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I am submitting herewith a thesis written by Gerald F. Graham, Jr., entitled "The Extent of Use Value Assessment of Farmland in the East Tennessee Development District." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Economics.

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THE EXTENT OF USE VALUE ASSESSMENT OF FARMLAND IN THE EAST TENNESSEE DEVELOPMENT DISTRICT

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee, Knoxville

Gerald F. Graham, Jr.

June 1979

1359780

ACKNOWLEDGMENTS

The author wishes to express his deep appreciation to Dr. Thomas Klindt for his helpful guidance in making this thesis a reality. Appreciation is also due to Dr. Darrell Mundy and Dr. Charles Sappington for their helpful suggestions.

The author would like to express a special appreciation to his wife for having the patience, the understanding and the courage to stand behind him throughout the long journey home.

ABSTRACT

Farmland property taxes have risen dramatically in recent years, resulting in higher fixed costs for farmers. Moreover, these higher taxes have resulted from the assessment of farmland at market values which often reflect the sale values associated with isolated parcels of farmland for nonfarm uses. Consequently, beginning with Maryland in 1956, 42 states, including Tennessee, have enacted a form of property tax relief known as "use value assessment" (see Appendix A).

Generally speaking, use value assessment provides that farmland can be assessed at farm value rather than at market value, for the purpose of reducing its tax liability. Often this device has been incorporated into farmland preservation laws which encourage preservation by enticing the landowner with property tax relief.

The purpose of this study is to examine the extent of the utilization of the Tennessee use value assessment law in the East Tennessee Development District. It will devote particular attention to the economic impact on local government finances on the counties within the district.

In addition, the study examines the characteristics of farmland owners with use value assessment and those without, in Jefferson, Knox and Sevier counties, to determine if there are discernible differences between them. Particular emphasis is placed on ascertaining the characteristics of the typical farmland owner participating in use value assessment in the District as of July 1978.

Data were obtained for the overall examination of the utilization of use value assessment through personal interviews with each of the

16 county tax assessors in the District. Of particular importance was the number of farmland parcels assessed at use value, their alternative market values, the amount of the subsequent reduction in property value, and the amount of tax savings. From these data, the economic impact on the local government finances and the resulting tax savings derived by farmland owners was calculated and analyzed.

A stratified random sample of farmland owners with use value assessment and those without was obtained from the county property tax rolls of Jefferson, Knox and Sevier counties. From this, a sample population was formed for the examination of the characteristics of farmland owners with use value assessment and those without.

Results indicated the extent of the utilization of use value assessment was limited to a few counties and ranged from 1 in Anderson, Cocke and Roane counties to 1,544 in Sevier County. Moreover, tax savings amounted to a total of $292,923, resulting in a 4.2 percent tax reduction in the combined agricultural tax liability of the District. In comparison, the tax reduction in Sevier County was 23.4 percent in agricultural tax liability.

For those farmland owners with use value assessment, the average age was 50 years and the average gross farm income was $8,600. The average number of acres owned by a farmer with full ownership of his land was 103.2 acres. The acreage owned by farmers in partnership, on the average, was 168.7 acres.

For those farmland owners without use value assessment, the average age was 54 years and the average gross farm income was $7,000. The average number of acres owned by a farmer with full ownership of his land was 89.1 acres. The acreage owned by farmers in partnership, on the average, was 91.3 acres.

Of all farmland owners in the District, approximately 32 percent were full-time farmers while approximately 68 percent were part-time farmers. Approximately 53 percent of all farmland owners had a husband and wife type of farm organization, approximately 34 percent had an individual type and approximately 13 percent had a partnership type.

The results further show the higher the level of education the more likely a farmland owner would be to participate in use value assessment. In addition, it was observed when a countywide reappraisal of land occurs, participation in use value assessment increases substantially as a result.

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CHAPTER I

INTRODUCTION

As a result of population shifts from urbanized areas to rural, there has been a reduction in both the number of farms and farmland acres while the average market value of farmland has increased. According to the U. S. Department of Agriculture,[1] the number of farms that were in production in the United States between 1972 and 1976 decreased by 4.3 percent while the number of farmland acres decreased by just 1.3 percent. This resulted in the national average size of farms to increase from 381 acres to 393 acres, a gain of 3.1 percent.

By comparison, the number of farms in production and the number of farmland acres in Tennessee decreased by 9 percent and 3 percent, respectively, between 1972 and 1976. This resulted in an increase of the average size of the Tennessee farm from 122 acres to 130 acres, an increase of 6.6 percent.

In conjunction with these trends, the average value of farmland for this same time period increased for both the United States and Tennessee. Specifically for the United States, the average value of farmland increased from $179 per acre to $320 per acre. This amounted to an increase of 79 percent. For Tennessee, the average value of farmland increased from $233 per acre to $386 per acre, an increase of 66 percent.

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[1] U. S. Department of Agriculture, Economics, Statistics, and Cooperative Service, July, 1978, Farm Real Estate Market Development; United States and Tennessee.

Of particular importance is the increase in farm property taxes. From 1950 to 1976, the average tax per acre for the United States increased from $.69 per acre to $3.17 per acre.[2] Comparatively the average tax per acre for Tennessee increased from $.46 per acre to $2.35 per acre. In percentage terms, taxes on farmland increased by 411 percent for Tennessee as compared to 360 percent for the United States.

Net farm income after inventory adjustment between 1950 and 1976 increased for the United States from $2417 to $6848, an increase of 183 percent. On the other hand, net farm income for Tennessee increased from $1244 to $2683, an increase of 116 percent.[3]

Considering that between 1950 and 1976, Tennessee had a 16 percent annual increase in property taxes as compared to 14 percent for the United States and that net farm income for Tennessee increased by 4.5 percent on an annual average as compared to 7.0 percent annual increase for the United States, the Tennessee farmer appeared at a disadvantage compared to his counterpart on the national average. Thus for the Tennessee farmer or farmland owner, net returns to land after property taxes have remained suppressed while property taxes have risen significantly.

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[2]U. S. Department of Agriculture, Economics Research Service, March, 1976, Farm Real Estate Taxes; United States and Tennessee.

[3]U. S. Department of Agriculture, Economics, Statistics, and Cooperative Service, Bulletin No. 609, September, 1978, State Farm Income Statistics; United States and Tennessee.

The Tennessee Use Value Assessment Law

In apparent response to these recent trends the State of Tennessee enacted the "Agricultural, Forest and Open Space Land Act of 1976," (hereafter referred to as the Act). The Act specifies that farmland is to be assessed at use value rather than market value.[4] The purpose of this Act is to encourage the preservation of farmland by decreasing the value of land on which taxes are determined and thereby resulting in an increase in the net return to land. Specifically, the Tennessee Legislature determined that,

> the existence of much agricultural, open space and forest lands is threatened by pressure from urbanization, scattered residential and commercial development, and the system of property taxation. This pressure is the result of urban sprawl around urban and metropolitan areas which also brings about land use conflicts, creates high cost for public services, contributes to increased energy usage, and stimulates land speculation.

Moreover,

> many landowners are being forced by economic pressures to sell such agricultural, forest, or open space land for premature development by the imposition of taxes based, not on the value of the land in its current use, but on its potential for conversion to another use.[5]

And,

> the taxing or zoning powers of governmental entities in Tennessee should not be used to force unwise, unplanned or premature development of such land.[6]

Considering only the portion of the Act which deals with agricultural land, the farmland owner of a parcel which is currently in

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[4]Tenn. Code Ann. §67-657 (a), 1976.

[5]Tenn. Code Ann. §67-651 (a), (d), 1976.

[6]Tenn. Code Ann. §67-652 (a), 1976.

farm use and no smaller than 15 acres may voluntarily request that his land be appraised at use value for tax purposes. In the context of the Act, agricultural use value means the value of land based on its current agricultural use assuming that there is no possibility of the land being used for another purpose (see Appendix B for the complete Act).

At the urban fringe, use value may be several thousand dollars per acre less than market value. Moreover, there is reason to believe that farmlands throughout Tennessee have market values in excess of values in agricultural use. Since Tennessee law stipulates that property taxes are to be assessed according to the market value of property, the contention is that the Act will provide substantial tax savings to farmland owners encouraging the preservation of farmland. A roll-back tax was integrated into the Act which stipulates that if the land is converted to a more intensive use, any tax saving generated due to the Act over the last three previous years must be paid.

The roll-back tax is second in importance only to the use value assessment provision, since it is the enforcing arm of the Act. Specifically the roll-back tax is equal to the difference between taxes paid; based on use value assessment, and the taxes that normally would have been paid under a market value assessment for the current year plus the two preceding years.

Historical Impact of Use Value Assessment

Since Maryland passed the first use value assessment legislation in 1956, several studies have been published concerning the effectiveness of use value assessments for various states as means in preserving

farmland. House studied the effects of use value assessment in eight counties in Maryland and found that assessed values of improved farmland decreased by 53 percent and assessed values of unimproved farmland decreased by 60 percent for participating farmland between 1956 and 1960.[7] House also found that reductions in the tax base ranged from 0.7 percent to 12.8 percent for counties surrounding the Baltimore and Washington, D.C. areas as well as significant reductions in revenue per acre from $1.20 to $15.20.[8]

C. H. Fields, executive secretary of the New Jersey Farm Bureau, wrote in 1972 that use value assessments were not significantly

> successful in reducing the rate of loss of farms. Before the Act we were losing 1,000 farms a year in New Jersey, now 500 or less a year . . . whether . . . farmland assessment has been really effective in slowing conversion of farmland to other uses is debatable. For one thing, the loss of 500 farms out of 8,000 is a proportionately larger loss than 1,000 farms out of 25,000 in 1950. . .[9]

Kolesar and Scholl summed up the effectiveness of use value assessments in New Jersey by stating

> calculated for the state as a whole, the Farmland Assessment Act shifted approximately $48 million in taxes to non-farmers

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[7]Peter House, Preferential Assessment of Farmland in the Rural-Urban Fringe of Maryland, U.S. Department of Agriculture, Economic Research Service, Report No. 8, (Washington, D.C.: Government Printing Office, June 1961).

[8]Peter House, Differential Assessment of Farmland Near Cities—Experience in Maryland Through 1965, U.S. Department of Agriculture, Economic Research Service, Report No. 358, (Washington, D.C.: Government Printing Office, October 1967), pp. 22-23.

[9]John Kolesar and Jaye Sholl, Misplaced Hopes, Misspent Millions, Report on Farmland Assessments in New Jersey, The Center for Analysis of Public Issues(New Jersey: New Jersey Appellate Printing Company, Inc., 1972), pp. 5-6.

> in 1972 . . . a shift of $50 an acre . . . or about two-thirds of the potential agricultural property tax burden. . . .[10]

In contrast, Hady states that "if one looks at census data on changes in effective tax rates, it is hard to pick out the impacts of use value assessment laws. Studies of individual states have found significant impacts . . . and very little in others."[11] He further contends that one reason why use value assessment has met with mixed success in that farmland has traditionally been assessed at farm use and there is little need for those farmers to seek a new use value assessment. Furthermore,

> as a result the practical effect of a use value assessment law value assessment law frequently is to make a defacto process legal. Assessment on farmland did not change much, but the assessor had a legal basis for the practice of putting lower assessments on farms. . . .[12]

Epp, Norton and Carrol, in a study of taxes in Pennsylvania showed that use value assessment would have the greatest effect in reducing farm property taxes for farmland located within heavily urban-centered cities.[13] Ching and Frick, in their examination of tax shifts in New Hampshire[14] found that farmland owners in the more urban-centered cities would receive larger tax benefits than those in the less-developed towns.

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[10] Ibid., pp. 11-12.

[11] Thomas F. Hady, "Differential Assessment Programs for Agricultural Land," a reprint from Land Use: Tough Choices in Today's World, (Soil Conservation Society of America, 1977), p. 118.

[12] Ibid.

[13] D. J. Epp, P. H. P. Norton and W. M. Carrol, The Agricultural Land Tax Issue, Farm Economics, Pennsylvania State University, April 1973, p. 2.

[14] C. T. K. Ching and G. E. Frich, "Effect of Use Value Assessment on Property Tax Rates," the American Journal of Agricultural Economics, Vol. 52, No. 4, (AAEA: November, 1970), pp. 603-606.

They contended that the average nonparticipating tax payer (includes the nonparticipating farmland owner) in rural towns would be required to pay 8.3 percent more in taxes as compared with 0.1 percent more in the more developed urban-centered cities.

Finally Knight and Drummond[15] contended that, given tax revenues remain at the same level after use value assessment as before, while farmland property taxes are reduced and farmland property values are increased the exact opposite occurs for nonfarmland owners: their taxes are increased and their property values are decreased.

Purpose of the Study

The purpose of this study is to examine the extent of the utilization of use value assessment in the 16 county East Tennessee Development District. The study devotes particular attention to the impact of use value assessment on local government finances; the tax base, tax rate, etc., and the resulting tax shift for overall District and select counties within it. The study also examines the characteristics of those farmland owners with and without use value assessment as a means in determining any significant differences between the two groups which could explain participation. It was hypothesized that the younger, better educated, part-time farmer with a higher income and farm size would be more likely to describe the typical participant in use value assessment in the District.

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[15] T. O. Knight and H. E. Drummond, Use Value Assessment: Its Impact on Property Tax Base in Payne County, Oklahoma, Research Bulletin No. 3. Vol. 50, Agricultural Experiment Station, Oklahoma State University, Stillwater, September, 1977, p. 23.

Organization of the Study

The general economic rational of and conceptual framework for evaluating use value assessment is presented in Chapter II. Chapter III examines the overall extent of use value assessment in the East Tennessee Development District and the resulting impact on local government finances. A more specific examination of use value assessment is presented in Chapter IV which deals with a case study analysis of Jefferson, Knox and Sevier Counties. Chapter V examines the characteristics of those farmland owners with and without use value assessment, the relationship between them and the factors that explain participation. Finally, Chapter VI summarizes the findings of the study and examines the policy implications.

