AN ECONOMIC ANALYSIS OF FACTORS AFFECTING INEQUALITY OF EDUCATIONAL EXPENDITURES FOR OKLAHOMA COMMON SCHOOLS

BY

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CHAPTER I

INTRODUCTION

The problem of financing and providing education has come under increasing scrutiny in recent years. In particular the property tax as one of the major sources of revenues used for financing common schools has been widely criticized.

Property taxes provide a large portion of the funds used for public education in many states. The use of the property tax as a base for financing public education has been the subject of controversy. Questions are raised as to whether such systems of funding can provide equality of educational opportunity and whether or not the burden of paying for public education is distributed equitably.

This situation has been reviewed in recent state and U.S. Supreme Court cases. The California Supreme Court ruled in Serrano v. Priest that the California school finance system "makes the quality of a childs' education depend upon the resources of his school district and ultimately upon the resources of his school district and ultimately upon the pocketbook of his parents" (1, p. 2128). In a previous case the U.S. Supreme Court refused jurisdiction and refused to rule out the use of the property tax for financing public education. But the Court did state that "The need is apparent for reforms in tax systems which may well have relied too long and too heavily on the local property tax" (2, p. 24).

Concepts of Equality in Public Education

The concepts of equity and equality of educational opportunity are difficult to quantify. Equality of educational opportunity inherent in common school funding systems can be viewed from two sides. Equality can be viewed in terms of inputs to or outputs of the educational system.

In defining equality in terms of educational inputs the main concern is how the revenues (inputs to the educational system) are raised. Equality in this case could be defined as equal expenditures for equal tax effort (3). This concept of equality--known as "fiscal neutrality" was introduced by John E. Coons, William H. Clune III, and Stephen H. Sugarman (4). In the courts the concept of fiscal neutrality has been argued more successfully than those cases centering on equality of educational output (5). The outputs of an educational system in terms of quality are often difficult to measure. Some researchers approach this problem by describing education as a production function (6)(7). The results of such analyses indicate that if equality of outputs from the educational system is desired the resources used in the educational process should be allocated differentially depending on education need. Differing costs of providing an education can affect the output of an educational system.

A frequently used standard in evaluating equality of educational opportunity is to compare revenues per average daily attendance.
The use of equal revenues a measure of equality has been widely criticized. If the price of educational resources varies from district to district equal revenues per pupil will not necessarily result in equal levels of educational output (8). Brown points out that students as inputs

to the educational process do not have equal educational characteristics before entering the educational system, and therefore require differing levels of expenditures in order for each student to reach the desired level of educational achievement (7). A primary factor that can affect student achievement is the student's socio-economic background.

Even though equal expenditures per pupil will not necessarily provide equality of educational opportunity, a move toward equal funding is a step toward equality of opportunity. Expenditures per student is an adequate and appropriate measure of equality for a study dealing only with Oklahoma because most school districts are relatively homogeneous with respect to those factors influencing student inputs and the level of educational resource prices.

There is evidence of wide variation in per pupil expenditures within many states. For the school year 1969-70 the ratio of maximum to minimum per pupil expenditure within those 49 states that use property tax revenues to support education ranged from a high of 56.2/1 in Texas to a low of 1.4/1 in West Virginia. In Oklahoma the ratio was 29.7/1. Only two states had a greater ratio than Oklahoma (9). For the school year 1975-76 the maximum to minimum ratio of per pupil expenditures in Oklahoma had fallen to 7.0/1. Even though this range has decreased significantly the variation is still great with maximum per student expenditures of $4583 to a minimum of $654 and with the state average of $1187. Variation such as this can be the result of how revenues of common education are generated and the way these funds are distributed to the school districts within the state.

Common School Funding in Oklahoma

As is the case in most states the funding of common schools in Oklahoma is dependent on three major revenue sources. These are locally raised revenues, state revenues and aid, and federal aid. The relative importance of each of these revenue sources is shown in Table I. Within the state the relative importance of each of these sources varies widely. For example dependence on locally raised revenues varies from 9% of total revenues in Sequoyah County to 61% of total revenues in Beaver County.

In Oklahoma local revenues come almost exclusively from the local property tax. Most local property for each district is assessed by the county assessor. The primary exception is the assessment of property owned by public service companies which is performed by the Oklahoma Tax Commission. Within each taxing district all property is taxed at the same millage rate.

