve.

Easement Enabling Statutes. As noted in section II, Oklahoma, Pennsylvania, North Dakota, and Wyoming did not have easement enabling statutes as of 1998.¹³¹ Also noted in section II, easement statutes were enacted in various years and vary in terms of which amenities they explicitly allow conservation easements to protect.¹³² For purposes here, land trusts are grouped by whether they operate under an easement enabling statute. If they do, they are also grouped by whether they were organized prior to the enactment of the state's original easement-enabling statute and by whether their statute is a variant of the UCEA.¹³³

Land's Capacity for Jointly Producing Non-Conservation Output. Some land trusts focus on protecting farmland, ranches, or timberland¹³⁴ (working lands). Once the development value of land is suppressed, working lands tend to have high non-conservation value relative to non-working land.

128. The Directory lists "the primary land types protected by a land trust. A land trust may protect additional types of land or resources [amenities] that are not listed in this directory." 1998 NATIONAL DIRECTORY, *supra* note 3.

129. *Id.*

130. The census is available at <http://www.nass.usda.gov/census/> (last visited Aug. 2, 2003).

131. Squires, *supra* note 49, at 72-73.

132. *Id.*; see also Mayo, *supra* note 52, at 28-30.

133. These groupings use data displayed by Squires, *supra* note 49, at 72-73.

134. Timberlands are logged while forests are not. See 1998 NATIONAL DIRECTORY, *supra* note 3.

2. Empirical Tests and Results

Regression analysis estimated the percent of acreage that land trusts controlled with conservation easements as a function of the above factors.¹³⁵ Factors that increased the likelihood that a land trust would hold more of its acreage in conservation easements were (1) the provision of scenic views, (2) increases in the average size of agricultural landholdings in the land trusts' area of operation, and (3) whether the land was logged, farmed, or ranched. The factors that increased the likelihood that a land trust would hold more of its acreage in fee-simple were (1) providing recreational amenities, (2) enhancing amenities, and (3) operating under a UCEA statute. The factors that had no effect on the likelihood that a land trust would hold more of its acreage in easements were (1) operating under an easement-enabling statute and (2) providing watersheds/water quality, wetlands, rare species habitat, historic and cultural sites, or forest amenities.

These results are generally consistent with the transaction cost theory. Consider first the findings regarding amenities provided. The amenities that are easiest to provide with conservation easements are scenic views. The land trust simply needs to prohibit certain construction and commercial use and periodically inspect the property to make sure new structures that spoil the view have not been erected. However, the transaction costs of using easements to provide forests, watersheds/water quality, wetlands, rare species habitat, and historic sites are variable and depend on specific characteristics of the land.¹³⁶ In general, then, the transaction costs of providing these amenities with easements may be high or low. As predicted, land trusts prefer easements when preserving environmental amenities entails low transactions costs.

Transaction cost theory also explains why land trusts would prefer to provide recreational amenities with full interest ownership. Doing so with conservation easements could generate high transaction costs. Either the land trust or the landowner would need to construct and maintain trails and related facilities and such building and maintenance agreements would be costly to specify and monitor. In addition, the parties would need to agree to a recreational plan that defined access numbers, times, and methods. The plan would require monitoring to assure compliance because the landowner would have incentives to

135. Readers interested in details should consult Parker, *supra* note 103, at 18–31.

136. Consider water quality as an example. On one hand, water quality in a rural area may be improved by simply fencing cattle to prevent them from grazing next to a watershed. On the other hand, ensuring water quality in an urban area may require the use of costly measuring and monitoring devices.

shirk on providing adequate access and the land trust would have incentives to maximize recreational opportunities for its beneficiaries. Furthermore, trails require connected parcels and their provision via easements could be thwarted by one or two unwilling landowners.¹³⁷ Hence, land trusts that provide recreational amenities tend to prefer full interest ownership because of its lower transactions costs.

Enhancing amenities presents similar issues. Like providing recreational amenities, enhancing environmental amenities through easements also requires management agreements with the landowner. Forming such agreements requires the creation of standards, monitoring to see if the standards have been achieved, and the modification of management practices in response to new information.¹³⁸ These transaction costs are likely to be high, especially as property ownership changes, enhancing amenities requires spatial coordination of land use over multiple parcels. Land trust ownership allows trusts to adaptively manage resources without time consuming negotiations and relationship building with landowners.