CHAPTER II

A CONCEPTUAL FRAMEWORK FOR EVALUATION OF USE VALUE ASSESSMENT

Use value assessment laws are typically couched in terms of preserving prime farmlands from urban development or to remedy perceived inequities in the farm property tax structure.[1] In economic terms, when nonagricultural forces bid for land, the price of farmland is set relatively high resulting in low rates of return for farmers or farmland owners. It has been argued that through use value assessment, this tendency would be partially reversed by reducing the cost of owning farmland and thereby making the farm use of land more competitive with nonfarm uses.

In this chapter, the implications of use value assessment on farm income, preservation of farmland and tax shifts among property owners in a county are examined conceptually. The first section deals with the impact of use value assessment on the aggregate county tax base and the effects on the property tax rate and shifts in tax burden. The second section deals with the impact of the Act on individual farmland owners. Finally, an examination is made of the ability of the Act to accomplish the stated goals of the legislation.

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[1] Raleigh Barlowe and Theodore R. Alter, Use Value Assessment of Farm and Open Space Lands, Research Bulletin No. 308, Michigan Agricultural Experiment Station, Michigan State University, East Lansing, 1976.

The Impact of the Act on County Property Taxation

Property tax revenue is equal to the tax rate times the tax base, where the tax base is defined as the total assessed value of all real property in the local jurisdiction. Both the tax rate and the tax base are directly related to tax revenue. If the tax revenue is held constant, the tax rate and tax base are inversely related.[2]

The county property tax assessor is responsible for determining the appraised value of property in each land class in the county from which the tax base is derived. Based on the total appraised values for each class, the assessor multiplies the appraised value by an appropriate percentage rate (the assessment rate) which yields the total assessed values for each class. Then taking the summation of these assessed values, the tax assessor determines the total assessed value of all property in the county. Then based on the tax revenue requirement set by the local taxing jurisdiction of the county and the total assessed value of property in the county, the tax rate is set at the level which will yield the required revenue.[3] A typical equation for determining the tax rate is,[4]

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[2]C.T.K. Chang and G.E. Frich, "Effects of Use Value Assessment on Property Tax Rates," the American Journal of Agricultural Economics, Vol. 52, No. 4, (AAEA: November, 1970), pp. 603-606.

[3]The typical equation for determining the tax revenue of a county, given that it is unknown is: $T = r(AV_T)$.

[4]John C. Keene, "The Impact of Differential Assessment Program on the Tax Base," in Property Tax Incentives for Preservation: Use Value Assessment and the Preservation of Farmland, Open Space and Historic Sites, Proceedings of the 1975 Property Tax Forum, (IAAO: Research and Technical Services Department, Chicago, 1975), p. 43.

$$r = \frac{T}{AV_T} \qquad (2\text{-}1)$$

where r = current tax rate

T = tax revenue

AV_T = total assessed value of all real property (tax base)

Rearranging this equation, it can be shown that the tax base is inversely related to the tax rate and directly related to tax revenue. The equation is,

$$AV_T = \frac{T}{r} \qquad (2\text{-}2)$$

When farmland is assessed at use value rather than at market value or at ad valorem, the net result is a decrease in the tax base which causes a change in either the current tax rate or tax revenue. If for example, the tax revenue were held constant before and after use value assessment, the effect would be an increase in the tax rate.

If farmland is assessed at use value, the assessed values of both that class and the total tax base will be lowered by an amount equal to the difference between the market value assessment and the use value assessment of the land. This is expressed as,

$$R = (AV_F - AV_F^u), \qquad (2\text{-}3)$$

where R = amount of reduction

AV_F = market value assessment of farmland

AV_F^u = use value assessment of farmland.

To determine the specific effects of use value assessment on local government finances, the tax base is separated into two classes: the

farm tax base and the nonfarm tax base. Included in the farm tax base, but excluded from use value assessment, is the value of farm dwellings and service buildings. Therefore, the tax base, without use value assessment, may be redefined in the following manner,

$$AV_T = (AV_F + AV_{NF}), \tag{2-4}$$

where AV_{NF} = market value assessment of nonfarmland.

With use value assessment, the tax base would be reduced by the amount of the reduction in assessed value. In other words,

$$AT_T * = ((AV_F - R) + AV_{NF}), \tag{2-5}$$

where $AV_T *$ = total assessed value of all real property with use value assessment.

As a result of use value assessment, the tax rate would tend to increase to offset the reduction in assessed value given that tax revenue is held constant. This effect is represented by the following equation,

$$r* = \frac{T}{AV_T - R} \tag{2-6}$$

where r* = tax rate with use value assessment.

By rearranging equation (2-1) and substituting the expression $(AV_F + AV_{NF})$, tax revenue without the effect of use value assessment is defined as,

$$T = r(AV_F) + r(AV_{NF}). \tag{2-7}$$

then, with use value assessment, tax revenue would be redefined as,

$$T = r^*(AV_F - R) + r^*(AV_{NF}). \qquad (2\text{-}8)$$

Given the assumption that tax revenue is held constant, the effect of use value assessment as shown by equations (2-7) and (2-8) is to increase the tax rate from r to r*. In terms of the two classes of property owners, the tax burden of farmland owners would decrease while the tax burden of nonfarmland property owners would increase. This conclusion is intuitive since the assessed value of nonfarmland property remained constant while the tax rate increased.

In essence, use value assessment would result in a tax shift from farmland owners to nonfarmland property owners. It should be noted that farmland owners are treated as a group. Individually, only those who participate in the Act would benefit. Nonparticipating farmland owners would bear higher taxes just as nonfarmland property owners.

A direct method of determining the tax shift is:

$$S = r(AV_F) - r^*(AV_F - R) \qquad (2\text{-}9)$$

where S = tax shift.

An example may be used to illustrate the effects of use value assessment on the rate and the resulting tax shift. Assume that the assessed market value of all property in a county is $100 million, comprised of $20 million of farmland and $80 million on nonfarmland property. If $5 million of tax revenue is needed, the required tax rate would be:

$$r = \frac{\$5,000,000}{\$20,000,000 + \$80,000,000}$$

or, $r = 0.05$.

Farmland owners would pay $1 million in taxes while owners of nonfarm property would pay $4 million.

If use value assessment is adopted and the assessed value of farmland is reduced by 40 percent, the farmland tax base would be $12 million. Given a constant tax revenue and nonfarmland tax base, the new tax rate would have to be:

$$r^* = \frac{\$5,000,000}{\$12,000,000 + \$80,000,000}$$

or, $r^* = 0.05435$.

With use value assessment on farmland, taxes on farmland would be about $652,000 while taxes on nonfarmland property would be about $4,348,000. Nonfarmland property owners would incur a tax shift of $348,000, an increase of 8.7 percent in taxes. In comparison, farmland owners would have to pay 34.8 percent less.

One critical factor which influences the amount of tax shift is the assessed value of nonfarmland property. In the extreme, if there were no nonfarmland property in the county, use value assessment of farmland would result in no tax shift except between participators and nonparticipators. As the assessed value of nonfarmland property increases, the amount of taxes than can be shifted increases. By use of some restrictive assumptions, the effects of the nonfarmland tax base on tax shifts can be illustrated.

Assume that the assessed market value of farmland is $20 million and the comparable figure after use value assessment if $12 million, a 40 percent decrease. Further assume that the tax rate before use value assessment of farmland (r) is 0.050. The effects of the assessed value of nonfarmland property (AV_{NF}) being zero, $10 million, $50 million and $200 million may be calculated.

As noted above, if AV_{NF} were zero, the tax rate after use value assessment would rise from 0.050 to 0.0833. However, no tax shift to nonfarmland property could occur.

If AV_{NF} were $10 million, the tax rate would rise from 0.050 to 0.0682 after use value assessment of farmland. The tax shift from farmland to nonfarmland property owners would be $182,000. This would amount to an 18.2 percent decrease in farmland property taxes and a 36.4 percent increase in nonfarmland property taxes.

If AV_{NF} were $50 million, the new tax rate would be 0.0545 and the tax shift would be $322,500. In percentage terms, farmland taxes would decrease by 32.3 percent while nonfarmland property taxes would increase by 12.9 percent. And, if AV_{NF} were $200 million, the tax rate would rise to 0.0519 while the tax shift would be $377,300. The shift would amount to a 37.7 percent fall in farmland taxes and a 3.8 percent rise in nonfarmland property taxes. As AV_{NF} continued to be larger, the decrease in taxes paid by farmland owners would approach 40 percent, the decrease in assessed value of farmland. Moreover, the percentage increase in nonfarmland property taxes would approach zero as the tax shift gets spread over a greater value of nonfarmland property.

Certainly, the above cases were over simplified. It would be expected that the degree to which use value assessment would affect

farmland assessment would vary directly with the value of nonfarmland property in a county. That is, the nonfarm demand for farmland and therefore the market price of farmland would be higher in counties which had a large nonfarm tax base (urban area), However, there would be a tendency for the relative tax shifts to be as described.

The Impact of the Act on Farmland Owners

The market value of farmland often exceeds its value as an input in agricultural production. This phenomenon has long been recognized and the explanations of it are many and varied. To continue using land for agricultural purposes, particularly at the urban fringe, the farmer or farmland owner must often accept an annual return to land which is less than necessary principal and interest payments on a mortgage based upon market value. This, together with annual property taxes, can result in cash flow problems even if the farmer's net worth position is enhanced through land appreciation. These cash flow difficulties can necessitate the sale of farmland. Often this land is purchased for purposes other than agricultural production or by persons or institutions whose financial position is such that they can hold the land in anticipation of substantial future returns even in the face of short-term costs in excess of returns.

The economic rational for use value assessment of farmland has been to make the agricultural (desired) uses of the land more competitive with other nonfarmland uses through a property tax advantage.[5] Given that

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[5]For a specific reference, see Tenn. Code Ann. §67-651 (a), (d), 1976; §67-657 (a)-(d); §67-658, 1976.

farm property taxes are a fixed cost, a reduction through use value assessment would tend to lower a firm's average cost while leaving its marginal cost unaltered. Therefore, the firm would be expected to operate at the same level of output as before the tax reduction but have a greater return to land.

The additional returns to land would be expected to be capitalized into its value. For purposes of explanation, a simple capitalization formula may be used.

$$V = \frac{Y}{i} \qquad (2\text{-}10)$$

where V = the market value of land in agricultural use

Y = annual returns to land and

i = rate of capitalization.

The assumptions underlying this capitalization formula in this case are: (1) net returns to land are known and constant over time; (2) the rate of capitalization used to discount future returns is constant; and (3) the investment period under consideration is infinite.[6]

By using the capitalization formula, the affects of use value taxation on land value in agricultural use can be examined. Assume a parcel of farmland that has a market value (including nonfarm demand) of $100,000 and an $8,000 annual return to land from farming. If the tax

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[6]Wm. D. Crowley, "Actual Versus Apparent Rates of Return on Farmland Investment," Agricultural Finance Review, Vol. 35, U.S. Department of Agriculture, Economic Research Service, (Washington, D.C.: U.S. Department of Agriculture, October 1974), pp. 52-54.

rate is $5 per $100 assessed value, the tax liability under market appraisal would be $1,250 ($100,000 x .25 x 0.05). The after tax returns to land would be $6,750 ($8,000 - $1,250). This would amount to a 6.75 percent after tax return to the market value of the land. Moreover, based upon a 10 percent capitalization rate, the value of the land in farming would be $67,500.

If use value were based upon pretax returns to land, the value of the parcel for tax purposes would be $80,000. Assuming, for simplicity, a constant tax rate after use value appraisal, the tax liability would be $1,000 ($80,000 x .25 x 0.050). Therefore, the after tax returns to land would be $7,000 ($8,000 - $1,000), or a 7 percent return on the land's market value. This amount, based on a capitalization rate of 10 percent would yield a value of land in farming of $70,000 or $2,500 more than was the case without use value assessment.

The above example illustrates that use value assessment can increase the returns to land used in farming if the market value is above use value. Moreover, the value of land in agricultural use can be increased. It should be noted, however, that lowering the property tax on a given parcel of land cannot override the effects of the nonagricultural demands unless the increment of annual nonagricultural value over and above annual agricultural returns to the land are taxed at 100 percent. Therefore, while the tax saving can make agricultural uses of land more competitive, they cannot in the long run circumvent the economic forces leading appropriate land to more intensive use. More simply, in the example the land owner can receive $7,000 return on the land in farming after use value assessment. The owner could sell the land for $100,000

and invest it at the assumed interest rate and receive $10,000 annually. (It may be assumed that the purchaser of the land would utilize it in a manner to economically justify the purchase price.) Therefore, utilization of the land in farm use costs the owner $3,000 annually. One need not expect this behavior to persist over any lengthy time period. Hence, it can reasonably be questioned whether use value assessment will meet the legislative intent of preserving farmland from development.

In the short run, the marginal increase in annual returns resulting from use value assessment may allow farmland owners, who are so disposed for noneconomic reasons, to retain their land in farm use. To the extent that this retention interferes with the orderly development and expansion of urban areas, leap-frog developments may occur. This effect could increase the cost of providing needed public services.

In examining the economic rational of use value assessment, an important consideration is its effect on economic efficiency. If economic efficiency is defined in traditional terms of factors being used in their highest marginal valued use, then assessing farmland at use could lead to economic inefficiency.[7] This is because use value assessment of farmland reduces the cost of the land input in farming relative to its cost in other uses. If through this process farmland is removed from market, even in the short run, then use value assessment in

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[7]Thomas F. Hady, "Differential Assessment of Farmland in the Rural-Urban Fringe," in the American Journal of Agricultural Economics, Vol. 52, No. 4, (AAEA: February, 1970), pp. 25-33.

effect interferes with the allocating mechanism of the market in determining the use of land. Justification of this alteration in the market mechanism must be based upon market inperfections in the allocation of land.

CHAPTER III

THE UTILIZATION AND ECONOMIC IMPACT OF USE VALUE ASSESSMENT

In July 1978, a study was initiated to determine farmland owners' utilization of the Act in the 16 county East Tennessee Development District. Of specific concern was the economic impact of use value assessment on local government finances of the 16 counties in the District.