Revenues from the state have two components, dedicated revenues and state aid. Dedicated revenues include gross production tax, auto, boat, and motor liscenses, REA tax, and school land earnings. Dedicated revenues are distributed to districts according to specific criteria such as collections by district, number of students, etc. State aid is distributed using a formula tha is a variant of the minimum foundation plan (10). A minimum level of support is stipulated for each elementary and secondary student. The foundation aid is determined using a formula which includes the net assessed valuation in the district. In addition the program provides funds for transportation, special programs for special education and vocational education, and

TABLE I

SOURCES OF REVENUES FOR COMMON SCHOOLS IN OKLAHOMA AND SELECTED COUNTIES 1976-77

	Local Revenues		State Revenues		Federal Revenues		Total Revenues
	Per ADA	Percentage	Per ADA	Percentage	Per ADA	Percentage	Per ADA
Oklahoma	443.06	38	594.63	51	128.25	11	1,165.95
ADAIR	189.16	14	816.69	61	336.40	25	1,342.25
BEAVER	1,497.25	61	939.18	38	18.50	1	2,454.93
GREER	442.44	39	580.05	52	98.79	9	1,121.28
OKLAHOMA	432.36	39	587.56	53	93.83	8	1,113.75
PAYNE	428.09	37	651.40	57	66.00	6	1,145.49
TEXAS	790.49	49	758.74	47	69.88	4	1,619.11
TULSA	545.38	46	577.69	49	61.63	5	1,184.70

Source: Oklahoma State Department of Education, 1976-77 Annual Report.

incentive aid to encourage districts with relatively low assessed values to increase their tax levies. A more detailed description of the local property tax and school funding formula will be provided in Chapter II.

In a funding system as diverse as that of Oklahoma inequality in expenditures can result from a variety of factors. A major cause of inequality may be variations in per capita property value among school districts. Another source of inequality could result from unequal distribution of public serivce utility assessments. The assessment procedures of the county assessor can also affect the revenues raised locally by the property tax. In Oklahoma variation may occur because property is assessed using different methods and different standards in each of the 77 counties. Ratios of assessed values to market values of property vary widely among counties. Within each county different classes of property can be assessed at different rates as long as the rates are applied in the same manner to a given class of property throughout the county.

The Oklahoma Tax Commission identifies these property classes as residential, commercial-industrial, and agricultural. The assessed value of each of these property classifications is reported for each county but not for the individual school districts.

Another determinant of the level of revenues raised by the property tax for school funding is the millage rate. The millage rate is determined by the County Excise Board within limits provided by state law. In addition to variation resulting from the property tax and distribution of property value some inequalities may arise from the school funding formula itself.

Objectives

In order to determine the impact of each of these sources of variation on expenditures per average daily attendance, estimates are needed for the values of residential, commercial-industrial, and agricultural property for each of Oklahoma's 623 school districts. The information provided by such analysis could be utilized by legislators and educators in evaluating the equity and equality implications of alternative educational financing systems.

The main objectives of this study are as follows:

1. To estimate 1976 market values of agricultural, commercial industrial, and residential property for each of Oklahoma's 623 school districts.
2. to identify and analyze sources of variation which result in inequalities of educational expenditures.

Some questions that are addressed in this analysis concern whether inequalities in common school funding per pupil are the result of disparities in property values per student or are a consequence of variation in assessment procedures or are caused by variation in some other means of support.

The effects of changes in the distribution of public service and personal property and changes in assessment rates on per capita assessed value will be evaluated using various measures of disparity. These measures will be formulated and compared for several assumptions about the determination of per capita assessed value. Similar measures will be used to ascertain the effects of changes in the millage rate, distribution of state dedicated revenues, distribution of state aid, and distribution of federal aid on variations in per capita expenditures.

Thesis Outline

An overview of the local property tax and school funding formula is presented in Chapter II. The procedure for estimating property values in each school district for the three property classifications is described in Chapter III. The use of these data in analyzing the sources of inequality of educational expenditures is presented in Chapter IV. Conclusions and a summary of the study are discussed in Chapter V.

CHAPTER II

THE PROPERTY TAX AND COMMON SCHOOL FUNDING SYSTEMS IN OKLAHOMA

Traditionally local governments have relied heavily on the property tax for financing. The property tax has been especially prominent in financing public education. In recent years dependence on the property tax by state and local governments has decreased; however, the local revenues still account for 48% common school funding nationwide and 40% in Oklahoma.

The use of the property tax has been widely criticized. Some criticisms of property tax have been identified by Jansen and Tweeten (11, p. 16). These include: (1) The property tax is relatively regressive - the percentage burden of property taxes to income declines as personal income increases, (2) The value of property owned is not an adequate measure of wealth and ability to pay and (3) Assessment procedures treat different property classes differently.

In Oklahoma the property tax is based on the assessed valuation of property. Property in each county is appraised and assessed by the County assessor. Property of public service companies is assessed by the Oklahoma Tax Commission. Personal property as well as real estate and improvements is assessed by the county assessor. Tangible personal property consists of improvements on the property, inventories, equipment, household goods, and luxury items. County assessment procedures for assessing personal property vary widely. Homestead and personal property exemptions are subtracted from gross assessed value to get net locally assessed valuation. Figure 1 illustrates the calculations needed to determine the level of taxes levied.

