THE IMPACT OF PROPERTY TAX EQUALIZATION ON RURAL PROPERTY IN OKLAHOMA

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Public opinion surveys indicate that the local property tax is the least popular of all taxes paid by Americans, yet in almost every state such a tax is levied for the support of local government and/or public schools [1, p.2]. The major economic argument against the property tax is its inequities — both vertical and horizontal. Several studies have focused on the vertical equity of property taxes in Oklahoma, [4, 5] but the question of horizontal equity remains unexplored. The research reported in this paper deals with the nature of horizontal inequities in the taxation of rural land in Oklahoma and with the impact of state-wide equalization on rural land values.

OKLAHOMA'S PROPERTY TAX SYSTEM

In Oklahoma, appraisal and assessment of property values for the purposes of levying ad valorem taxes is the responsibility of county governments.[1] The state collects no millage and exerts a minimum of control over the practices of county assessors. The state's constitution stipulates that property must be assessed at no more than 35 percent of its appraisal value.[2] Most counties levy maximum millage rates allowed by law.[3] The constitution further provides that different classes of property may be assessed at different ratios so long as the assessment for each class is less than 35 percent and all property within each class is treated equally. The constitution also establishes a State Board of Equalization "to examine the various county assessments and to equalize, correct and adjust the same as between the counties by increasing or decreasing the aggregate assessed value of the property or any class thereof" [6]. However, this board has been virtually inoperative since the 1930's, when a statewide two mill levy was dropped. In 1960, the board met and set a target assessment ratio of 20 percent for all property, but failed to enforce this goal. Since then, assessment ratios within each county have been established solely by the County Assessor who, as an elected official, generally seeks to reduce assessment ratios by failing to reappraise property values in accordance with land market trends.

As a consequence, substantial horizontal inequities have developed in the Oklahoma property tax system — both among classes of property within counties (which is sanctioned by state law) and among counties for any given class of property.[4] As a result of the school funding system, providing amounts of state assistance necessary to bring revenue per ADA in each district up to a certain minimum level, taxpayers in counties with high assessments subsidize taxpayers in counties with lower ones. That is, the

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[1]Property owned by public service, transportation and pipeline companies that operate in more than one county is appraised by the Ad Valorem Division of the Oklahoma Tax Commission.

[2]The constitution was amended in 1972 to permit use value assessment. In 1974 the legislature mandated that all counties be reappraised on a use value basis by 1979.

[3]For instance, counties are limited by the state constitution to no more than 10 mills and schools are limited to 35 mills for operating expenses. Practically all districts collect the maximum millage. Since an amendment to the constitution (which must be submitted to the voters) is required to adjust maximum millage rates, they will be considered constant throughout this study.

[4]Inequitites also exist in the assessment of property within a given class in a given county [8, Table 4]. Horizontal inequities within counties will not be examined in this study.

lower the assessment ratio (and hence tax collections with a fixed millage), the higher is state support for public education. Therefore, a county with a low assessment ratio will have a net fiscal inflow which must be balanced with a net outflow from the high assessment counties.

Recently a state representative from Tulsa county, which has the highest assessment ratio (i.e., fiscal outflow) in the state, brought suit against the State Board of Equalization for not performing their constitutional responsibilities. On April 21, 1975 the Oklahoma Supreme Court ruled that the state board must begin equalizing "on an annual and regular basis" at "a rate which is inherently and basically fair to all citizens."[5] The court further ruled that if the board fails to act, its members should be removed from office for failure to perform their constitutional duties. The board's membership includes the Govenor, Secretary of State, Attorney General and President of the State Board of Agriculture.

HORIZONTAL INEQUITIES IN ASSESSMENTS OF RURAL PROPERTY

Who will be advantaged and disadvantaged by equalization? Several hypotheses exist. None have been empirically tested for Oklahoma. In the following section three specific hypotheses will be formulated. An empirical test of each will be presented.