Description of the Study Area

The 16 counties comprising the District are:[1] Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, and Union (Figure 1). As of 1978 Anderson, Blount, Knox, and Union counties constituted the Standard Metropolitan Statistical Area (SMSA). Between 1950 and 1970, all the counties except Campbell, Claiborne, Monroe, Morgan, and Scott counties experienced a population decrease. Of these, Campbell and Claiborne counties had a population decrease of more than 20 percent.[2]

There were 52 communities in the District ranging in population from 200 to over 50,000. Knoxville was the largest city in the District as well as the regional economic trade center.

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[1] East Tennessee Development District, ETDD Proposed Land Use Plan, April 1978, pp. 6-8.

[2] U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, General Population Characteristics, Tennessee, PC(1)-B44, Table 16; and 1960, Volume I, Characteristics of the Population, Part 44, Tennessee, Chapter A, Table 6.

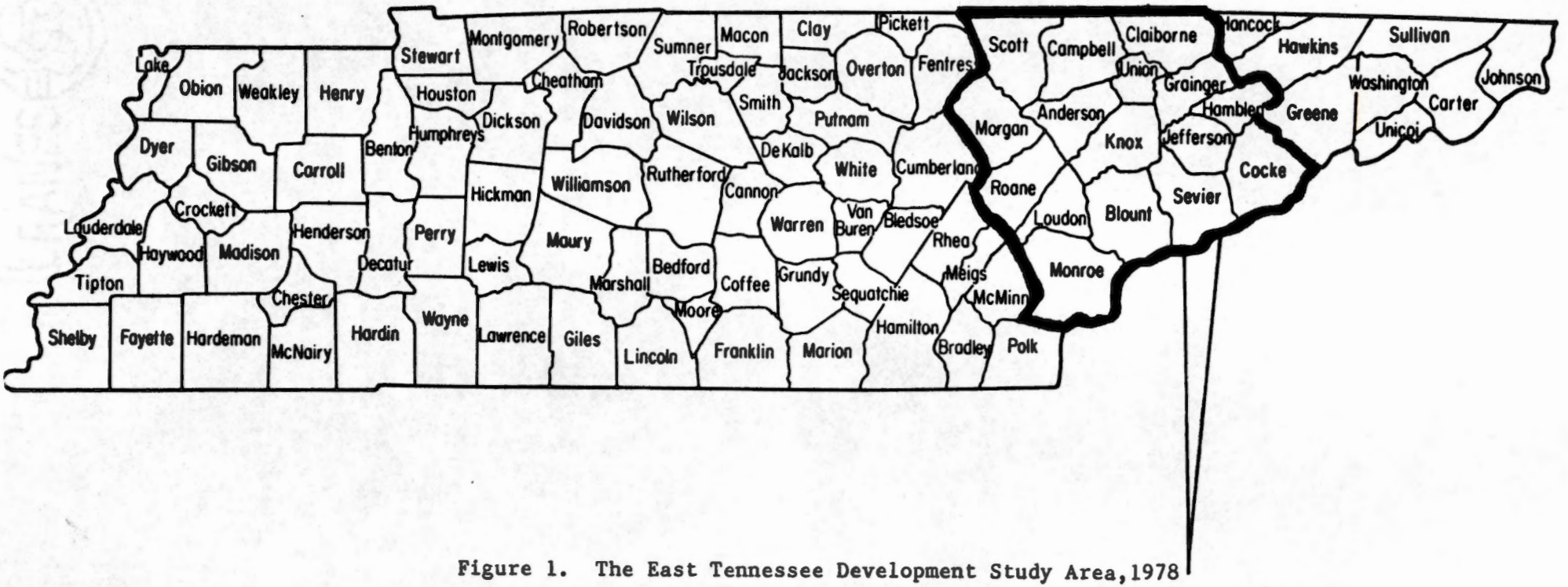


Figure 1. The East Tennessee Development Study Area, 1978

The predominant land use in the District as of 1970 was agriculture followed by forestry, recreation, residential, public-quasi public and industrial-commercial (Table 1). The agriculture of the District was comprised of a mixture of beef and hog farming and general cash grain farming. Corn, wheat, soybean and tobacco were the principal crops with corn being the most important in terms of acreage and tobacco the most important in terms of the value of production.[3]

Between 1969 and 1974, the number of farms in the District decreased from 19,550 to 14,930, for a 24 percent decrease. This resulted in an increase in the average farm size from 94 acres in 1969 to 99 acres in 1974. The average market value of farmland and buildings increased from $304 per acre in 1969 to $564 per acre in 1974 for an 86 percent increase.[4]

Transportation routes and facilities have been an important factor in shaping the direction and extent of urban development of farmland throughout the District. Interstates 40 and 75 each bisect the District, intersecting in Knox County. Several state highways further divide the District into sub-areas or pockets of development along US-11, 25, 27, 70, 129, 411, and 441. In addition to highway routes the Tennessee River, which runs northeast to southwest, has traditionally had an impact on development in the District.

Another major factor in the development of the District has been the presence of the Tennessee Valley Authority (TVA). Increasingly,

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[3]Tennessee Crop Reporting Service, Tennessee Agricultural Statistics, 1977, Bulletin T-14, County Estimates for Selected Types of Farming, pp. 38-50.

[4]U.S. Department of Commerce, Bureau of the Census, 1974 Census of Agriculture, Volume I, Part 42, Tennessee, County Summary Data, Selected Counties, Table 1.

TABLE 1. THE NUMBER OF ACRES OF LAND BY LAND USE TYPE, BY COUNTY
EAST TENNESSEE DEVELOPMENT DISTRICT, 1970

	Agriculture		Forest		Ind.-Comm.		Public-Quasi Public		Residential		Recreation	
County	No. of Acres	% of County Land Area	No. of Acres	% of County Land Area	No. of Acres	% of County Land Area	No. of Acres	% of County Land Area	No. of Acres	% of County Land Area	No. of Acres	% of County Land Area
Anderson	56,000	26.5	115,020	54.0	690	0.40	7,500	3.5	8,040	3.8	10,300	4.8
Blount	146,000	39.7	89,730	24.4	590	0.40	7,960	2.2	8,500	2.3	114,120	31.0
Knox	125,900	38.9	140,170	43.4	990	1.91	17,170	5.3	30,030	9.3	4,440	1.4
Union	60,200	44.4	41,370	30.5	80	0.25	1,130	0.8	1,210	0.9	31,610	23.3
SMSA TOTAL	388,500	37.3	386,290	37.2	8,350	0.81	33,800	3.3	47,780	4.6	160,470	15.4
Campbell	39,200	13.6	230,840	80.1	400	0.14	3,260	1.1	3,470	1.2	11,030	3.8
Claiborne	151,100	53.5	102,830	36.4	270	0.09	2,430	0.9	2,590	0.9	23,380	8.3
Cocke	129,300	48.0	69,250	25.7	360	0.13	3,160	1.2	3,370	1.3	64,160	23.8
Grainger	127,400	70.9	47,650	26.5	160	0.10	1,740	1.0	1,860	1.0	990	0.6
Hamblen	79,900	80.7	4,400	5.0	2,150	2.10	4,840	4.9	5,160	5.2	2,050	2.1
Jefferson	138,200	79.3	27,340	15.7	420	0.25	3,120	1.8	3,300	1.9	1,790	1.0
Loudon	110,400	73.0	33,340	22.1	470	0.32	3,030	2.0	3,240	2.2	720	0.5
Monroe	169,800	40.3	99,080	23.5	560	0.14	2,930	0.7	3,130	0.8	145,700	34.6
Morgan	64,800	18.8	235,780	68.5	200	0.07	1,700	0.5	1,820	0.5	39,760	11.6
Roane	83,700	37.4	86,700	38.8	1,250	0.57	4,860	2.2	5,180	2.3	16,230	7.3
Scott	69.800	20.2	206,290	58.0	280	0.09	1,850	0.5	1,970	0.6	71,010	20.6
Sevier	142,800	37.4	103,690	27.2	270	0.08	3,530	0.9	3,770	1.0	127,740	33.5
NonSMSA TOTAL	1,306,400	41.3	1,241,690	39.3	6,790	0.22	36,450	1.2	38,890	1.2	504,560	16.0
ETDD TOTAL	1,694,900	40.4	1,627,980	38.8	15,140	0.37	70,250	1.7	86,670	2.1	665,030	15.8

Source: The East Tennessee Development District, ETDD Proposed Land Use Plan, April, 1978, Table 1.

the TVA has been involved in rural development programs in addition to its traditional development of land for electric power stations, recreation and flood control.

Sample Plan and Data Collection

A meeting was held with the Knox County Tax Assessor to ascertain the availability of data on use value assessments in each of the 16 counties in the District. On the basis of the information supplied, it was determined that since the Act had at that time only been in operation for one full year, existing data would be limited. Nevertheless, available data was sufficient to determine the initial response to, and the extent of, use value assessment in the District.

Preliminary interviews with the 16 county property tax assessors were then conducted concerning the extent of use value assessment in their respective counties. Data were collected on the total number of farmland parcels, total market value of farmland in the county, the tax rate and the date of the last countywide reappraisal. For those counties not having any farmland parcels assessed at use value, the interview process was completed. For those counties that reported having farmland parcels assessed at use value, an additional interview was conducted for the purpose of collecting data on the number of farmland parcels appraised at market value that were receiving use value assessments.

The Extent of Use Value Assessment

As of July 1978, participation in use value assessment was found to vary considerably throughout the 16-county District. Seven counties

reported that no farmland was assessed at use value, five reported between one and five, and four reported more than five.

More extensive utilization of use value assessment was reported in Jefferson, Knox and Sevier counties. In Jefferson County, 76 farmland parcels were assessed at use value, or 4 percent of the total farmland parcels in the county. In Knox, the most urban county in the District, 145 farmland parcels, or 3 percent of the total, were assessed at use value. By far, the greatest utilization of the Act was found in Sevier County. There, 1,544 parcels of farmland or about 40 percent of the total were assessed at use value.

Table 2 shows the extent of use value assessment in the District. Overall, there were approximately 34,580 farmland parcels in the District, of which 1,786 received use value assessment as of July 1978. This represents about 5 percent of the total number of farmland parcels. Of these, 151 parcels or 8.5 percent were located within the Knoxville SMSA as compared with 91.5 percent that were located outside it.

The amount of tax savings by farmland owners in any one county as a result of use value assessment may be determined by multiplying the respective county tax rate by the reduction in assessed value. This computation also yields the amount of roll-back taxes that would be due if all the farm parcels assessed at use value were converted to a nonfarmland use. These values are given in the column headed "Tax Savings Subject to Roll-Back Tax" in Table 2. For the counties having five or more farmland parcels assessed at use value, the tax savings (or average roll-back tax) per use value assessed parcel amounted to $383 in Knox County, $232 in Blount County, $209 in Hamblin County, $169 in Jefferson County and $142 in Sevier County.

TABLE 2. THE EXTENT OF USE VALUE ASSESSMENT OF FARMLAND ON EAST TENNESSEE DEVELOPMENT DISTRICT COUNTIES, JULY 1978

County	Total Number of Farmland Parcels	Total Market Value of Farmland[a] (000)	Farmland Appraised at Use Value				Tax Savings Subject to Rollback Tax[c]	Tax Rate Per $100 Assessed Value	Ratio of Appraised Value to Actual Value (1977)[d]	Date of Last County Reappraisal
			Number of Farmland Parcels	Market Value (000)	Use Value (000)	Reduction[b] (000)				
Anderson	NA	$ NA	1	$ 42	$ 35	$ 7	$ 104	5.96	.42	1969
Blount	3,792	128,864	5	417	262	155	1,161	3.10	.74	1974
Knox	5,202	170,560	145	12,298	6,884	5,414	55,491	4.10	.64	1973
Union	2,131	18,914	0	0	0	0	0	4.74	.44	1969
SMSA Total	11,125	318,338	151	12,757	7,181	5,576	56,756	--	--	--
Campbell	NA	19,665	0	0	0	0	0	4.95	.56	1966
Claiborne	2,400	29,173	2	105	60	45	473	4.25	.49	1972
Cocke	2,117	34,490	1	NA	NA	NA	NA	4.50	.53	1970
Grainger	1,919	19,549	0	0	0	0	0	3.48	.65	1970
Hamblen	904	26,991	11	357	89	268	2,298	3.43	.64	1969
Jefferson	1,895	50,742	76	1,833	458	1,375	12,823	3.73	.55	1972
Loudon	2,042	38,502	0	0	0	0	0	5.32	.45	1970
Monroe	NA	23,241	0	0	0	0	0	3.50	NA[e]	NA[f]
Morgan	2,709	15,030	0	0	0	0	0	6.30	.58	1970
Roane	3,593	73,232	1	144	26	118	737	2.50	.77	1975
Scott	2,053	23,103	0	0	0	0	0	4.24	.80	1972
Sevier	3,823	117,057	1,544	58,623	14,656	43,967	219,836	2.00	1.00	1977
NonSMSA Total	23,455	470,775	1,635	61,062	15,289	45,773	236,167	--	--	--
ETDD Total	34,580	789,113	1,786	73,819	22,470	51,349	292,923	--	--	--

[a]Total Assessed Value = .25 × Total Market Value.

[b]Reduction = Market Value - Use Value; often referred to as development value.

[c]Reduction × Assessment Rate of .25 × Tax Rate.

[d]Data are from the Tennessee State Board of Equalization Office.

[e]Not computed because reappraisal is in process. The comparable figure for 1976 was .04.

[f]Reappraisal in process.

Source: County Property Tax Assessors' Offices for counties in the East Tennessee Development District, Summer, 1978.

The appraised market value of farmland parcels assessed at use value in the District equaled $73,819,000, whereas the total use value equaled $22,470,000. Taking the difference between the appraised market value and use value yields $51,349,000, a reduction of almost 70 percent. With no use value assessment, the appraised value of all farmland in the District could have been $789,113,000. However, utilization of the Act reduced that figure to $737,764,000, a decrease of 6.5 percent. Total assessed value (25 percent of the appraised value) was reduced from $197,278,250 to $184,441,000.