Revenues from the local property tax go toward financing common schools, county government, Vo-tech schools and junior colleges, and various other local government services. The revenues generated for common schools are determined by the total net assessed value within the district and the millage rate. A four mill county levy and a five mill district levy are the minimum millages required for common schools. In order for the district to be eligible for state aid the full fifteen mills at the discretion of the school board must be levied. Voters in the school district can approve up to fifteen mills additional levy. The maximum total millage allowed for common schools general funds is limited by the state constitution to thirty-nine mills. Most school districts in the state receive the maximum levy of thirty-nine mills. Additional millages are levied to provide for common school captial outlays and debt retirement. This study is concerned only with those millages that provide common school general fund revenues for current operating expenditures and will not address those millages for capital items.

Oklahoma Common School Funding Formula

In addition to the revenues raised locally the state provides revenues for common school funding. Dedicated revenues from auto licenses, boat and motor licenses, mobile home taxes, rural electric

(+)	Total Value of All Real Taxable Property in County
(-)	Property Owned by Public Service Companies
(-)	Exempt Property (Indian lands, school lands, public lands, etc.)
(=)	Total Taxable Property Value Net of Public Services
(x)	Assessment Ratio in County
(=)	Gross Locally Assessed Value
(-)	Homestead Exemptions
(-)	Personal Property Exemptions
(=)	Net Locally Assessed Value
(+)	Public Service Assessment
(=)	Total Assessed Value
(x)	Millage Rate
(=)	Tax Levied

Source: H. Evan Drummond, "A Property Tax Model for Oklahoma," Stillwater, Oklahoma State University Agricultural Experiment Station Research Report P-730, December, 1975.

Figure 1. Determination of Property Assessments and Taxes in Oklahoma

cooperative taxes, and school land earnings are collected by the Oklahoma Tax Commission and distributed to the districts on the basis of specific criteria.

State aid is provided for common schools by legislative appropriations from the general fund of Oklahoma. This state aid is distributed to school districts according to a formula provided by state law. The common schools funding formula currently used in Oklahoma is a variation of a type of funding plan known as the minimum foundation plan (10, p. 9).

This formula guarantees at least a minimum level of expenditures per average daily attendance. For the school year 1976-77 the formula stipulates a foundation levy of $300 per average daily attendance for elementary students and $360 per average daily attendance for secondary students. In order to be eligible for state aid the district must impose at least the fifteen mills that are at the discretion of the school board. Foundation aid is calculated by subtracting chargeable income from the stipulated minimum expenditure. Chargeable income consists of state dedicated revenues received by the district for common schools and the net assessed valuation in the district times fifteen mills. In addition to foundation aid, state aid is also provided according to the formula for transportation, special education, and vocational programs.

The Oklahoma common school funding formula differs from the basic minimum foundation plan in that it provides incentive aid. The incentive program provides a matching grant for those districts with millage rates above fifteen mills. The formula used in calculating foundation aid and incentive aid is shown in Figure 2.

The following is the formula, as provided by law, used in the calculating of Foundation and Incentive Aid. It reflects the correct amounts and factors in use today. The two equalizing factors in the formula are:

(1) The chargeable income in the Foundation Aid section. This reflects the districts ability to support itself at home.

(2) The district wealth ratio in the Incentive Aid section. This reflects the school districts valuation per A.D.A. in relation to the State valuation per A.D.A.

FORM FOR CALCULATING STATE AID
FOUNDATION AID

(1) Elem. A.D.A. ______________ X \$300 = \$ ________________

(2) Sec. A.D.A. ______________ X \$360 = \$ ________________

(3) Line 3 TOTAL = \$ ________________

SUBTRACT CHARGEABLE INCOME

(4) 1976 Net Assessed Val. X 15 Mills
(valuation) X.015 = \$ ________________

1975-1976 Collections of:
(5) 75% of County 4 mill
(6) Auto License
(7) School Land
(8) Gross Production
(9) R.E.A. Tax
(10) Line 10
(11) Line 11 (Line 3 Total Minus Line 10) \$ ________________

Source: Oklahoma State Department of Education, 1976-77 Annual Report

Figure 2. Oklahoma State Aid Formula, 1976-77

ADD THE FOLLOWING

(12) Transportation:
(A.D.H. X Per Capita)

__________ X ____________ X 1.06 $ __________________

(13) Special Education:

________________programs X $6000 = $ __________________

(14) Vocational Programs:

____________ Vo. Ag. X $4200 = $ __________________

____________ Other X $2500 = $ __________________

(15) TOTAL $ __________________

Foundation Aid - Line 11 plus line 15 = $ __________________

INCENTIVE AID

(1) District Valuation divided by District A.D.A. = District Valuation per A.D.A.

(2) District Valuation per A.D.A. divided by 8,990 = District Wealth Ratio.