Transaction costs may also explain why easements are used more often where agricultural holdings are large. Economies of scale offered by large landholdings would lower the transaction costs per acre. Monitoring multiple small parcels involves more time to measure the condition of the separate properties, more time and travel expenses to schedule and conduct periodic monitoring visits, and more time to build relationships with landowners. Therefore, easements would be preferable where trusts can acquire larger holdings.

Consider next the finding that land trusts preserving working lands are more likely to hold a greater percentage of their acres in easements. This finding is consistent with the idea that easements will be used when there are large gains to be accrued from the specialization of a landowner that is not the land trust. For any given level of effort, the yield from farm or ranch land should be significantly higher when generated by a specialized operator. Because there is no such yield from non-agricultural land, there is less to be gained from divided ownership. By relying primarily on conservation easements over working lands, land trusts are exploiting economic benefits that arise from the comparative advantage of specialization.

137. These arguments suggest that the costs of providing recreational access should rise with increases in population pressures. Regression results indicate that this is the case. Increases in population density increase the likelihood that land trusts will provide recreational amenities with full ownership when controlling for other factors. See Parker, *supra* note 103, at 25.

138. See, e.g., Wilhere, *supra* note 116, at 21-22.

Two findings, however, are at odds with the transaction cost theory: first, land trusts operating under a UCEA statute held less acreage in easements relative to trusts operating under non-UCEA statutes, and second, land trusts operating under an easement-enabling statute do not hold more acres in easements than trusts without such a statute. The UCEA result, however, is not completely unexpected because many non-UCEA states have statutes and legal precedent that rival UCEA statutes with regard to easement enforceability.¹³⁹ In addition, land trusts in states that lack UCEA statutes will be more motivated to lobby for UCEA statutes only if the existing statute is weak. The second finding is more surprising. It suggests that easement enforcement is not markedly different in states that lack statutes. It may be that the difficulties of enforcing easements under the common law occur more in theory than in practice. The subject of easement enforceability and easement statutes merits more research.¹⁴⁰

VI. TAX INCENTIVES: THE OTHER DRIVER

Considered together, the data and empirical results imply that land trusts hold full interest and easement acreage in such a way that exploits gains from specialization and mitigates transaction costs. But tax incentives are also an important driver. Over time and across locales, variation in the tax benefits of donating fee-simple and easement acreage should influence the supply of conservation easements and full land interests offered to land trusts.

A. Changes in Tax Incentives Offered to Landowners over Time

It is difficult to determine how much of the trend toward greater reliance on conservation easements is explained by federal tax incentives. Time series data that quantify land trust easement and fee-simple acreage before and after 1976 would better enable testing of the effect of the federal income tax incentive. Unfortunately, such data are not readily available. With available data, one might discern the effect of federal tax incentives by carefully controlling for changes in the

139. This is especially the case in the predominantly non-UCEA Northeast. See Marchetti & Cosgrove, *supra* note 58, at 78-101.

140. The statute-year data from Squires, *supra* note 49, at 72-73, may be inappropriate for use in this context. See Antony W. Dnes & Dean Lueck, *Common Law, Statute Law and the Conservation Easement* (2003) (unpublished manuscript, on file with author) (suggesting that Squires does not distinguish between the year in which statutes were created to enable public agencies from the year in which statutes were created or amended to enable private holders).

transaction costs of holding easements over time. Controlling for such costs, however, is complicated. The most quantifiable transaction cost reducing device—the easement-enabling statute—also increases the likelihood that landowners can capitalize on federal tax incentives.¹⁴¹ Despite this constraint on empirical analysis, common sense suggests that federal income and estate tax incentives have helped to propel the use of conservation easements since 1976.