By using the decrease in assessed value of farmland and the appropriate tax rate of each county, it was determined that taxes on farmland were reduced by $292,923. For farmland owners in the District, this amounted to a 4.2 percent decrease in tax liability. Moreover, according to the theory set forth in Chapter II, any subsequent tax reduction in the farm tax base resulting from the use value assessment of farmland causes a redistribution of taxes or a tax shift equal to the tax reduction. Therefore, assuming tax revenues were maintained at a constant level through higher tax rates, then there appears to have been a tax shift equal to $292,923 from those farm to nonfarm property owners in the District.

However, in real terms, any tax shift that occurs subsequent to a tax reduction also falls upon nonparticipating farmland owners as well. In addition, since the increased tax rate (to maintain constant tax revenues) falls upon all nonparticipating land owners, the tax shift is argued to have been marginally lower than $292,923, of which the measurement is beyond the scope of this study.

Essential to this argument is the qualification that in those counties with an increasing tax base, changes due to use value assessment act to slow the rate of growth of the tax base (through its tax shift effect). Therefore, for those counties having a constant tax base, changes due to use value assessment will cause a direct shift to the nonparticipating land owners, whereas in those counties which have an increasing tax base, the tax shift will be borne by new land owners.

Thus, the extent to which use value assessment affects local government finance in the District is difficult to measure empirically. This is because the assessed values of taxable property, revenue needs and the tax rate within each county vary over time.

Variation in utilization of the Act among counties has already been noted. In 13 of the 16 counties studied, 11 or fewer parcels of farmland had been assessed at use value. Possible explanations for the low participation level include lack of information about the Act or use values of farmland which equal or exceed market values. However, the most plausible economic argument rests on the fact that appraised values for property in most counties of the District were considerably lower than current market values.

The estimated ratio of appraised value to market value for 1978 in each of the 16 counties is shown in Table 2. In nine cases, the ratio was in the .40 to .59 range, while five cases were in the .60 to .80 range. Only in Sevier County, where property had been reappraised in 1977 which brought all farmland up to current market value, was the ratio 1.00. In other counties, the date of the last reappraisal was in the late 1960s or early 1970s. Since the appraised value of property

for tax purposes is typically not altered significantly between reappraisals, the appraised value for farmland in most of the counties studied was based on market values determined several years earlier.

While the appraised value of farmland was relatively low in counties that have not had recent countywide reappraisals, the use value assessments are based more nearly upon the current market conditions and are not directly correlated with the date of a county's reappraisal. For example, assume the actual market value (current) of a farmland parcel under highest and best use equals $2,000 per acre. Further assume that the agricultural use value equals $1,500 per acre. If the most recent reappraisal occurred in 1971, the appraised value of the farmland parcel might only be 60 percent of its current market value or $1200 per acre. If so, the farmland owner would have no incentive to seek a use value assessment. Hosever, if the farmland parcel was reassessed to reflect the actual market value, $2000 per acre, the farmland owner could reduce his property taxes through the use value assessment.

In the 16 counties in the District, farmland owners in only one county have made significant use of the Act's provisions. The failure of farmland owners in the other 15 counties to do so is at least partially due to the lack of up-to-date appraisals. As reappraisals are made, as was done in Sevier County and as is currently being done in Monroe County, economic incentives to seek use value are created. The impact in various counties will, of course, differ depending upon the composition of the real property base and the extent to which non-farmland market forces have affected land values.

CHAPTER IV

A CASE STUDY ANALYSIS OF THE INDIVIDUAL COUNTY EXPERIENCE WITH USE VALUE ASSESSMENT

From the general analysis, a case study of selected counties was conducted specifically to determine the impact of use value assessment on local government finances at the individual county level. Selections were based on the number of farmland parcels assessed at use value as of July 1978. Following this criterion, the counties selected were Jefferson, Knox and Sevier counties. The counties are located adjacent to another in the southeastern portion of the District. According to the 1970 Census of Population, Jefferson County was classified as semi-urban, Knox County as urban, and Sevier County as rural.

The Jefferson County Experience

As of July 1978, the total assessed value of all property in Jefferson County was $58,628,000. The tax rate per $100 of assessed value was $3.73. The assessed value of nonfarmland property was $45,942,481. This amount times the tax rate yielded a tax liability of $1,713,655 for nonfarmland property owners. Farmland, including 1,895 parcels, was assessed at $12,685,500 with a corresponding tax liability of $473,170.

In the year of the study, 76 farmland parcels, or 4 percent of the total, were assessed at use value. The appraised value of parcels assessed at use value was $458,000 (Table 2), yielding an assessed value of $114,500 (25 percent of appraised value). The appraised market value

of these parcels prior to use assessment was $1,833,000 (Table 2) with an assessed value of $458,250.

The tax liability for the farmland appraised at use value was approximately $4270. The average for the 76 parcels was about $56. Without use value assessment, the total tax liability, given a constant tax rate, would have been approximately $17,090 (ceteris parabis) for an average of about $225 per parcel. Therefore, the total reduction in tax liability, given a constant tax rate, was $12,820 or $169 per parcel.

Without use value assessment, the farmland now assessed at use value would be included on the tax rates at assessed market value. The increase in the county's total assessed value, $343,750 in this case, would allow the tax rate to be decreased while maintaining the same tax revenue. In Jefferson County, the tax rate on all property could have been just under $3.71 per $100 of assessed value. This amounts to a decrease of only about 0.6 percent in the countywide tax rate.

By using the lower tax rate that could have prevailed to maintain a constant tax revenue, the tax shift from farmland owners (an aggregate of partipators and nonparticipators) to nonfarmland property owners was estimated.

The total farmland assessment of $12,685,500 as of July 1978 included all those parcels appraised at use value. Thus, at the current tax rate of $3.73 per $100 of assessed value, a tax liability is yielded of $413,170 or 21.6 percent of total county property tax revenue (Table 3). However, without use value apprisal, the assessed value of farmland would have been $13,029,300. With a tax rate of $3.71 per $100 of assessed value, farmland property taxes would have

TABLE 3. CHANGES IN FARMLAND TAX EXPENDITURES FOR JEFFERSON, KNOX AND SEVIER COUNTIES BY WITH AND WITHOUT USE VALUE ASSESSMENT, JULY 1978

	Sevier				Jefferson				Knox			
	Farmland		Nonfarmland		Farmland		Nonfarmland		Farmland		Nonfarmland	
	Without	With	Without	With	Without	With	Without	With	Without	With	Without	With
	-dollars											
Share of Tax Expenditure	760,838	585,285	3,079,806	3,206,144	483,125	473,170	1,703,547	1,713,655	1,800,171	1,748,240	26,242,927	26,294,858
Percentage of Total Tax Expenditure	20.1	15.4	79.9	84.6	22.1	21.6	77.9	78.4	6.4	6.2	93.6	93.8

been $483,125, or 22.1 percent of the total (Table 3). This decrease in tax burden of $10,100 would be shifted to nonfarmland property owners through the higher taxes necessary because of use value appraisal. This shift amounts to a decrease in taxes on farmland of 2.3 percent and an increase in nonfarmland property taxes of 0.6 percent (Table 4).

TABLE 4. PERCENTAGE CHANGE IN TAX EXPENDITURES BY JEFFERSON, KNOX AND SEVIER COUNTIES AS A RESULT OF USE VALUE ASSESSMENT, JULY 1978

County	Percent Decrease in Farm Tax Liability	Percent Increase in Nonfarm Tax Liability
Jefferson	2.3	.6
Knox	3.1	.2
Sevier	23.4	5.9

In Jefferson County, the aggregate effects of use value assessment were negligible since relatively little farmland was appraised under the Act. One could hypothesize the principal reason for the lack of utilization is that the most recent reappraisal of market value in this county occurred in 1972. Consequently, the estimated ratio of apprisal value to actual value was relatively low, 0.55. If a reappraisal increased the value of farmland to 100 percent of market value, more farmland owners would undoubtedly find that use value assessment would lower their tax burden. This being the case, the tax shifts would then increase.

The Knox County Experience

The aggregate effects of use value assessment in Knox County were similar to those found in Jefferson County. Total assessed value in Knox County was $683,978,000 as of July 1978. The assessed value of farmland was $42,640,000, while the assessed value of nonfarmland was $641,338,000. The tax rate was $4.10 per $100 of assessed value. Therefore, the tax liability was $1,748,240 for farmland and $26,294,858 for nonfarmland or $28,043,098 in total.

In July 1978, 145 or 3 percent of all farmland parcels were appraised at a use value of $6,884,000. These parcels had a use value assessment of $1,721,000. The market appraised value of the parcels was $12,298,000 with a corresponding assessed value of $3,074,500.

Property taxes on farmland appraised at use value was approximately $70,560 or $487 per parcel. Without use value assessment, given a constant tax rate, the tax liability would have been $126,050 (ceteris parabis) or $869 per parcel. As a result of use value appraisal, participating farmland owners were able to pay $55,490 less tax or $383 per parcel.

Without use value appraisal, the total assumed value of property in the county would have increased by $1,353,500. To have maintained constant tax revenue, the county tax rate could have been $4.09 rather than $4.10, a decrease of 0.2 percent.

In other words, farm tax liability would have been $1,800,171 or 6.4 percent of total county property tax revenue without use value assessment, as opposed to $1,748,240 or 6.2 percent of total county property tax revenue with it (Table 3).

The tax shift between farmland owners and nonfarmland property owners, after taking into account the altered tax rate, is $51,930. This amounts to a decrease in farmland taxes of 3.1 percent and an increase in nonfarmland property taxes of 0.2 percent (Table 4).

In view of the very small percentage shift in nonfarmland taxes and the slight difference in the necessary property tax rate, use value appraisal appears to have little impact on the complex of factors which are a part of the county's property tax system. In Knox County, as in Jefferson County, the estimated ratio of appraised value to actual value was relatively low, 0.64. It has been argued previously that a low ratio tends to diminish the effects of use value appraisal. Moreover, in Knox County, the relatively large nonfarmland property base would allow any tax shift to be spread over a greater value of property. Therefore, the impact of use value appraisal would tend to have a more modest impact on the countywide tax rate.

The Sevier County Experience

In July 1978, Sevier County had just undergone a countywide reappraisal. The property tax rate was $2.00 per $100 of assessed value. The assessed value of all property was $189,571,500. Of this, $29,264,250 was for farmland while $160,307,200 was nonfarmland. The tax liability was $585,285 for farmland and $3,206,144 for nonfarmland property, or $3,791,430 in total.

Of the 3,823 parcels of farmland in the county, 1,544 were appraised at use value. The appraised market value of these parcels was $58,623,000. The assessed value was $3,664,000 at use and $14,655,750 at market.

The tax liability of farmland appraised at use value was $73,300 or about $47 per parcel. Without use value appraisal, and assuming a constant tax rate, taxes on the same property would have been $293,200 or $190 per parcel. Therefore, the tax reduction was $219,900 in total or $142 per parcel.

Without use value appraisal in Sevier County, total farmland assessment would have been $10,991,750 higher. If this amount were included in the county's total assessed value, the tax rate could have been decreased 5.5 percent from $2.00 to $1.89 per $100 of assessed value and the total tax revenue maintained at $3,791,429. Given this different tax rate, farmland owner tax liability would be $760,838 without use value appraisal or $505,285 with use value appraisal. Stated differently, without use value appraisal, farmland owners would pay 20.1 percent of total county property taxes, whereas they paid 15.4 percent with use value appraisal (Table 3). This shift of $175,553 would result in nonfarmland property owners paying 79.9 percent of total property taxes without versus 84.6 percent with use value appraisal. Overall, use value appraisal would allow farmland owners to pay 23.4 percent less property tax while nonfarmland owners would have to pay 5.9 percent more (Table 4).

A Final Comment

The impact of use value assessment on the agricultural tax base for each county is summarized graphically by the grouped bar chart in Figure 2. The graph illustrates the contention put forth in this chapter, that the impact of use value assessment on the agricultural tax base of Jefferson County and Knox County was practically

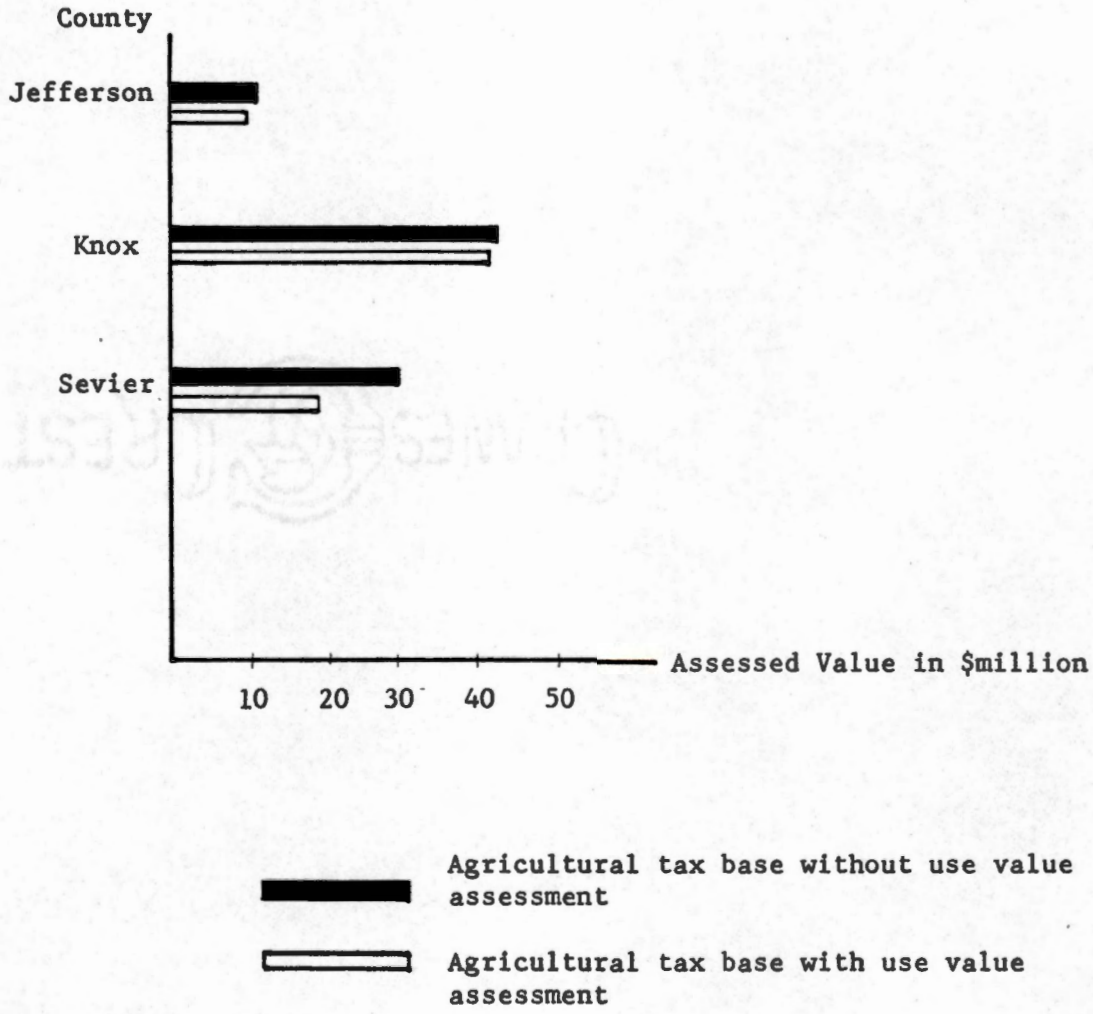


Figure 2. A Graphic Summary of the Impact of Use Value Assessment on the Agricultural Tax Base of Jefferson, Knox and Sevier Counties.

non-existent. In percentage terms, the impact amounted to a 2.3 percent and a 3.1 percent reduction of the agricultural tax base for Jefferson County and Knox County, respectively.