(3) District Wealth Ratio X .550 = Local Support Ratio

(4) 1.000 - Local Support Ratio - State Support Ratio (min. .4150 Max. .8350)

(5) State Average Support per mill (8.990) divided by .550 = Support Level (16.35)

(6) 16.35 X State Support Ratio - State Support per mill

(7) State Support per mill X mills levied above 15 = Matching Grant

(8) Matching Grant X Dist. A.D.A. = Incentive Aid $ ____________

Total State Aid $ ____________

Figure 2, Continued

CHAPTER III

ESTIMATION OF MARKET VALUES OF AGRICULTURAL, COMMERCIAL-INDUSTRIAL AND RESIDENTIAL PROPERTY FOR OKLAHOMA SCHOOL DISTRICTS

The common school funding system in Oklahoma relies on the local property tax for approximately 40% of total revenues. The level of local revenues generated for common schools is also dependent on the assessed value of taxable property within the district and the millage levied. To accurately determine the effects of assessment procedures and the distribution of property on the distribution of educational revenues among school districts it is necessary to have some information about the property tax base in each individual district. County level data were used in previous analyses (10) of the Oklahoma school funding system even though variation in revenues per ADA may be as great within counties as among them.

Data published by the Oklahoma Tax Commission provide only the net locally assessed valuation and millage rates for each school district (12). County totals for gross assessed values of agricultural, commercial-industrial, and residential property and homestead exemptions are published annually (13) (14). Also available are county assessment rates for each class of property designated as agricultural, commercial-industrial, and residential (15).

School district boundaries in Oklahoma often overlap county boundaries. The section of a school district within each county was considered a subdistrict. A total of 807 subdistricts were included in the estimation procedure.[1/] Market values were first estimated for each subdistrict and then aggregated to provide district market values.

Proxy variables were used to estimate market values for each property class.[2/] Proxy variable data in census data format are available for all subdistricts of districts that had more than 300 ADA in 1970. Proxy variables for the remaining subdistricts were estimated from census county division level proxy variable data less the value of the proxy variables for sub-districts within the county that were available. For each class of property, the proportion of the county total of the proxy variable located within a subdistrict was determined. That proportion of the county market value of the property class was assumed attributable to the subdistrict. Equation (3-1) illustrates the general formula used to determine subdistrict assessed values.

$$MVAL_{sd} = MVAL_{c} \frac{Proxy_{sd}}{Proxy_{c}} \tag{3-1}$$

Where:

MVAL is the estimated market value of property by class

Proxy is the value of the proxy variable and sd, c are subscripts referring to the subdistrict and county respectively.

[1/] Many of the subdistricts identified contained little land area and few students. These were arbitrarily eliminated from the computations.

[2/] A more detailed description of the estimation procedure used is provided by Drummond (16).

The proxy variable used to estimate residential property was the number of families in the subdistrict by family income classes. The reason for using this measure is that the number of families residing within a subdistrict and the incomes of those families should be a determinant of the level of residential property in the area. County level census data provide a two-way frequency distribution of the number of families by the value of residential units by each family income class (17). These data were used to derive a coefficient of the estimated value of residential property for each family in each income class. These coefficients were multiplied by the proxy variable of families in each income class in each school subdistrict to get an estimate of residential value by income classes in the school subdistrict (18). These estimates were summed across income classes to arrive at the estimated total market value of residential property in each school subdistrict.

The level of non-farm employment within each subdistrict served as a proxy for commercial-industrial property values (18). The selection of this proxy variable was based on a regression analysis which indicated a significant relationship between this proxy variable and commercial-industrial property value at the county level. The estimated regression equation with t-values in parentheses is as follows:

$$\underset{}{\text{ESTVAL}} = \underset{(-1.58)}{-1821940.9030} + \underset{(19.16)}{2197.4056\ \text{EMPLOYMENT}} + \underset{(17.42)}{376027768.4580\ \text{Dummy}}$$

$$R^2 = .9966$$

Where:

ESTVAL = Estimated county market value of commercial-industrial property

EMPLOYMENT = County total non-farm employment

DUMMY = Dummy variable = 1 for Oklahoma and Tulsa counties, = 0 for all other counties.

A procedure similar to that described for residential property was used to estimate commercial-industrial property with this proxy variable. A difficulty with this proxy variable is that it tends to underestimate commercial-industrial property in those subdistricts where large numbers of non-residents are employed and overestimate the value of commercial-industrial property for those subdistricts with a large number of residents employed outside the district. In general, it is expected that commercial-industrial property in subdistricts in inter-city areas is underestimated and that in bedroom districts is overestimated.

Because both of these proxy variables came from 1970 Census data, initial estimates were made for the 1970 market value of each property class. These estimates were then converted to the level of 1976 market values using county average rates of growth for each property class.

The 1976 assessed value of agricultural property was estimated using the area of the subdistrict as a proxy variable. The use of this proxy is based on two assumptions. First it is necessary to assume that property is of a uniform quality (or at least a uniform assessed value per acre) throughout the county. Second, it is assumed that the ratio of agricultural property to total property is constant for each subdistrict. Given these assumptions the estimate of the assessed value of agricultural land within each subdistrict is proportional to the total amount of land in the subdistrict. It is expected that this procedure will overestimate agricultural property value in those subdistricts that are densely populated, have land values lower than the county average, or contain a significant area of such non-taxable land as military bases or Indian lands.