B. Differences in Tax Incentives across States and Locales

Fewer impediments constrain empirical analysis of the effects of tax incentives across states and locales. As discussed in section II, seventeen states have statutes that require local assessors to reduce property value assessments when a conservation easement encumbers the land.¹⁴² Holding other relevant variables constant, regression analysis shows that land trusts operating in these states hold a greater percentage of their acreage in conservation easements.¹⁴³ This finding implies that property tax incentives encourage landowners to donate conservation easements.¹⁴⁴

Because most farmers and ranchers already pay property taxes based on current-use, property tax benefits probably do not motivate donations of easements over agricultural land.¹⁴⁵ To discern whether this is indeed the case, the sample of land trusts was divided between those that acquire land interests on working lands and those that do not. In the non-working lands sample, land trusts operating in states requiring that tax appraisers take into account easement encumbrance held more of their acreage in conservation easements than did trusts operating in states without the requirement.¹⁴⁶ In the working lands sample, however, statutes requiring that tax appraisals account for conservation easements did not affect the percentage of acreage land trusts held in easements.¹⁴⁷ As expected, land trusts hold more easements if they operate in a state

141. See e.g., Squires, *supra* note 49, at 70–71.

142. DEFENDERS OF WILDLIFE, *supra* note 78.

143. For more details, see Parker *supra* note 103, at 18–31.

144. A myriad of other state-level tax incentives for donating conservation easements (e.g., income, estate, real-estate transfer) exist and should also affect land trust ownership decisions. However, these tax breaks are too disparate to quantify and categorize. See DEFENDERS OF WILDLIFE, *supra* note 78.

145. Nearly every state assesses the property tax liability of agricultural land based on value in its “current,” not “full-market” use. For a clearinghouse of state statutes, see AMERICAN FARMLAND TRUST, STATE FARMLAND PROTECTION STATUTES, available at http://www.farmlandinfo.org/farmland_preservation_laws/ (last visited Aug. 2, 2004).

146. For more details, see Parker *supra* note 103, at 29–30.

147. *Id.*

that requires property tax assessors to account for easements in valuing property. However, such laws have less impact on agricultural land because long-standing valuation methods protect such landowners from the property tax impact of full-market valuation.

Property taxes, however, do play a role in determining how land trusts preserve agricultural acreage. Consider prime versus marginal agricultural land. Holding full-market values constant, owners of prime agricultural land benefit least from current-use tax assessments. Hence, they have stronger incentives to find a property tax shelter. Land trust ownership may provide such a shelter because land trusts are nonprofits often exempt from tax liability. If so, potential gains from land trust ownership are proportional to increases in property tax liabilities. Empirical evidence suggests that some of these potential gains are captured. An increase in the property taxes paid per farm in the county or counties in which a land trust operates is negatively correlated with the percentage of acreage the trust holds as easements.¹⁴⁸ While there are several explanations for why this correlation exists,¹⁴⁹ the property tax shelter rationale is as compelling as any.

These findings confirm the common-sense predictions that tax incentives affect land trust conservation decisions. But do tax incentives trump transaction cost and specialization considerations? Consider why they might. When a trust purchases a conservation easement, it has incentives to scrutinize whether a conservation easement is the low cost option. The land trust faces the full opportunity cost of acquiring easements that are cumbersome to monitor and enforce: it could conserve other lands with the money foregone. In contrast, when trusts accept donations of conservation easements, they do not face the full opportunity cost of conserving the parcel. Donated property rights become land trust assets, but conservation easements are not liquid. IRS rules, as described earlier, generally preclude easements from being extinguished and alienated. Thus, when deciding whether to accept a donated easement, an individual trust faces a take-it-or-leave-it proposition. The trust does not assess and compare the net value of the parcel in full ownership because this is not an option.

148. For this analysis, only land trusts that protect agricultural land were considered. *Id.* at 29–30.

149. The classic land-rich, cash-poor farmer will not relieve his liquidity constraints much by donating a conservation easement when the difference between market and current use value is small. In addition, owners of prime agricultural land may be reluctant to encumber their land with easements because they are leery of constraining their future expansion opportunities. As owners of the most productive land, they have more to lose if easements impose long-term rigidities on their agricultural operations.

For these reasons, land trusts relying exclusively on donations have weaker incentives to fully weigh the specialization and transaction cost tradeoffs of full ownership versus conservation easements. Regression results reveal the effect of these different incentives. As a group, land trusts that use their own money to finance acquisitions are especially sensitive to changes in transaction costs and specialization. Land trusts that only accept donated rights also respond to these factors, albeit less markedly.¹⁵⁰ The results imply that landowners who donate land or conservation easements consider gains from their non-conservation specialization and that land trusts consider transaction costs when determining whether to accept donations. These considerations, however, appear to be of greater influence when the land trust uses its own dollars to finance the acquisition.