On the other hand, the impact of use value assessment on the Sevier County agricultural tax base was quite substantial. Use value assessment reduced taxable farmland assessment by 23.4 percent. Proportional to the total assessed value of all real property in the county, the agricultural tax base was reduced from 20.1 percent to 15.4 percent.

By comparing the results of the impact of use value assessment on the agricultural tax base for each county, the substantially greater impact in Sevier County implies that reappraisal is an important factor in determining the level of use value assessments. For Knox County or Jefferson County, the participation levels recorded as of July 1978 are likely to remain until countywide reappraisal increases the appraised value of farmland to 100 percent of actual market value.

CHAPTER V

SOCIO-ECONOMIC CHARACTERISTICS OF PARTICIPATING AND NON-PARTICIPATING FARMLAND OWNERS IN JEFFERSON, KNOX, AND SEVIER COUNTIES

An objective of this research was to determine if farmland owners who participated in use value assessment exhibit the same socio-economic characteristics as those who did not. It was hypothesized that the younger, better-educated part-time farmer, with a higher income and larger farm size would most likely utilize the use value assessment provision of the Act in the District as of July 1978. This hypothesized relationship was generally consistent with the research reported by Leuthold and Smith,[1] and Rogers and Shoemaker[2] regarding characteristics of early adopters.

It was believed that younger, better-educated farmland owners would have been more likely to know about the authorizing legislation and its possible benefits. It was thought that higher income farmland owners would have had a more "commercial economic orientation"[3] and farmland owners with greater acreages would have more to gain by use value assessment. Finally, it was believed that part-time farmers were more

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[1]Frank O. Leuthold and George F. Smith, Characteristics of Wisconsin Dairy Operators by Adopter Category: Is Rogers Correct?, Paper presented at the Rural Sociological Society annual meeting, Baton Rouge, Louisiana, August 1972.

[2]Everett M. Rogers and F. Floyd Shoemaker, Communications of Innovations, 2nd ed., The Free Press, 1971, Ch. 5.

[3]Ibid.

likely to reside near urban areas where appreciation of farmland values was expected to have been the greatest.

To test the above, an analysis of the characteristics of farmland owners in the three county case study area of Jefferson, Knox and Sevier counties was conducted. Particular attention was paid to the characteristics of farmland owners with use value assessment and those without. Moreover the socio-economic characteristics of the two groups were compared to determine if there were any differences between those on the aggregate and the individual county level.

The Sample Design

To determine the general characteristics of farmland owners with use value assessment and those without, it was necessary to sample farmland parcel owners in each county of the study area. The sample population was all farmland owners with 15 or more acres in each of the three counties.[4] The population was defined from tax roles in each of the three counties.

A random stratified sample design was used in order to sample equal numbers of farmland owners with use value assessment and those without, in each of the counties. Lacking prior information upon which to base this sample size, a 5 percent sample of farmland owners with 15 or more acres was used. This yielded a sample size of 546. Specifically this yielded the sample from each county of 66 from Jefferson, 240 from Knox and 240 from Sevier.[5]

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[4]The 15 acre requirement was used since it conformed with the minimum acreage requirement specified by the Act for participation.

[5]The sample size was constrained by the number of use value assessments in Jefferson County. Therefore in order to obtain a proportionate sample,

Within each of the counties, half of the total sample was allocated to farmland owners with use value assessments, and half to those without. The actual selection of sample units was from alphabetized county tax roles. A letter was selected at random and the first person whose name began with that letter was established as the starting point. Then, each subsequent farmland parcel owner meeting established criteria was selected until the requisite number for the two subsamples (with and without use value assessment) was obtained.

A single sheet questionnaire (Appendix C) was mailed out to each farmland owner selected, soliciting a response on the socio-economic characteristics of age, gross farm income, years of education, location of the farm, farm employment status (full-time versus part-time), number of weeks worked off the farm, type of farm organization, average number of acres owned by a farmer having full ownership of his land and the average owned by farmers in partnership. In addition, the last section of the questionnaire dealt directly with each farmland owner's knowledge of the Act, whether or not the owner applied for use value assessment, and whether or not the farmland was assessed at use value.

Out of the 546 questionnaires mailed out, 101 responded for an 18 percent response rate. This was somewhat below the target response rate of 25 percent. Of the total responses, 63 were from Knox County, 13 were from Jefferson County, 34 were from Sevier County, and one did not provide adequate information to determine the location of the farm

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a total of 66 farmland owners from Jefferson County were selected for sampling (33 with and 33 without). The remaining 480 were divided equally among participants and non-participatings in Knox and Sevier counties.

parcel. The number of respondents who utilized use value assessment was 45, the remainder did not, except for one for which there was insufficient information to determine the category.

Analytical Procedure

For this study, frequency distributions, cross-tabulations, and nonparametric one-way analysis of variance were calculated with the SAS-76 computer program available at the University of Tennessee Computer Center. Dummy variables were used to represent yes-no answers. For the data grouped into classes, a ranking system was used whereby each class was assigned a rank number beginning with 1.

The frequency distributions and cross-tabulations provided information on the characteristics of the farmland owners in the study area. The non-parametric one-way analysis of variance was used to test the difference between the means of selected variables for those farmland owners with and without use value assessment in the study area.

The relevant variables used throughout this analysis were as follows:

AGE = age

ED = education

INC = income

LOFM = location of farm; county

FMES = farm employment status

NFMWW = number of weeks worked off the farm

FMORG = type of farm organization

TACF = Total acres owned by a farmer having full ownership of his land

TACP = total acres owned by farmers in a partnership

KNOW = knowledge of the Act

APPLY = application for use value assessment

ASUV = farmland assessed at use value

General Characteristics of All Farmland Owners in the Study Area

The overall average age of sampled farmland owners in the study area in 1978 was 52 years. In the three counties, 61.1 percent of all owners were over 55 years of age (Table 5). The overall average

TABLE 5. PERCENT DISTRIBUTION OF FARMLAND OWNERS BY AGE IN THE STUDY AREA, JULY 1978

Age	Percent
Less than 34	6.0
35-44	10.1
45-54	23.0
55-64	22.1
Over 65	39.0
Total	100.0

number of years of education for sampled farmland owners was 13 years, where 48.0 percent had some college education (Table 6). The overall average gross farm income of farmland owners was $8,000. Within the sample 72.8 percent of the farmland owners reported an annual gross farm income of $5,000 or less. This average could have been lower had it not been for 4.4 percent of the farmland owners reporting an annual gross farm income of $50,000 or more (Table 7). As expected, the husband and wife farm operation[6] was the most common among those

[6]The husband and wife farm operation is not considered a

TABLE 6. PERCENT DISTRIBUTION OF FARMLAND OWNERS BY EDUCATION IN THE STUDY AREA, JULY 1978

Years of Education	Percent
Less than Junior High School	11.2
Junior High School	6.1
High School	28.6
Tech School	6.1
Junior College	12.2
College (BS/BA)	19.4
Graduate Work	16.4
Total	100.0

Source: 1978 Survey of Farmland Owners With and Without Use Value Assessment.

TABLE 7. PERCENT DISTRIBUTION OF FARMLAND OWNERS BY INCOME IN THE STUDY AREA, JULY 1978

Income	Percent
Less than $5,000	72.8
$5,000-9,999	10.8
$10,000-19,999	7.6
$20,000-49,999	4.4
$50,000 or more	4.4
Total	100.0

Source: 1978 Survey of Farmland Owners With and Without Use Value Assessment

studied, amounting to 52.7 percent of all farm types (Table 8). Of the 47.3 percent remaining, the individually operated farm accounted for 34.1 percent and those operated in partnership accounted for 13.2 percent. Table 9 shows the percent distribution of farmland owners by farm employment status. Part-time farmers were the largest group, accounting for 68.2 percent of the total, while full-time farmers accounted for 31.8 percent of the total.

The average number of weeks spent off the farm by part-time farmers was 39 weeks. This meant that on the average, the part-time farmer spent 25 percent of the year on the farm. In terms of the total time spent off the farm by part-time farmers, 8.3 percent spent between 4 and 28 weeks off the farm while 76.7 percent spent between 44 and 52 weeks off the farm (Table 10).

The average number of acres owned by a farmer having full ownership of his land in the study area amounted to 95.4 acres (n=92). Moreover, acreage owned by farmers in partnership, on the average, was 127.4 acres (n=15). Full-time farmers having full ownership of their land, on the average, owned 95.2 acres (n=27). Moreover, part-time farmers having full ownership of their land, on the average, owned 97.0 acres (n=53). On the other hand, for full-time farmers owning their land in partnership, the average was 126.7 acres (n=3) and for part-time farmers, the average was 127.6 acres (n=12).

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a partnership since title is under one name. Moreover, it is not an individually operated farm since financial responsibilities and benefits are shared by husband and wife.

TABLE 8. PERCENT DISTRIBUTION OF FARMLAND OWNERS BY TYPE OF FARM ORGANIZATION IN THE STUDY AREA, JULY 1978

Farm Organization	Percent
Husband and Wife	52.7
Individual	34.1
Partnership	13.2
Total	100.0

Source: 1978 Survey of Farmland Owners With or Without Use Value Assessment.

TABLE 9. PERCENT DISTRIBUTION OF FARMLAND OWNERS BY FARM EMPLOYMENT STATUS IN THE STUDY AREA, JULY 1978

Farm Employment Status	Percent
Full-time	31.8
Part-time	68.2
Total	100.0

Source: 1978 Survey of Farmland Owners With or Without Use Value Assessment.

TABLE 10. PERCENT DISTRIBUTION OF PART-TIME FARMERS BY NUMBER OF WEEKS WORKED OFF THE FARM IN THE STUDY AREA, JULY 1978

Number of Weeks Worked Off Farm	Percent
4-28	8.3
28-36	3.3
36-44	11.7
44-52	76.7
Total	100.0

Source: 1978 Survey of Farmland Owners With and Without Use Value Assessment.

Characteristics of Farmland Owners With and Without Use Value Assessment

Participation in the use value assessment (see Chapter III) varied considerably by the location of farmland parcels. Forty percent of farmland parcels were assessed at use value in Sevier County, followed by 4.0 percent in Jefferson County and 3.0 percent in Knox County. Table 11 gives the general characteristics of those farmland owners with and without use value assessment.

For those with use value assessment, of 45 respondents the average age was 50 years and the average years of education was 14 years. Average gross income of 44 respondents was $8,600. For those without use assessment, the average age of 55 respondents was 54 years, the average years of education of 53 respondents was 12 years, and the average gross farm income of 48 respondents was $7,000.

Of the farmland owners without use value assessment, 29.0 percent were full-time farmers, while 71.0 percent were part-time farmers. The average number of acres owned by a farmer having full ownership of his land was 89.1 (n=51). The average number of acres owned by farmers in partnership was 91.3 acres (n=8). Of those respondents with use value assessment, 35 percent were full-time farmers while 65 percent were part-time farmers. The average number of acres owned by a farmer having full ownership of his land totaled 103.2 acres (n=41). Moreover, acreage owned by farmers in partnership, on the average, totaled 168.7 acres (n=7).

Of the 21.6 percent that were full-time farmers who knew of the Act (n=88) (Table 12), 17 percent received use value assessments (Table 13). Of the 38.6 percent (n=88) that were part-time farmers

TABLE 11. GENERAL CHARACTERISTICS OF FARMLAND OWNERS WITH AND WITHOUT USE VALUE ASSESSMENT IN THE STUDY AREA, JULY 1978

Category	Average Age[1]	Average Income[1]	Average Years of Education[2]	Farm Employment Status[1]		Total Acres Owned[1]	
				Full-time	Part-time	In full	In part
With Use Value Assessment	50 (45)	$8,600 (44)	14 (45)	35.0 (15 of 43)	65.0 (28 of 43)	103.2 (41)	168.7 (7)
Without Use Value Assessment	54 (55)	$7,000 (48)	12 (53)	29.0 (13 of 45)	71.0 (32 of 45)	89.1 (51)	91.3 (8)

[1]Participation in use value assessment was found to be independent of average age, income total acres owned in full and in part and of farm employment status at the 5 percent level of significance using a chi-square of 3.84, df = 1.

[2]Education was found to be significantly different for those with use value assessment and those without at the 5 percent level of significance using a chi-square of 3.84, df = 1.

Note: Numbers in parentheses refer to total number of observations for each characteristic.