The estimates provided for each property class by these proxy variables served to establish the relative weight of each property class within each subdistrict. These estimates were adjusted so that the sum of the estimated market values by property class of the subdistricts within each county was equal to the known county total property value of each class. The estimates were further adjusted such that the sum of the assessed value of the three property classes from all subdistricts was equal to the known assessed value of total property within each district. The resulting estimates of 1976 market and assessed values of commercial-industrial, residential and agricultural property are presented in Table II. Summary data by school district are given in Appendix A.

TABLE II

STATE TOTAL ESTIMATS OF 1976 MARKET AND ASSESSED VALUES FOR OKLAHOMA

	Estimated Market Value	Net Locally Assessed Value
	------ ($ millions)	------
Residential Property	12,865	1,915
Commercial-Industrial Property	4,892	747
Agricultural Property	11,469	609
Total Real Property	29,227	3,272

CHAPTER IV

ANALYSIS AND RESULTS

Variations in per capita expenditures can result from differences in the level of local revenues, and the method of distributing state and federal funds among the school districts. For this analysis expenditures per ADA and total revenues per ADA are considered equivalent. The level of local revenues in each school district is dependent on the value of property within the district, the way the property is assessed, and the millage rate levied. The effect of changes in the property tax base and assessment procedures can be seen in the variation of per capita net assessed valuation. In addition to this source of variation the method of distribution of state and local funds also determines the level of per capita revenues for each school district.[1]

Measures of Variation

Variation in total revenue per average daily attendance will be analyzed for each of the alternatives. The variable measured will

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[1]Funds used for transportation of students are included in total revenues. The cost of transportation is dependent on the density of students in the district. Therefore total revenues and not instructional funds are equalized.

be total revenues per average daily attendance (ADA). The observations on this variable will be made at the school district level.

Decile Distributions

The total population of students ranked according to the variable being measured can be broken into decile groups. This allows the presentation of the cumulative proportion of the variable being measured by decile of ADA. If total educational expenditures were distributed equally among all students the first decile would account for 10% of total expenditures, the second decile for 20% of total expenditures, and so on. Deviations from these percentages in each decile indicate that expenditures are not distributed equally among students.

Lorenz Curves

A visual representation of the joint cummulative distribution of two variables is known as a Lorenz curve. The horizontal axis measures the cummulative percentage of state total ADA and the vertical axis portrays the cummulative percentage of either total net assessed value or total expenditures. A sample Lorenz curve is illustrated in Figure 3. The 45° line represents the situation of perfect equality, that is each percentage of students receives that same percentage of the variable being measured. The Lorenz curve itself shows the actual distribution. The greater the curvature of the Lorenz curve the greater the degree of inequality.

Gini Coefficients

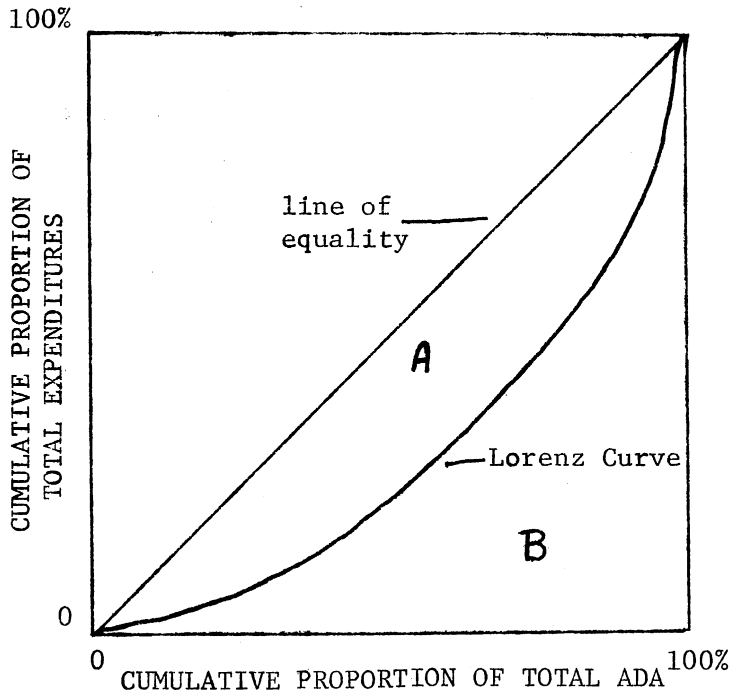
A numerical measure of the degree of inequality illustrated by the Lorenz curve is known as a Gini coefficient. Figure 3 describes the calculation of the Gini coefficient and shows its relationship to the Lorenz curve. The value of the Gini Coefficient ranges from zero for a situation of perfect equality to one for a situation of perfect inequality. A fortran program was used to calculate the Gini Coefficients for this study (20).

Population Variances

Variances were calculated for each of the funding and property tax alternatives. These variances are a measure of the dispersion of district expenditures per ADA about the state mean. Because the observations are made at a district level the variance measures the variation among districts. However, the district observation is not weighted according to the number of students within the district so this variance does not measure the variation among students as in the previous criteria. This calculated variance is the actual population variance because observations were made on each element (district) in the population. Any change in the variance is indicative that the alternative under consideration either increased or reduced the level variation in revenues per ADA.