VII. CONCLUSION

Land trusts can preserve and enhance environmental amenities on a parcel of land by owning it outright or holding a conservation easement. Data shown here illustrate the fact that conservation easements are becoming more prevalent relative to outright ownership. Common sense implies that the trend is driven in part by new and augmented tax breaks for donating conservation easements, which are summarized in this article. This article, however, also is concerned with how changes in more subtle economic tradeoffs have influenced whether land trusts own land outright or hold conservation easements.

Tax considerations aside, the main economic advantage of conservation easements is that they better facilitate gains from landowner specialization. Through conservation easements, land trusts can conserve environmental amenities while continuing to allow landowners the right to produce non-conservation output. This can be an especially cost-effective arrangement when landowners specialize in farming, ranching, or logging and the land trust does not. In these circumstances, landowners can produce crops, beef, and timber with less effort than that required of land trusts. The cost savings are passed on to the land trust (or taxpayers) when the easement price (or tax deduction) is lower than the cost of acquiring the land minus the present value of any profits the trust can generate by farming, ranching, or logging.

Landowner specialization, however, does not necessarily render conservation easements a cheaper substitute for outright ownership. Because they will always imperfectly divide land interests, easements

150. Parker, *supra* note 103, at 28-29.

create temptations for the landowner and land trust to try to capture the value of imperfectly specified rights. Such temptation inspires the parties to protect their interests by specifying them as explicitly as possible, using time and money in the process. Despite these efforts, some well-specified interests will still be costly to monitor and enforce. These transaction costs of negotiating and holding conservation easements reduce cost-savings generated by landowner specialization.

The evidence summarized in this article indicates that land trusts tend to hold conservation easements when benefits from landowner specialization are high and when expected transaction costs are low. They do so, for example, by holding conservation easements over large parcels of agricultural land and owning outright land on which they wish to enhance amenities. These and other findings suggest that land trusts act as if they are attempting to minimize the costs of providing environmental amenities. This is good news for taxpayers who fund land acquisitions and for others with stakes in the success of land trusts. Despite being not-for-profit organizations, land trusts have the incentives and wherewithal to search for ways of reducing costs.

Funding easement acquisitions with tax deductions for donating landowners, however, can discourage cost-effective conservation in some cases. The findings described here show that tax benefits can result in trusts holding easements when full ownership would be more cost-effective or vice versa. When a land trust lacks funds to purchase easements and can only passively accept donated easements, the data also show that transaction costs have less influence on conservation decisions. In these cases, the landowner is in the driver's seat and the long-run costs of enforcing the easement do not weigh as heavily into his decision calculus.

As the popularity of tax incentives for private land conservation expands,¹⁵¹ these findings may have important policy implications. If cost minimization is a priority, policy makers should be wary of promoting tax incentives that favor one conservation method over the other. Researchers and policy makers might also consider whether alternative funding schemes could better provide trusts with incentives to consider the full costs and benefits of conserving different lands. Competitive grants to land trusts that match private dollars, for example,

151. Since 2000, several states have introduced new tax incentives for donating conservation easements. *See, e.g.,* Defenders of Wildlife, *supra* note 78; AMERICAN FARMLAND TRUST, *supra* note 145. At the federal level, proposed legislation would increase tax incentives for donating conservation easements. *See, e.g.,* LAND TRUST ALLIANCE, NEW TAX INCENTIVES FOR CONSERVATION, available at http://www.lta.org/publicpolicy/tax_incentives.htm (last visited Aug. 2, 2004).

might better encourage efficient conservation. More generally, policy makers should not only allow land trusts the room to innovate and reduce transaction costs,¹⁵² but also determine how to discourage them from discounting transaction cost and specialization considerations inherent to the problem of providing environmental amenities in cost-effective ways.

152. Readers interested in how conservation entrepreneurs have found ways to reduce the transaction costs of preserving open space, wildlife habitat, and recreational amenities on private land, should consult Anderson, *supra* note 107. Those interested in an exploratory discussion of legal mechanisms that might reduce the transaction costs land trusts face when engaging in active, ecological management of other people's land should consult Elmendorf, *supra* note 116.