Source: 1978 Survey of Farmland Owners With and Without Use Value Assessment

TABLE 12. KNOWLEDGE OF THE ACT BY FARM EMPLOYMENT STATUS IN THE STUDY AREA, JULY 1978[a]

Farm Employment Status	Do Not Know of the Act	Do Know of the Act	Total
	(percent)		
Full-time	10.2	21.6	31.8
Part-time	29.6	38.6	68.2
Total	39.8	60.2	100.0

[a]Significant at the 5 percent level using a chi-square of 3.84, df=1.

Source: 1978 Survey of Farmland Owners With and Without Use Value Assessment.

TABLE 13. PARTICIPATION IN USE VALUE ASSESSMENT BY FARM EMPLOYMENT STATUS IN THE STUDY AREA, JULY 1978[a]

Farm Employment Status	Did Not Participate	Did Participate	Total
	(percent)		
Full-time	14.8	17.0	31.8
Part-time	36.4	31.8	68.2
Total	51.2	48.8	100.0

[a]Significant at the 5 percent level using a chi-square of 3.84, df=1.

Source: 1978 Survey of Farmland Owners With and Without Use Value Assessment.

who knew of the Act, 31.8 percent received use value assessments.

In addition, the general characteristics of farmland owners with use value assessment and those without, on the individual county level, were examined. For those farmland owners that reported receiving use value assessments, the average age for Jefferson County was 50 years, for Knox County 51 years and for Sevier County 45 years. The average years of education for Jefferson County was 14 years, for Knox County 14 years and for Sevier County 10 years.

The average gross farm income for those with use value assessment in Knox County was $7,000 and in Sevier County $5,000. However, due to insufficient data, the average gross farm income in Jefferson County was not attainable.

For those receiving use value assessments, the average number of acres owned by a farmer having full ownership of his land in Jefferson County was 224.3 acres, in Knox County 97.0 acres and in Sevier County 33.5 acres. Moreover, the average number of acres owned in partnership in Jefferson County was 300.0 acres, in Knox County 133.3 acres and in Sevier County 48.0 acres.

Comparatively, for those farmland owners that reported not receiving use value assessment, the average age for Jefferson County was 53 years, as well as for Knox County. On the other hand, the average age for Sevier County was 54 years.

The average years of education in all three counties was 12 years. The average gross farm income in Jefferson County was $6,650, in Knox County $8,600, and in Sevier County $6,000.

For those not receiving use value assessment the average number of acres owned by a farmer having full ownership of his land in Jeffer-

son County was 103.1 acres, in Knox County 80.8 acres and in Sevier County 82.2 acres. The average number of acres owned in a partnership in Jefferson County was 47.0 acres, in Knox County 94.5 acres, and in Sevier County 101.7 acres.

Results of the Statistical Analysis

As noted previously, it was hypothesized that the younger, better-educated part-time farmer with higher than normal farm incomes and an above-average farm size would most likely represent the typical user of use value assessment. To test this hypothesis, the SAS-76 procedure for non-parametric one-way analysis of variance was used. This particular type of testing method was necessary since the observations corresponding to these variables had been placed in classes for the purpose of analysis. This reflected the rank-ordering of the classes comprising each of the variables.

The non-parametric procedure is a distribution-free test which makes no assumptions about the form of the distribution nor about the population parameters. Its only requirement is that the sample population be continuous.[7]

Specifically, this procedure involved testing the means of the characteristics AGE, ED, INC. FMES, and TACF for those farmland owners with use value assessment and those without, to determine if there was a significant difference between them. At the 5 percent level of significance, using a critical chi-square of 3.84, the results showed there was no significant difference in the average age, income, farm

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[7]Jean D. Gibbons, Nonparametric Statistical Inferences (New York: McGraw-Hill Book Company, 1971), pp. 3-4.

employment status and farm size for those with and without use value assessment (Table 14).

On the other hand, the results indicated that there was a significant difference in the average education level for those with use value assessment as opposed to those without (Table 14). This suggested that the portion of the hypothesis concerning the education level of the typical participant was correct.

In a collateral analysis, it was found that nearly all of the respondents who did not participate in use value assessment did not know of its existence. Moreover, knowledge of the Act was positively related to education. Therefore, the level of education probably influenced participation through knowledge of the Act. That is, the more highly educated may have simply made themselves more aware of the public policy which could affect their income.

TABLE 14. RESULTS OF THE NONPARAMETRIC ONE-WAY ANALYSIS OF VARIANCE OF SELECTED CHARACTERISTICS IN EXPLAINING PARTICIPATION IN USE VALUE ASSESSMENT IN THE STUDY AREA, JULY 1978[a]

Characteristic	With Use Value Assessment	Without Use Value Assessment	Chi-Square
Age (yrs)	49	52	1.17
Income	$6,500	$6,000	0.12
Education (yrs)	7	9	5.21[b]
Farm size (ac)[c]	103.0	91.0	2.37

[a]The variable FMES was excluded from the table since the mean for both cases when interpolated was part-time farming.

[b]Statistically different at the 5 percent level of significance using a critical chi-square of 3.84.

[c]Total acres owned in full.

Note: Since the nonparametric test gives an observation the median value when it occurs more than once, i.e., education class 2 occurs more than once, the average values for the variables shown are slightly lower than their actual averages.

Source: 1978 Survey of Farmland Owners With and Without Use Value Assessment.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to examine the extent to which use value assessment was utilized in the 16 county East Tennessee Development District. Particular attention was devoted to the impact of use value assessment on local government finances and the resulting tax shift to nonfarmland owners. To fully ascertain the economic impact of use value assessment on local government finances, a case study analysis of Jefferson, Knox, and Sevier counties was undertaken.

Fundamental to the study was the objective of determining if farmland owners who participated in use value assessment exhibited the same socio-economic characteristics as those who did not. It was thus hypothesized that the younger, better-educated part-time farmer, with a higher income and larger farm size would be most likely to participate in use value assessment in the District. Moreover, the characteristics of farmland owners with use value assessment and those without were examined to determine if there were any socio-economic differences between the two groups on the aggregate level and on the individual county level.

The sample plan for determining the general extent and economic impact of use value assessment consisted of a series of interviews with the 16 county property tax assessors. Data were collected on the total number of farmland parcels in each county, the number that were assessed at use value, the current tax rate, the total market value of farmland in each county, the total use value assessment in

each county, and the last date of a countywide reappraisal. From these data, the amount of reduction in property value, the subsequent tax savings and the tax shifts were determined.

Of the 34,580 farmland parcels in the District as of 1978, approximately 5 percent received use value assessment. In total, there was a 4.2 percent decrease in the overall agricultural tax liability of the District. This amounted to a tax savings to farmland owners of $292,923.

Specifically, out of the 16 counties in the District, 9 counties reported one or more use value assessed farmland parcels, of which five reported having five or less. Of the counties located in the Knoxville SMSA, where use value assessment was expected to be substantial, only Blount County and Knox County had more than five use value assessed farmland parcels. Of these two, Knox County had 145 parcels assessed at use value. Of the counties outside the SMSA, only Jefferson and Sevier counties had more than five; 76 and 1,544 respectively.

Therefore, utilization of use value assessment was extensive only in Jefferson, Knox and Sevier counties. In Jefferson County, the total tax reduction due to the use value assessment of farmland amounted to $12,823, or $142 per parcel. Moreover, in Knox County, the total tax reduction amounted to $55,491, or $383 per parcel and in Sevier County, the total tax reduction amounted to $219,836, or $169 per parcel. Thus, although farmland owners in Sevier County experienced a much greater total tax savings, Knox County farmland owners experienced a greater per parcel tax savings.

The direct impact of use value assessment on the tax rate for most counties was not determinable, due to the short period the Act has been operational. However, in the case of Sevier County when a countywide reappraisal occurred in 1977, it appeared to be the reappraisal that caused the tax rate to vary downward and not use value assessment.

The impact of use value assessment on the tax base was determinable only for Jefferson, Knox and Sevier counties. For Jefferson and Knox counties, use value assessment did not significantly alter their agricultural tax bases or cause a significant change in agricultural tax liabilities. However, use value assessment did affect the agricultural tax base of Sevier County significantly to the point that it reduced the agricultural tax liability by 23.4 percent.

For the analysis of the characteristics of farmland owners with use value assessment and those without, a stratified random sample design was used to sample farmland owners with 15 acres or more from the county property tax rolls of Jefferson, Knox and Sevier counties. A sample of 5 percent yielded a sample size of 546 farmland owners with and without use value assessment, out of which 101 responded, for an 18 percent response rate. The total number who utilized use value assessment was 45. Fifty-five did not participate and one could not be correctly classified.

A single sheet questionnaire was mailed out to each farmland owner selected, soliciting a response on the socio-economic characteristics of age, gross farm income, years of education, location of the farm, farm employment status, full-time or part-time, number of weeks worked off the farm, type of farm organization and the average number of

acres owned by a farmer having full ownership of his land and the average acreage owned by farmers in partnership.

The typical farmland owner in the District as of July 1978 was 52 years old, had approximately a high school education, and made approximately $8,000 per year off the sale of agricultural products. The average number of acres owned by a typical farmer having full ownership of his land was 95.4 acres. The acreage owned by typical farmers engaged in a partnership, on the average, was 127.4 acres.

In comparison, the typical farmland owner with use value assessment was 50 years old, had at least two years of college, and made approximately $8,600 off the sale of agricultural products. The average number of acres owned by a farmer with use value assessment, having full ownership of his land, was 103.2 acres. Moreover, the acreage owned by farmers in a partnership, on the average, was 168.7 acres.

On the other hand, the typical farmland owner without use value assessment was 54 years old, had a high school education and made approximately $7,000 off the sale of agricultural products. The average number of acres owned by a farmer without use value assessment, having full ownership of his land, was 89.1 acres. Moreover, the acreage owned by farmers in a partnership, on the average, was 91.3 acres. In each of these three cases, the typical farm employment was part-time farming.

A major objective of this study was to describe the typical farmland owner who was most likely to utilize use value assessment by testing the hypothesis that the younger, better-educated, part-time farmers with above average incomes and larger farm size would be more likely to participate in use value assessment in the District.

Moreover, it was argued that this relationship was consistent with research on early adopters. Empirical results of this test indicated the higher the level of education, the more likely a farmland owner would be to participate in use value assessment, regardless of age, income, farm employment status and farm size.

In a collateral analysis, it was also found that nearly all of the respondents who did not participate in use value assessment did not know of its existence. Moreover, knowledge of the Act was positively related to education. Therefore, the level of education probably influenced participation through knowledge of the Act.

Policy Implications

The Act, as currently written, will likely not have far-reaching effects on the District. This is due to the overall rural-urban mix of the counties within it. As such, utilization will be concentrated in those semi-urban counties and urban fringe areas of the District.

Furthermore, prior to any increased level of participation there must be widespread reappraisal of land in conjunction with an increased awareness of the Act and its use value assessment provision. In such a case, the implication is that there would be a significant reduction in the tax base of each county where participation was substantial, which would result in significant tax shifts to nonfarmland owners and nonparticipating farmland owners.

As regards the effectiveness of use value assessment in conversion of farmland to nonfarm use through property tax reductions, any tax relief will be of a short-term nature. That is to say, as farm costs increase and as the market value of land continually appreciates, any

incentive to remain in farming, under the current Act, will be eroded away by potential lucrative gains which could be made by developing the land.

Thus, if preservation of farmland through such a program is desired, then the present use value assessment provision should be reworked in order to provide that farmland would indefinitely be preserved through a system of contracts, restrictive agreements and transfer of development rights.

Through these revisions of the objectives of the Act were met, without a change in economic efficiency, then in traditional terms of factors being used in their highest marginal valued use, the use of land would be determined through the allocation mechanism of the market. In other words, through contracts, restrictive agreements and the transfer of development rights, in combination with use value assessment, the social costs of the Act (in terms of opportunity costs of development) could equal social benefits (preservation of farmland).

Note, however, that although the conditions for economic efficiency go a long way toward defining policy recommendations for increasing social welfare, they do not help in determining whether one particular tax relief program is better than another. In order to do that, value judgments must be made concerning the relative "deservingness" of a specific group in the society, of which measurement is beyond the scope of this study.

When the Tennessee State Legislature intended that the Act directly relieve the increasing tax liability of actively producing farmers, it inadvertently allowed any farmland owner meeting the requirements to participate.

Therefore, the question arises as to who the Act primarily benefits--farmland owners holding land for farming or speculators holding land for relatively near term conversion to urban uses.

Furthermore, by making it less expensive to hold land through the use value assessment, the Act in essence encourages farmland owners in the urban fringe to wait for higher prices before converting to nonfarmland uses. This effect could invite "leapfrogging" of development and increase the costs of essential public services to growing areas throughout the District.

BIBLIOGRAPHY

BIBLIOGRAPHY

Babbie, E. R., Survey Methods Research, Belmont, Calif., Wadsworth Publishing Company, Inc., 1973.

Bachman, G. R., Simulated Effects of Use Value Assessment Alternatives on Local Government Finances in Five Townships on the Rural-Urban Fringe in Kent County, Michigan, Ann Arbor, Michigan: University Microfilms International, 1971.

Bauer, L. L. and J. P. Jordan, A Statistical Technique For Classifying Loan Applications, Bulletin 476, Agricultural Experiment Station, University of Tennessee, Knoxville, March 1971.

Barlowe, R. and T. R. Attev, Use Value Assessment of Farm and Open Space Lands, Research Report 308, Agricultural Experiment Station, Michigan State University, East Lansing, September 1976.

Ching, C. T. K. and G. E. Frick, "Effect of Use Value Assessment on Property Tax Rates," The American Journal of Agricultural Economics, Vol. 52, No. 4, November 1972.

Conklin, E. H., "Property Tax Incentives to Preserve Farming in Areas of Urban Pressures," reprinted from Property Tax Incentives for Preservation: Use Value Assessment and the Preservation of Farmland, Open Space, and Historic Sites, Proceedings of the 1975 Property Tax Forum, June 5-6, Washington, D. C., January 1976.

Conklin, E. H. and W. G. Leshev, "Farm Value Assessments as a Means for Promoting Efficient Farming in Urban Fringes," The Journal of the American Society of Farm Managers and Appraisers, Vol. 42, No. 1, April 1978.