Changes in the School Funding System

Alternative changes in the system of funding common schools in Oklahoma are analyzed to determine the effects of each on the distribution



The Gini Coefficient is defined by the following formula:

$$\text{Gini} = \frac{\text{Area A}}{\text{Area A + Area B}} = \sum_{i=2}^{n} (X_{i-2} Y_i - X_i Y_{i-1}$$

Where:

X_i = Cumulative proportion of ADA for the ith district.

Y_i = Cumulative proportion of total expenditures for the ith district.

Source: Chaudhari, Ramesh. "Subprogram Gini." Mimeo. Normal, Illinois: Illinois State University, Center for the Study of Educational Finance, Dept. of Educational Administration, December, 1977.

Figure 3. Lorenz Curve and Gini Coefficients

of total revenues per ADA. The alternatives considered consist of changing the way revenues from each of the major sources are distributed.

State Dedicated Revenues

The effect of equalizing state dedicated revenues per ADA is one alternative analyzed. Total revenues per ADA for each district is calculated by adding the state average of dedicated revenues per ADA of $174,32 to the actual state aid, federal aid and local revenue per ADA.

Local Revenues

Two types of alternative changes in local revenues may be considered. Local revenues per ADA were equalized in one of these alternatives. The state average of local revenues per ADA of $392.58 was added to the actual state dedicated revenues per ADA, and state and federal aid per ADA to determine the resulting total revenue per ADA for each school district.

The effect on total revenues per ADA of equalizing millage rates in all districts was estimated as another alternative. The state average millage rate of 43.3 mills was calculated by dividing state total local revenue by state total net assessed valuation. This millage rate is a composite of district millages, county millages, and local revenues from sources other than the ad valorem property tax. Total revenues per ADA for each district are calculated by multiplying net assessed value per ADA by the state average millage rate and adding the result to the actual per ADA state dedicated revenues, state aid, and federal aid.

TABLE III

DISTRIBUTION OF TOTAL COMMON SCHOOL REVENUES BY DECILES OF STATE TOTAL AVERAGE DAILY ATTENDANCE

	Cumulative Percentage of Total Average Daily Attendance									
Funding Alternative	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
	Cumulative Percentage of Total Revenues									
Actual 1976-77 Distribution of Common School Revenues Per Average Daily Attendance (ADA) Among School Districts.	8.27	16.93	25.93	35.29	44.57	63.10	71.12	75.03	86.77	100.00
Estimated 1976-77 Distribution of Common School Revenues Per Average Daily Attendance Assuming The Following are Equalized:										
State Dedicated Revenues/ADA	8.50	17.93	26.12	35.95	45.03	63.39	71.56	75.64	86.97	100.00
State Aid/ADA	8.69	15.53	24.15	35.21	42.31	52.01	62.75	73.24	86.33	100.00
Federal Aid/ADA	10.70	17.54	27.71	35.90	46.04	55.95	64.94	80.90	86.08	100.00
District Millage Rate	8.31	16.91	25.72	34.86	44.24	54.33	71.19	80.24	85.64	100.00
Local Revenues/ADA	13.13	16.97	29.52	35.04	46.44	55.78	65.49	75.83	87.30	100.00
Local and State Dedicated Revenues/ADA	13.29	17.17	32.35	34.89	44.20	54.79	64.64	75.50	90.89	100.00

TABLE IV

GINI COEFFICIENTS, AND POPULATION VARIANCES FOR ALTERNATIVE CHANGES IN COMMON SCHOOL FUNDING SYSTEM, OKLAHOMA, 1976-77

Funding Alternative	Gini Coefficients	Variance
Actual 1976-77 Distribution of Common School Revenues	.0827	392,204.38
Estimated 1976-77 Distribution of Common School Revenues Per Average Daily Attendance Assuming The Following Are Equalized:		
State Dedicated Revenues	.0742	333,990.38
State Aid/ADA	.1098	291,049.53
Federal Aid/ADA	.0729	371,423.37
District Millage Rate	.0855	457,552.02
Local Revenues Equalized	.0794	129,327.27
Local Revenues and State Dedicated Equalized	.0816	104,221.11

State Aid

Total revenues per ADA for each district were estimated with state aid equalized per ADA as another alternative. The state average for state aid per ADA of $494.72 was added to the actual state dedicated revenues, local revenues, and federal aid per ADA to estimate total revenue per ADA for each district.

Federal Aid

An additional alternative consisted of equalizing federal aid per ADA. Total revenue per ADA for each district was estimated by adding the state average federal aid per ADA of $103.25 to the actual revenues per ADA from other sources.

Results

The impact of each of the alternative changes in the funding system on the measures of variation on total expenditures per ADA is presented in Tables III and IV and Figures 16-22 in Appendix. The criterion used to evaluate each of the alternatives is to compare it with the actual 1976-77 distribution of total revenue per ADA.