Hypothesized Horizontal Inequities

One hypothesis states that counties with low mean incomes tend to assess property at lower rates than counties with higher average income levels. The reasoning behind this argument was alluded to above. Since county assessors are elected officals, there are strong political pressures in low income counties to reduce tax burdens by lowering the assessment ratio. Conversely, it is frequently argued that residents of high income counties support assessors who maintain high assessment ratios such that public support of schools and other services is adequate. Thus it is hypothesized that income levels and assessment ratios vary directly. The implication of this hypothesis is that equalization would tend to increase the relative tax burden (property taxes as a percent of income) on taxpayers in low income counties more than on more affluent taxpayers, thereby further distorting the vertical inequities already present in the property tax structure.[6]

A second hypothesis that is often encountered is that assessment ratios are higher in counties with relatively low land prices. The reasoning here is that land prices have increased more rapidly for high priced land than for lower priced land, assessors tending to adjust all appraised values more or less uniformly accross the state. Consequently, it is expected that actual assessment ratios in those counties where land prices have been bid up either for reasons of productivity or location will be below those encountered in counties with low land prices. If this hypothesis were verified, equalization would tend to increase property tax burdens most rapidly in those counties with high valued land. Most of the higher valued land in Oklahoma is found in the counties surrounding Tulsa and Oklahoma City and in the heart of the wheat belt.

A third hypothesis is that assessment ratios are lower in counties that are predominately rural. This argument is particularly forceful with regards to assessment of rural property, since the political impact of rural property owners increases as the degree of rurality in a county increases. In addition to the political expectation of an inverse relationship between rurality and assessment ratios, there is also the argument that public service costs are lower in rural counties than in congested areas. Therefore, assessors in rural counties may reduce the level of county revenue per dollar of property value below that found in more urban areas. Finally, since county expenditures tend to vary with population and since there is more property per capita in rural areas, assessments in rural counties can be maintained at relatively lower levels. For these reasons it is expected that the assessment ratio and rurality will vary inversely. If this hypothesis is accepted, it would mean that statewide equalization of rural property would tend to increase the tax burden in rural counties of Oklahoma more than in the state's urban areas.

Test of the Hypotheses

Each of the hypotheses relates the level of the

[5] Opinion of the court quoted in [12, pg. 1].

[6] This conclusion is valid if income is the equity criterion. Presumably, if wealth were used as an equity criterion, equalization would foster vertical equity under all hypotheses.

assessment ratio to a socio-economic characteristic of the county. These hypotheses are tested using 1969 assessment ratios for rural land in Oklahoma's 77 counties. Since differential assessment practices are allowed in Oklahoma, the analysis is limited to rural land. Two different assessment ratios will be used. The first, a sales-assessment ratio, was computed by the Oklahoma Tax Commission for 1969 and based on property actually sold on the open market during that year [7].

The other assessment ratio is a value-assessment one. This ratio is equal to the per-acre assessed value of rural property in each county divided by the per-acre market value of all land as reported in 1969 Census of Agriculture.[7] The three above hypotheses are tested by comparing mean assessment ratios for each quintile of the variables hypothesized to be related to the level of the assessment ratio. The results are summarized in Table 1.

Table 1. AVERAGE RURAL PROPERTY ASSESSMENT RATIOS FOR QUINTILES OF RURAL INCOME, LAND PRICES AND PERCENT OF COUNTY RURAL FARM: OKLAHOMA, 1969

Quintile of Income, Land Prices or Percent Rural Farm	Average Sales-Assessment Ratio by Quintile of-			Average Value Assessment Ratio by Quintile of-		
	Rural Income[b]	Land Price[c]	Percent Rural Farm[d]	Rural Income	Land Price	Percent Rural Farm
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First[a]	11.93	13.55	11.34	8.96	10.22	8.90
	(2.88)	(2.85)	(2.25)	(2.20)	(3.04)	(1.45)
Second	11.55	11.29	11.84	10.03	9.03	9.34
	(2.04)	(2.18)	(1.93)	(2.21)	(1.91)	(1.46)
Third	10.71	11.82	11.54	9.43	9.47	9.23
	(2.25)	(2.05)	(2.18)	(1.71)	(1.55)	(1.70)
Fourth	11.90	11.14	11.95	9.07	9.32	9.42
	(2.40)	(1.91)	(3.26)	(1.73)	(1.37)	(2.36)
Fifth	12.59	10.88	12.06	10.93	10.34	11.48
	(3.11)	(3.03)	(3.27)	(3.08)	(3.04)	(3.28)

[a]Lowest income, lowest land price or most rural quintile. Standard deviations in parentheses below each item.

[b]Mean rural farm family income [11, Table 137].

[c]Average price of agricultural land from [10, Table 1], adjusted by ratio of rural property assessments, including improvements to rural property assessments excluding improvements [7].

[d]Percent of county population that is rural farm [11, Table 43].