_____, "Farm Value Assessment as a Means for Reducing Primitive and Excessive Agricultural Disinvestment in Urban Fringes," The American Journal of Agricultural Economics, Vol. 59, No. 4, November 1977.

Crowley, W. D., "Actual Versus Apparant Rates of Return on Farmland Investment," Agricultural Finance Review, Vol. 35, Economic Research Service, U. S. Department of Agriculture, Washington, D. C.: Government Printing Office, October 1974.

_____, Farmland Use Values Versus Market Prices in Three Oregon Land Markets, Bulletin 580, Economic Research Service, U. S. Department of Agriculture, Washington, D. C.: Government Printing Office, September 1974.

Drummond, E. H., Impact of Differential Assessment on the Oklahoma Property Tax Base, Proceedings of the Oklahoma Academy of Science, Vol. 56, 1976.

_____, The Impact of Property Tax Equalization on Rural Property in Oklahoma, Journal Article J-3046, "Oklahoma Agricultural Experiment Station, Oklahoma State University, Stillwater, December 1971.

Knight, T. O. and H. E. Drummond, Use Value Assessment: Its Impact on Property Values and the Property Tax Base in Payne, Oklahoma, Research Bulletin No. 3, Vol. 50, Agricultural Experiment Station, Oklahoma State University, Stillwater, September, 1977.

East Tennessee Development District, Land Use Plan, April 1978.

Epp, D. J., P. H. P. Norton and W. M. Carrol, The Agricultural Land Tax Issue, Farm Economics, Pennsylvania State University, April 1973.

Gardner, P. D. and R. Barlowe, Farm Real Estate Tax Trends in Michigan, Research paper, Department of Resource Development, Michigan State University, East Lansing, 1978.

Gibbons, J. D., Nonparametric Statistical Inference, New York: McGraw Hill Book Company, 1971.

Gloudemans, R. J., Use Value Farmland Assessments: Theory, Practice, and Impact, International Association of Assessing Officers, Chicago: IAAO, 1974.

Hady, T. F., Differential Assessment and the Land Market: A Commentary, Professional paper prepared for the Conference on the Preferential Tax Treatment Policy for Agricultural Land, The Lincoln Institute of Land, Policy, Cambridge, Mass., June 12-13, 1978.

_____, Differential Assessment Programs for Agricultural Land, a reprint from "Land Use: Tough Choices in Today's World," Soil Conservation Society of America, 1977.

Hady, T. F. and A. G. Sibold, State Programs for the Differential Assessment of Farm and Open Space Land, Bulletin No. 256, Economic Research Service, U. S. Department of Agriculture, Washington, D. C.: Government Printing Office, April 1974.

_____, "Differential Assessment of Farmland on the Rural-Urban Fringe," in the American Journal of Agricultural Economics, Vol. 52, No. 4, AAEA, February 1970.

House, P., Preferential Assessment of Farmland in the Rural-Urban Fringe of Maryland, Report No. 8, Economic Research Service, U. S. Department of Agriculture, Washington, D. C.: Government Printing Office, June 1961.

_____, Differential Assessment of Farmland Near Cities--Experience in Maryland Through 1965, Report No. 358, Economic Research Service, U. S. Department of Agriculture, Washington, D. C.: Government Printing Office, October 1967.

_____, Differential Assessment and the Preservation of Farmland, Open Space, and Historic Sites, in "Property Tax Incentives for Preservation: Use Value Assessment and the Preservation of Farmland, Open Space, and Historic Sites" from the Proceedings of the 1975 Property Tax Forum, IAAO: Chicago, 1975.

Keene, J. C., The Impact of Differential Assessment Programs on the Tax Base, in "Property Tax Incentives for Preservation: Use Value Assessment and the Preservation of Farmland, Open Space and Historic Sites," from the Proceedings of the 1975 Property Tax Forum, IAAO: Chicago, 1975.

Kolesar, J. and J. Scholl, Misplaced Hopes, Misspent Millions, Report on Farmland Assessments in New Jersey, The Center for Analysis of Public Issues, New Jersey: New Jersey Appellate Printing Company, Inc., 1972.

Leuthold, F. O. and G. F. Smith, Characteristics of Wisconsin Dairy Operators by Adapter Category: Is Rogers Correct? Paper presented at the Rural Sociological Society annual meeting, Baton Rouge, Louisiana, August 1972.

Miner, D. D., Emergency Trends in Agricultural Retention and Open Space Preservation, in Property Tax Incentives for Preservation: Use Value Assessment and the Preservation of Farmland Open Space and Historic Sites, from the Proceedings of the 1975 Property Tax Forum, IAAO: Chicago, 1975.

Mundy, S. D., M. Gray and R. Thomsen, Variables Related to Farm Real Estate Values in Tennessee Counties, Bulletin 576, Agricultural Experiment Station, University of Tennessee, Knoxville, March 1978.

Murray, R. A. and R. D. Reinsal, The Transfer of Farm and Open Country Real Estate in Six Maryland Counties, 1962, Misc. Publication 557, Agricultural Experiment Station, University of Maryland, College Park, June 1965.

Richmond, S. B., Statistical Analysis, 2nd Ed., New York: The Roland Press Company, 1964.

Rogers, E. M. and F. F. Shoemaker, Communications of Innovations, 2nd Ed., The Free Press, Chapter 5, 1971.

Ring, A. A., Property Valuations: Real Estate Principles and Practices, 7th Ed., New Jersey: Prentice-Hall Inc., 1972.

Sappington, C., "A Numerical Example of the Practical Use of Dummy Variables," in the Southern Journal of Agricultural Economics, Vol. 2, No. 1, December 1976.

Siegal, S., Nonparametric Statistics for the Behavioral Sciences, New York: McGraw-Hill Book Company, 1956.

Sinclair, R. O., Use Value Assessment: Economic Effects in Selected Communities in Vermont, Bulletin 676, Agricultural Experiment Station, University of Vermont, Burlington, April 1973.

Tennessee Annoted Code 67-650, The Agricultural, Forest and Open Space Land Act of 1976.

Tennessee Crop Reporting Service, Tennessee Agricultural Statistics, Bulletin T-14, 1977.

U. S. Department of Agriculture, Economics, Statistics and Cooperative Service, Farm Real Estate Market Development, July 1978.

_____, Economics Research Service, Farm Real Estate Taxes, March 1976.

_____, Economics, Statistics, and Cooperative Service, Bulletin No. 609, State Farm Income Statistics, September 1975.

U. S. Department of Commerce, Bureau of the Census, Census of Population: 1970, General Population Characteristics, Tennessee, PC(1)-B-44, Table 16; and 1960, Vol. 1, Characteristics of the Population, Part 44, Tennessee.

_____, Bureau of the Census, 1974 Census of Agriculture, Vol. 1, Part 42, Tennessee, County Summary Data.

APPENDICES

APPENDIX A

TABLE A-1. STATES HAVING USE VALUE ASSESSMENT LAWS AS OF JANUARY 1, 1978

State	Preferential[a] Assessment	Deferred Taxation[b]			Restrictive[c] Agreements
		Roll Back Tax	Interest Charge	Other Penalty Charges	
Alabama		X			
Alaska		X			
Arizona[d]					
Arkansas	X				
California					X
Colorado	X				
Connecticut		X		X	
Delaware	X				
Florida	X	X	X		X
Georgia					
Hawaii		X	X	X	X
Idaho	X[e]				
Illinois		X	X		
Indiana	X				
Iowa	X				
Kansas					
Kentucky		X			
Louisiana		X			
Maine		X	X	X	X
Maryland	X	X		X	X
Massachusetts		X		X	
Michigan		X[f]	X[f]		X[f]
Minnesota		X			
Mississippi					
Missouri	X				
Montana		X			
Nebraska		X	X		
Nevada		X			
New Hampshire				X	X

TABLE A-1 (continued)

State	Preferential[a] Assessment	Deferred Taxation[b] Roll Back Tax	Interest Charge	Other Penalty Charges	Restrictive[c] Agreements
New Jersey		X			
New Mexico	X				
New York		X[g]		X[g]	X[g]
North Carolina		X	X	X	
North Dakota	X				
Ohio		X			
Oklahoma[d]					
Oregon		X	X	X	
Pennsylvania		X	X		X
Rhode Island		X			
South Carolina					
South Dakota[i]	X				
Tennessee		X			
Texas		X			
Utah		X			
Vermont					X[h]
Virginia		X	X		
Washington		X	X	X	X
West Virginia					X
Wisconsin					
Wyoming	X				

[a]Eligible land is assessed at its value in current use and there is no penalty for converting to an urban use.

[b]Eligible is assessed at its value in current use and there is a penalty for converting to an urban use.

[c]Local government and landowner agree to restrictions on land use in return for use-value assessment.

[d]Arizona and Oklahoma tax all land according to current use.

TABLE A-1 (continued)

[e]Agricultural and commercial land are both taxed on the basis of current use.

[f]Circuit breaker law (does not explicitly require use-value assessment).

[g]New York's deferred tax law is used in conjunction with the establishment of agricultural districts.

[h]Vermont allows additional contracts between local governments and farmers to fix the tax rate on real and personal property.

[i]South Dakota limits preferential assessment to farmland in independent school districts.

Source: Thomas F. Hady, Differential Assessment Programs for Agricultural Land, A reprint from "Land Use: Tough Choices in Today's World," (Soil Conservation Society of America, 1977) Table 1; Raleigh Barlowe and Theodore R. Alter, Use-Value Assessments of Farm and Open Space Lands, Michigan Agricultural Experiment Station, Research Report 308 (Michigan State University, East Lansing, September 1976), Table 1.

APPENDIX B

AGRICULTURAL, FOREST, AND OPEN SPACE LAND ACT OF 1976*

67-651. Legislative Findings[1]

The general assembly finds:

(a) That the existence of much agricultural, open space and forest lands is threatened by pressure from urbanization, scattered residential and commercial development, and the system of property taxation. This pressure is the result of urban sprawl around urban and metropolitan areas which also brings about land use conflicts, creates high costs for public services, contributes to increased energy usage, and stimulates land speculation.

(b) That the preservation of open space in or near urban areas contributes to:

(1) The use, enjoyment and economic value of surrounding residential, commercial, industrial or public use lands;

(2) The conservation of natural resources, water, air, and wildlife;

(3) The planning and preservation of land in an open condition for the general welfare;

(4) A relief from the monotony of continued urban sprawl;

(5) An opportunity for the study and enjoyment of natural areas by urban and suburban residents who might not otherwise have access to such amenities.

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*Section to Section Reference. Sections 67-650--67-658 are referred to in §§ 11-1716, 11-1807, 67-606.

[1]Section to Section Reference. This section is referred to in § 67-653.

(c) That many prime agricultural and forest lands in Tennessee, valuable for producing food and fiber for a hungry world, are being permanently lost for any agricultural purposes and that these lands constitute important economic, physical, social, and esthetic assets to the surrounding lands and to the people of Tennessee.

(d) That many landowners are being forced by economic pressures to sell such agricultural, forest, or open space land for premature development by the imposition of taxes based, not on the value of the land in its current use, but on its potential for conversion to another use. [Acts 1976 (Adj. S.), ch. 782, § 2.]

67-652. Policy of State

The general assembly declares that it is the policy of this state:

(a) That the owners of existing open space should have the opportunity for themselves, their heirs, and assigns to preserve such land in its existing open condition if it is their desire to do so, and if any or all of the benefits enumerated in § 67-651 would accrue to the public thereby, and that the taxing or zoning powers of governmental entities in Tennessee should not be used to force unwise, unplanned or premature development of such land.

(b) That the preservation of open space is a public purpose necessary for sound, healthful, and well-planned urban development, that the economic development of urban and suburban areas can be enhanced by the preservation of such open space, and that public funds may be expended by the state or any municipality or county in the state for the purpose of preserving existing open space for one or more of the reasons enumerated in this section. [Acts 1976 (Adj. S.), ch. 782, § 3.]

67-653. Definitions[2]

As used in §§ 11-1716, 11-1807, 11-1808, 67-650--67-658 unless the context otherwise requires:

(a) "Agricultural land" means a tract of land of at least twenty-five (25) acres including woodlands and wastelands which form a contiguous part thereof, constituting a farm-unit engaged in or held for the production or growing of crops, plants, animals, nursery, or floral products.

(b) "Forest land" means land constituting a forest unit engaged in the growing of trees under a sound program of sustained yield management or any tract of twenty-five (25) or more acres having tree growth in such quantity and quality and so managed as to constitute a forest in the opinion of the state forester.

(c) "Open space land" means any area of land other than agricultural and forest land, of not less than three (3) acres, characterized principally by open or natural condition, and whose preservation would tend to provide the public with one or more of the benefits enumerated in §67-651 and which is not currently in agricultural land or forest land use. This term includes greenbelt lands or lands primarily devoted to recreational use.

(d) "Open space easement" means a perpetual right in land of less than fee simple which (i) obligates the grantor and his heirs and assigns to certain restrictions constituted to maintain and enhance the existing open or natural character of the land; (ii) is restricted to the area defined in the easement deed; (iii) grants no right of physical access to the public except as provided for in the easement.

(e) "Person" means any individual, partnership, corporation, organization, association, or other legal entity.

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[2]Section to Section Reference. This section is referred to in § 67-657.

(f) "Owner" means the person holding title to the land.

(g) "Director" means the director of the Tennessee state planning office.

(h) "Commissioner" means the commissioner of conservation or his designee.

(i) "Planning commission" means a commission created under § 13-501.

(j) "Present use value" means the value of land based on its current use as either agricultural, forest, or open space land and assuming that there is no possibility of the land being used for another purpose. It is equal to what its market value would be if there were some firm legal prohibition on changing the use of the land.

(k) "Roll-back taxes" means the amount of back tax differential a land owner would be required to pay as a result of converting the use of the land from agricultural land, forest land, or open space land as classified under §§ 67-650--67-658 to some other more intensive use.

(l) "State forester" means the director of the division of forestry of the department of conservation.

(m) "Local government advisory committee" and "Tennessee local government advisory committee" and "Tennessee local government planning advisory committee" means the local government planning advisory committee created by § 13-102. [Acts 1976 (Adj. S.), ch. 782, § 4.]