The results of those alternatives with equalized state or federal aid would seem at first glance to be inconclusive. For the alternative with state aid equalized the Gini ratio is greater than the current situation, however, the variance is decreased. This indicates that the current state aid program reduces the variation among students as indicated by the Gini coefficient but increases the variation among districts as measured by the population variation. This occurs because in the calculation of the population variance each district has the same weight no matter how many students are in each district. A situation where this could occur is if the alternative resulted in the total revenue per ADA of several districts with relatively small proportions of the state total ADA moving away from the mean total revenue per ADA and a district with a relatively large proportion of total ADA was moved closer to the mean. Somewhat similar results indicate that equalizing Federal aid reduces variation among students but has very little impact on the amount of variation among districts.

The alternative of levying a state average millage rate resulted in increasing the variation in total expenditures per ADA. This result is not unexpected since those districts with a relatively high net assessed value per ADA can finance common schools with a relatively low millage rate, and that those districts with relatively low net assessed value per ADA need a relatively high millage rate in order to generate sufficient revenues to fund common schools adequately.

Both the variances and Gini coefficients indicated that equalizing state dedicated revenue and/or local revenues does reduce the variation in and inequality of total revenues per ADA. The level of actual local revenues per ADA is determined by the millage rate, and the net assessed value per ADA within the district. The results for a state average millage rate indicate that the variation is not the result of differences in millage rates. Therefore it follows that most of the variation in revenue per ADA is a result of variations in net assessed value per ADA.

Changes in the Property Tax System

In order to determine the causes of variation in net assessed value per ADA several alternative changes in the property tax system were considered. Variation in net assessed value per ADA can be the result of assessment procedures or the actual distribution of property among districts.

Changes in the Tax Base

The alternatives considered consisted of equalizing the distribution among districts of two types of property; personal property and public service property. For the year 1976-77 personal property assessment per ADA ranged from $25,908 for Big Four School district in Kingfisher County to $58 for Belfonte school district in Sequoyah County (13). An equalized value for personal property assessments per ADA of $1,844 was substituted for the actual personal property assessments in calculating total net assessed value per ADA in each district.

Another alternative evaluated is the equalization of public service assessments. A bill that would provide for a constitutional change that would allow this was considered by the 1978 Oklahoma legislature. Public service property assessments for each district are established by the Oklahoma Tax Commission. For the year 1976-77 public service assessments per ADA a percentage of total net assessed value per ADA ranged from 93.6% to 1.3% in Oklahoma school districts. Total net assessed value per ADA for each district was calculated by adding the equalized public service assessment per ADA to the actual personal and real property assessments per ADA for each district.

Composite Assessment Rates

In 1976 composite assessment rates ranged from 4.31% in Atoka County to 15.95% in Tulsa County. One alternative examined consisted of multiplying the state average assessment rate for all classes of property of 11.19 by the total market value of property in each district. Total net assessed value per ADA was then calculated by adding this value to the actual personal and public service properties per ADA of each district.

Differential Assessment Rates

Diffferent classes of property within each county may be assessed using different assessment rates for each class. The effect of equalizing these differential rates was determined by calculating net assessed value per ADA using a similar assessment rate in all districts for each class of property. The state mean assessment rate was used for each class. The mean assessment rate for commercial-industrial property was 15.28%, for residential property 14.89%, and for agricultural property 5.31% in 1976. These estimated assessed values were added to actual personal and public service property assessments to determine total net assessed value per ADA for each district.

Results

The results presented in Tables V and VI and Figures 4-15 in Appendix B provide information about the impact on the variation of net assessed value per ADA of each of the alternative changes in the property tax system.

TABLE V

DISTRIBUTION OF TOTAL NET ASSESSED VALUE BY DECILES OF STATE TOTAL AVERAGE DAILY ATTENDANCE

Tax Base Alternative	Cumulative Percentage of Total Average Daily Attendance 10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
	Cumulative Percentage of Total Net Assessed Value									
Actual 1976-77 Distribution of Net Assessed Value Per Average Daily Attendance (ADA) by District	3.09	8.87	13.42	19.50	28.05	36.55	47.36	63.76	82.01	100.00
Estimated 1976-77 Net Assessed Value Per ADA by Districts Assuming the Following are Equalized:										
Personal Property/ADA	4.81	10.77	17.22	24.40	32.75	41.80	53.03	66.00	82.91	100.00
Public Service Property/ADA	4.43	10.07	16.40	23.90	32.75	42.01	54.25	72.16	92.84	100.00
Personal and Public Service Property/ADA	6.00	12.93	20.83	30.68	31.52	46.33	57.27	76.37	93.23	100.00
County Assessment Rates For All Property:										
State Average Rate	4.90	8.57	13.64	20.29	30.77	37.23	55.07	69.38	74.20	100.00
State Average Rate With Personal and Public Service Property/ADA	6.97	13.74	21.43	29.43	39.34	48.11	64.71	77.64	81.47	100.00

TABLE V (CONTINUED)