[7]Census data which report farm real estate values were corrected for non-land elements as described in the footnote to Table 1. The land value data from the census [10, Table 1] is taken as a ratio of per acre assessed values of rural land excluding improvements [7].

The most striking aspect of Table 1 data presented is the rather small difference between assessment ratios in different quintiles. None of these differences were found to be significant by Duncan's multiple range test. Moreover, there is little if any pattern to the results, although the value-assessment ratio does appear to increase slightly as the level of income and degree of urbanization increase. But again, differences are not statistically significant. Consequently, all three hypotheses are rejected.

These results do not imply that there is little variation in assessment ratios. In fact, sales-assessment ratios for rural land in Oklahoma vary from a low of 7.39 percent to a high of 20.62, with a coefficient of variation of 22 percent. The low and high value-assessment ratios are 6.08 and 19.37 percent. Instead, these results show that such variation is not related to income levels, land prices or rurality.

It may be concluded that while equalization of rural assessment ratios would certainly affect property owners in those counties that have maintained low assessment ratios, equalization would not systematically affect taxpayers in counties with low rural farm incomes, low land prices or high degrees of rurality.

IMPACT OF EQUALIZATION OF PROPERTY VALUES

The previous section showed that equalization would not disadvantage property owners in any of the particular classes of counties studied. A second general question that may be asked concerning the impact of equalization is what will happen to property taxes as a result of equalization? Since local changes in property taxes are capitalized into property values, a move toward equalization would tend to alter property values in Oklahoma.[8] In this section a rural land market model will be developed. It is capable of estimating the impact of equalization on rural property values in Oklahoma.

Land Value Model

A model capable of predicting rural land prices in Oklahoma was developed to estimate the impact of equalization on property values. Numerous studies have shown that rural land prices are dependent on the productive ability of that land, its proximity to urban centers, and the level of local property taxes [3, 9, 13]. Consequently, the model below was developed and its parameters estimated using OLS for 1969 Oklahoma data with each of the 77 counties as an observation:

$$(1)\quad V = \underset{}{6.105} + \underset{(0.028)}{0.057Y} + \underset{(0.032)}{0.136G} + \underset{(0.063)}{0.225C} - \underset{(0.028)}{0.118D} - \underset{(0.127)}{0.296S} \quad (R^2 = 0.70)$$

where:

- V = land value, computed as in Table 1.
- Y = net farm income, equal to the difference between the market value of agricultural commodities sold [10, Table 4] and farm production expenses [10, Table 5].
- G = receipts from government farm programs [10, Table 4].
- C = receipts from custom work, recreational and other agricultural services [10, Table 4].
- D = highway mileage from the county seat to either Tulsa or Oklahoma City, whichever is shorter.
- S = sales-assessment ratio for rural property [7].

Where applicable, all variables are measured on a per-acre basis and expressed in logarithms. All coefficients are statistically significant at the 5 percent level and all signs are of the expected direction. Standard errors of the coefficients are shown in parentheses below the estimates.

Impact of Equalization

Using the above model, the impact of equalization on property values and assessed values can be estimated easily by substituting constant equalized values for S, the sales-assessment ratio. For any given county, an increase in the assessment ratio (assuming millage rates remain constant) would imply higher property taxes which would be capitalized into the value of land, resulting in a reduced value. The ultimate impact of equalization on assessed values depends on the interplay between capitalization effect on land values and the change in assessment ratio. As the assessment ratio increases,

[8] For a discussion of why such capitalization occurs, see [9]. In a previous paper the author argued that global effects of property taxes were not always capitalized [2]. Within the context of this paper all changes in property taxes may be considered within a local or partial equilibrium framework.

value of land upon which that assessment is made decreases, so assessed values increase less rapidly than assessment ratios.

The impact of equalization assuming uniform sales-assessment rates of both 9.75 and 20.0 percent are shown in Table 2. The first rate (9.75 percent) is the present average value-assessment ratio in the state — reflecting current practice, and the second (20 percent) is the target that was established by the State Equalization Board in its 1960 effort to equalize. The present mean sales-assessment ratio for rural property in Oklahoma is 12.01 percent. Since the 9.75 percent rate represents a decrease in the average assessment ratio, reduction in taxes is capitalized into land values, increasing the value of the average acre by $5.46 or 4.11 percent. The aggregate effect is a gain in total property values of almost $200 million for the entire state. The effect of equalizing the sales-assessment ratio at 9.75 percent varies among counties from a reduction in property values by 8 percent to an increase of 25 percent. Obviously, the greatest increase in property values accrues to property owners in counties with the highest present assessment ratio. The combined effect of increased land values and a reduction of 18.82 percent in the average assessment ratio would result in a decrease of 16.10 percent in total assessed values.[9]