67-654. Agricultural land--Classification Procedure

(a) Any owner of land may apply for its classification as agricultural land on any assessment roll of any county by filing a written application for such classification with the tax assessor of such county.

The assessor shall determine whether such land is agricultural land, and if such a determination is made, he shall classify and include it as such on the county tax roll. In determining whether any land is agricultural land, the tax assessor shall take into account, among other things, the acreage of such land, the productivity of such land, and the portion thereof in actual use for farming or held for farming or agricultural operation.

(b) An application for classification of land as agricultural land shall be made upon a form prescribed by the state board of equalization and shall set forth a description of the land, a general description of the use to which it is being put, and such other information as the assessor may require to aid him in determining whether the land qualifies for classification as farmland.

(c) Any person aggrieved by the denial of any application for the classification of land as agricultural land shall have the same rights and remedies for appeal and relief as are provided in the general statutes for taxpayers claiming to be aggrieved by the actions of tax assessors or boards of equalization. [Acts 1976 (Adj. S.), ch. 782, §5.]

67-655. Forest Land--Classification Procedure

(a) Any owner of land may apply for its classification as forest land on any assessment roll of any county by filing a written application for such classification with the tax assessor of such county. The assessor shall determine whether such land is forest land, and if such a determination is made, he shall classify and include it as such on the county tax roll.

(b) In determining whether any land is forest land, the tax assessor shall take into account, among other things, the acreage of such

land, the amount and type of timber on the land, the actual and potential growth rate of the timber, and the management practices being applied to the land and to the timber on it. The tax assessor may request the advice of the state forester in determining whether any land should be classified as forest land, and the state forester shall make such advice available.

(c) An application for classification of land as forest land shall be made upon a form prescribed by the state board of equalization, in consultation with the state forester, and shall include a description of the land, a general description of the uses to which it is being put, aerial photographs, if available, and such other information as the tax assessor or state forester may require to aid him in determining whether the land qualifies for designation as forest land.

(d) Any person aggrieved by the denial of any application to the tax assessor for designation of land as forest land may appeal to the state forester on a form prescribed by the state forester. The state forester shall examine the land, and may have access to the original application filed with the tax assessor, and shall determine if the land is forest land. If he determines that it is, he shall notify the owner and the tax assessor, who shall classify such land as forest land and include it as such on the tax rolls of the county.

(e) The landowner, or the tax assessor, may appeal the decision of the state forester to the chancery court for the county. Such appeal shall be taken within ninety (90) days after the issuance of the determination by the state forester. The landowner and the tax assessor shall have the same rights and remedies for appeal and relief as are provided in the general statutes with respect to appeals from boards of tax equalization. [Acts 1976 (Adj. S.), ch. 782, §6].

67-656. Open Space Land--Classification Procedure

(a) The planning commission, in preparing a land use or comprehensive plan for the municipality or county, may designate upon such plan areas which it recommends for preservation as areas of open space land, other than lands currently in agricultural and forestry uses. Land included in any area so designated upon such plan as finally adopted may be classified as open space land for purposes of property taxation if there has been no change in the use of such area which has adversely affected its essential character as an area of open space land between the date of the adoption of such plan and the date of such classification.

(b) In any municipality or county where a planning commission is not in existence and a land use or comprehensive plan considering open space land is not adopted, the state planning office may designate lands which are highly desirable to be preserved as open space land in addition to lands currently in agricultural or forestry use as defined herein. Such designation shall be subject to the approval of the local government advisory committee and shall have the same force and effect upon property taxation as if the designation had been made by a municipal or county planning commission.

(c) An owner of land included in any area designated as open space land upon any plan as finally adopted or as designated by the state planning office may apply for its classification as open space land on any assessment roll of any county by filing a written application for such classification with the tax assessor of such county. Such assessor shall determine whether there has been any change in the area designated as an area of open space land upon the plan of such municipality or county or upon such designation if made by the state planning office and, if he determines that there has been no such change, he shall classify

such land as open space land and include it as such upon the tax rolls of the county. An application for classification of land as open space land shall be made upon a form prescribed by the state board of equalization and shall set forth a description of the land, a general description of the use to which it is being put, and such other information as the assessor may require to aid him in determining whether such land qualifies for such classification.

(d) Any person aggrieved by the denial by an assessor of any application for the classification of land as open space land shall have the same rights and remedies for appeal and relief as are provided in the general statutes for taxpayers claiming to be aggrieved by the actions of assessors or boards of equalization. [Acts 1976 (Adj. S.), ch. 782, § 7.]

67-657. Present Use Valuation--Roll-back Taxes--Involuntary Conversion of Use[3]

(a) When a parcel of land has been classified by the tax assessor as agricultural, forest, or open space land under the provisions of §§ 67-654-67-656, it shall be subsequently considered that its current use for agricultural or timber purposes or as open space used for neither of these purposes, is its immediate most suitable economic use, and assessment shall be based upon its value in that current use, rather than on value for some other use as may be determined in accordance with § 67-606 and § 67-608. In determining the current use value for land classified and used for agricultural or forestry purposes the tax

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[3]Cross-References. Discontinuance of open space easements, see § 11-1807.

assessor shall consider farm income, soil productivity or fertility, topography, susceptibility to flooding, rental value, replaceability as agricultural land for the production of food and fiber, and other factors which may serve to determine value for agricultural or timber production purposes.

(b) After a parcel of land has been classified by the tax assessor as agricultural, forest, or open space land under the provisions of §§ 67-654-67-656, he shall record it on a separate list for such classified property. Henceforth, the assessor shall appraise the land and compute the taxes each year based upon both (i) farm classification twenty-five (25%) percent of appraised value and present use value and (ii) on farm classification and value as determined under § 67-606 and § 67-608, but taxes shall be assessed and paid only on the basis of farm classification and present use value under the provisions of §§ 66-650 - 67-658. The taxes computed under § 66-606 and § 67-608, shall be used to compute the roll-back taxes, as defined in subsection (k) of § 67-653 and as provided for in subsection (c) of this section.

(c) If any land classified under §§ 67-654 - 67-656 as agricultural, forest or open space land is converted to a use other than those stipulated herein, the appropriate tax assessor shall compute the amount of taxes saved by the difference in present use-value assessment and value assessment under § 68-606 and § 66-608, for each of the preceding three (3) years for agricultural and forest land, and for the preceding five (5) years for open space land. Such amount shall be the roll-back taxes to be levied and collected on the first assessment roll prepared subsequent to such conversion in the same manner and at the same time as other taxes. If such converted land constitutes only a portion of a parcel so classified

on the assessment roll, the tax assessor shall apportion the assessment of such parcel on the first assessment roll prepared subsequent to the conversion and enter the apportioned amount attributable to the portion converted as a separately assessed parcel on the assessment roll. Such apportionment shall be made for each of the years to which roll-back taxes apply.

(d) In the event that any land classified under §§ 67-654 - 67-656 as agricultural, forest, or open space land or any portion thereof is converted to a use other than those stipulated herein by virtue of a taking by eminent domain or other involuntary proceeding, except a tax sale, such land or any portion thereof involuntarily converted to such other use shall not be subject to roll-back taxes by the landowner, and the agency or body doing the taking shall be liable for the roll-back taxes. In the event the land involuntarily converted to such other use constitutes only a portion of a parcel so classified on the assessment rolls, the assessor shall apportion the assessment and enter the portion involuntarily converted as a separately assessed parcel on the appropriate portion of the assessment roll. [Acts 1976 (Adj. S.), ch. 782, §8.]

67-658. Open Space Easement--Assessment[4]

Where an open space easement as defined in § 67-653 has been executed and recorded as provided in § 11-1807 the assessor of property shall henceforth assess the value and classification of such land, and taxes shall be computed and recorded each year both (1) on the basis of farm classification and value in its existing use under §§ 67-650 - 67-658, taking

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[4]Cross References. Discontinuance of open space easements, see § 11-1807.

into consideration the limitation on future use as provided for in the easement and (2) on the basis of such classification and value, under § 67-606 and § 68-608, as if the easement did not exist; but taxes shall be assessed and paid only on the basis of farm classification and fair market value in its existing use, taking into consideration the limitation on future use as provided for in the easement. [Acts 1976 (Adj. S.), ch. 782, § 10.]

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67-653. Definitions

As used in §§ 11-1716, 11-1807, 11-1808, 67-650 - 67-658 unless the context other wise requires:

(a) "Agricultural land" means a tract of land of at least fifteen (15) acres including woodlands and wastelands which form a contiguous part thereof, constituting a farm unit engaged in or held for the production or growing of crops, plants, animals, nursery, or floral products. 'Agricultural land' means also two or more tracts of land including woodlands and wastelands, one of which is greater than fifteen (15) acres and none of which is not less than ten (10) acres and such tracts may not be contiguous but shall constitute a farm-unit being held and used for the production or growing of agricultural products.

(b) "Forest land" means land constituting a forest unit engaged in the growing of trees under a sound program of sustained yield management or any tract of fifteen (15) or more acres having tree growth in such quantity and quality and so managed as to constitute a forest.

(c) * * *

(j) "Present value" means the value of land based on its current use as either agricultural, forest, or open space land and assuming that there is no possibility of the land being used for another purpose.

(k) * * *

[Acts 1976 (Adj. S.), ch. 782, § 4; 1977, ch. 256, § 1; 1978, ch. 613, §§ 1, 2.]

APPENDIX C

CURRENT USE VALUE ASSESSMENT QUESTIONNAIRE

INSTRUCTIONS: PLACE AN "X" IN THE BOX REPRESENTING YOUR BEST ANSWER.

1. COUNTY WHERE YOU RESIDE_____STATE_____

   LOCATION OF FARM PARCEL (WHAT COUNTY)_____STATE_____

2. AGE:

   [ ] under 25 yrs. [ ] 25 to 34 yrs. [ ] 35 to 44 yrs.
   [ ] 45 to 54 yrs. [ ] 55 to 64 yrs. [ ] 65 yrs. or older

3. EDUCATION:

   [ ] Less than Jr. H.S. [ ] Tech. School [ ] BS/BA
   [ ] Jr. High School [ ] Jr. College [ ] Graduate work
   [ ] High School

4. ARE YOU EMPLOYED AS A:

   [ ] FULL-TIME FARMER (primary employment is farming)
   [ ] PART-TIME FARMER (primary employment is not farming and works at least 4 weeks per year off the farm)

   IF YOU ARE A PART-TIME FARMER, WHAT IS YOUR OTHER OCCUPATION(S)?

   _____

   IS IT FULL TIME? [ ] Yes [ ] No

   APPROXIMATELY HOW MANY WEEKS DO YOU WORK OFF THE FARM?:

   [ ] 4 - 12 wks. [ ] 20 - 28 wks. [ ] 36 - 44 wks.
   [ ] 12 - 20 wks. [ ] 28 - 36 wks. [ ] 44 - 52 wks.

5. APPROXIMATELY WHAT WERE YOUR TOTAL CASH RECEIPTS FROM THE SALE OF FARM PRODUCTS IN 1977?

   [ ] Less than $5,000 [ ] $5,000-9,999 [ ] $10,000 - 19,999
   [ ] $20,000-49,999 [ ] $50,000 or more

6. WHICH OF THE FOLLOWING BEST DESCRIBES YOUR TYPE OF FARM ORGANIZATION?:

   [ ] Husband and wife [ ] Individual [ ] Partnership [ ] Corporation

7. WHAT IS THE TOTAL NUMBER OF ACRES YOU OWN IN FULL_____AND/OR IN PART_____?

   Number of acres in crop land you own in full_____and/or in part_____.
   Number of acres in pasture you own in full_____and/or in part_____.
   Number of acres in woodlands you own in full_____and/or in part_____.

8. ARE YOU FAMILIAR WITH OR KNOW OF THE "AGRICULTURAL, FOREST, AND OPEN SPACES ACT OF 1976"(COMMONLY REFERRED TO AS THE "GREEN BELT ACT") PASSED BY THE TENNESSEE STATE LEGISLATURE WHICH PROVIDES FOR ALL AGRICULTURAL AND FOREST LAND THAT IS 15 ACRES OR MORE TO BE ASSESSED AT CURRENT USE VALUE RATHER THAN MARKET VALUE?

   [ ] Yes [ ] No

   IF YOUR ANSWER IS YES, CONTINUE TO QUESTION 9; IF YOUR ANSWER IS NO, THERE IS NO NEED TO CONTINUE.

9. HAVE YOU APPLIED FOR USE VALUE ASSESSMENT? [ ] Yes [ ] No

   → IF YES, IS YOUR LAND NOW ASSESSED AT USE VALUE? [ ] Yes [ ] No

   → IF NO, DO YOU EXPECT TO APPLY FOR USE VALUE ASSESSMENT IN THE FUTURE?

   [ ] Yes [ ] No [ ] POSSIBLY, BUT ONLY AFTER A COUNTYWIDE REASSESSMENT OF LAND

10. IF YOUR LAND IS ASSESSED AT USE VALUE PRESENTLY, WILL THE TAX SAVINGS RECEIVED ALLOW YOU TO REMAIN IN FARMING FOR A LONGER LENGTH OF TIME?

    [ ] Yes [ ] No [ ] Makes no difference.

VITA

Gerald F. Graham, Jr., was born in Peoria, Illinois, January 31, 1949. The son of a career officer in the USAF, he grew up living throughout the United States, Canada, Europe and the Canal Zone. After graduation from Scollard Hall Secondary School in North Bay, Ontario, Canada, in 1968, he entered Valdosta State College. In 1969, he left Valdosta State to live in St. Petersburg, Florida. For the next three years he held various jobs in the St. Petersburg area. In 1972, he entered Pinellas Vocational Technical Institute and graduated in 1974 with a technical degree in Civil Engineering Technology. For approximately the next two years, he worked for the City of St. Petersburg, Florida, in the Department of Planning. In January 1976, he entered the University of South Florida and graduated in August of 1977 with a degree in Economics. In the fall of 1977, he began a graduate program in the Department of Agricultural Economics at the University of Tennessee, Knoxville. In June 1979, he received the Master of Science degree in Agricultural Economics.

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