Table 2. AVERAGE LAND PRICE, STATE PROPERTY, VALUE, AND ASSESSED VALUE FOR DIFFERENT SALES-ASSESSMENT RATIOS ON RURAL PROPERTY: OKLAHOMA 1969

	Sales-Assessment Ratio		
	Present 12.01%	Proposed 9.75%	Proposed 20.00%
Percentage Change in Sales-Assessment Ratio		-18.82%	+66.53%
Land Price* Per Acre	$123.15	$128.61	$103.99
Total Rural Property Value* (millions)	$4,579	$4,767	$3,855
Percentage Change in Property Value		+4.11%	-15.81%
Total Assessed Value of Rural Property (millions)	$191	$160	$266
Percentage Change in Assessed Value		-16.10%	+39.16%

*Estimated by Equation (1), not the same as the total appraised value from which assessed values are calculated.

[9]Actually, the tax base would shrink a bit less than the estimated 16.10 percent decrease because of a homestead exemption on the first $1,000 of assessed value. Those properties that currently have assessed values less than $1,000 would not experience any change in their tax liability if equalization occurred.

If equalization were mandated at 20 percent, an average acre of rural land in Oklahoma would decrease in value by almost $20, or 15.81 percent. This translates into a loss of property values of nearly three-quarters of a billion dollars for rural property owners in Oklahoma. The 66 percent increase in the assessment ratio would cause an estimated 39 percent increase of assessed values. In fact, the average rural taxpayer in Oklahoma would pay *more* than 39 percent in property *taxes* if assessment ratios were fixed at 20%, appraisal practices and millages remaining constant. The tax paid by most rural tax payers would increase even more because of the fixed homestead exemption of $1,000 on assessed values. For example, suppose a rural property is presently assessed at $3,000. The taxpayer receives a $1,000 homestead exemption and pays the millage on a net assessed value of $2,000. If equalization causes a 39 percent increase in assessed values, then assessed value of a $3,000 parcel becomes $4,170. After subtracting homestead exemption, the net assessed value of $3,170 is more than 59 percent above the previous level. In other words, tax burdens will increase more rapidly than gross assessed values whenever equalization implies an increase of assessment ratios.

The impact of equalization at 20 percent would vary greatly among counties. Two Oklahoma counties presently assess rural property at rates slightly above 20 percent. In these cases, equalization at 20 percent would reduce total assessed values (and tax collections) and cause a slight increase in rural property values. These adjustments would all be 1 percent or less. At the other end of the spectrum, Major county has the lowest sales-assessment ratio, 7.39 percent. If appraisals and millage rates remained constant, reassessment at 20 percent would more than double the gross assessed value in Major county. Net assessed values would increase even more for the reasons cited above. The increased property tax burden would be capitalized into land values, causing them to fall by more than 25 percent — according to estimates generated by the rural and land model in equation (1).

CONCLUSION

It is quite certain that some form of equalization of property tax assessment procedures in Oklahoma will occur. This study investigated the effects of equalization on rural property owners. Contrary to many expectations, results suggest that equalization will not differentially affect those counties with relatively high land values, nor those counties with relatively low levels of rural family income, nor those counties with relatively high land values, nor those counties that are most rural. In fact, there appears to be no systematic relationship between these variables and existing assessment ratios. Consequently, an equalization program could be implemented without producing any systematic externalities. Therefore, the net equity gain of an equalization program in Oklahoma is almost certain to be favorable. Similar equity gains should be expected in states with unequalized property taxes.

Equalization will affect property values and assessed values in those counties that change their assessment ratios if appraised values and millage rates remain constant. In 1969, sales-assessment ratios on rural land varied from a low of 7.39 percent to a high of 20.62. Due to the range in existing assessment ratios, any equalization will substantially lower assessed values in high assessment counties, or increase assessed values in low assessment counties, or both. Property values will also be drastically affected, with the possibility of some land prices changing by as much as 25 percent as the impact of equalized assessments is capitalized into land values. In those counties where the assessment ratio increases, actual taxes paid by landowners will increase even more rapidly than assessed values, due to the fixed nature of the homestead exemption. In conclusion, it appears that equalization will produce significant, but not systematic changes in the horizontal equity of the property tax structure of Oklahoma.

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