Tax Base Alternative	Cumulative Percentage of Total Average Daily Attendance									
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
	Cumulative Percentage of Total Net Assessed Value									
County Assessment Rates For Each Property Class:										
State Average Rates for CI, Res, Ag†	3.47	8.50	14.11	20.59	28.47	37.82	48.81	65.40	81.38	100.00
State Average Rates for CI, Res, Ag With Public Service and Personal Property/ADA	6.28	13.53	23.60	30.05	38.18	47.96	59.10	76.85	92.57	100.00
CI and Res Rate of 13.00%, Ag Rate State Average (5.31%)	3.78	8.51	14.12	20.60	28.49	37.76	48.82	65.41	81.37	100.00
CI and Res Rate of 13.00%, Ag Rate of 3.00%	3.28	8.90	14.10	20.14	27.98	37.39	48.50	66.97	83.65	100.00
CI and Res Rate of 13.00%, Ag Rate of 5.00%	3.40	8.55	14.22	20.40	28.54	37.71	48.95	65.59	81.72	100.00
CI and Res Rate of 13.00%, Ag Rate of 7.00%	3.59	9.27	13.97	20.90	28.62	40.15	48.96	64.50	80.13	100.00

†CI- Commercial-Industrial Property, Res - Residential Property, Ag - Agricultural Property

TABLE VI

GINI COEFFICIENTS, AND POPULATION VARIANCES FOR ALTERNATIVE CHANGES IN THE PROPERTY TAX SYSTEM, OKLAHOMA 1976-77

Tax Base Alternative	Gini	Variance
Actual 1976-77 Net Assessed Value Per Average Daily Attendance (ADA) by District	.3203	190,596,807.6
Estimated 1976-77 Net Assessed Value Per ADA by District Assuming the Following are Equalized:		
Personal Property/ADA	.2499	126,803,516.5
Public Service Property/ADA	.2535	70,535,604.7
Public Service and Personal Property/ADA	.1799	32,202,322.2
County Assessment Rates for All Property		
State Average Rate	.3196	280,340,625.2
State Average Rate With Public Service and Personal Property/ADA	.1700	80,098,104.1

TABLE VI (CONTINUED)

Tax Base Alternative	Gini	Variance
County Assessment Rate for Each Property Class:		
State Average Rates	.3033	178,588,907.2
State Average Rates With Public Service and Personal Property/ADA	.1598	26,898,935.4
CI and Res. Rate of 13.00% Ag Rate State Average (5.31%)†	.3031	178,659,871.3
CI and Res. Rate of 13.00% Ag Rate 3.00%	.3052	145,090,844.7
CI and Res. Rate of 13.00% Ag Rate 5.00%	.3032	173,827,184.1
CI and Res. Rate of 13.00% Ag Rate 7.00%	.3031	206,798,023.0

†CI - Commercial-Industrial property, Res - Residential property, Ag - Agricultural property.

The results indicate that the current treatment of personal and public service property contribute considerably to the variation of net assessed value per ADA. The variation in assessment rates alone does not appear to be a significant factor in the total amount of variation in net assessed value per ADA. However, in combination with equalized public service and personal property, statewide assessment rates for each property class are very effective in reducing the amount of variation.

The use of differential assessment rates does not appear to be a major cause of variation in net assessed value. In general residential and commercial-industrial property are assessed at substantially higher rates than agricultural property. To determine the effect of changing the differential between these rates several alternatives were considered for which commercial-industrial property and residential property were assumed to be assessed at a 13% rate which is near the state mean of these rates. Agricultural property was assumed to be assessed at rates equal to, above, and below the state mean agricultural assessment rate of 5.31. The results indicate that the relative level of the assessment rate on agricultural property did not contribute much to the total variation in net assessed value per ADA. Decreasing the difference between the commercial-industrial and residential rates and agricultural assessment rate did not substantially reduce the variation.

Examination of the decile data in Table V reveals that the alternatives that included equalized personal property and/or equalize public serivce assessments were effective in improving the distribution of total net assessed value in the lower deciles. The other alternatives did not appear to change the distribution substantially.

CHAPTER V

SUMMARY AND CONCLUSIONS

Equality of educational opportunity is a concept that has received attention in recent court cases. Questions have been raised about the equality and equity aspects of common school funding systems that depend in a large part on the local property tax for revenues. In this study equal revenues per pupil was chosen as an adequate measure of equality of educational opportunity in Oklahoma.

Common School Funding in Oklahoma

The funds for common schools in Oklahoma come from four main sources. Federally provided aid account for about 11% of total revenues for common education in Oklahoma. State dedicated revenues from such items as the gross production tax, auto, boat and motor licenses, provide about 12% of total common school revenues. Legislative appropriations account for 39% of total revenues. This state aid is distributed according to a formula provided by law. This formula includes net assessed value as a measure of the districts ability to support itself. The remaining 38% of total revenues come from local sources. Most of these local revenues are generated by the local property tax.

Property Tax System in Oklahoma

In Oklahoma property taxes are levied on the assessed valuation of property. Most real and personal property in each county is assessed by the county assessor. This results in wide variation in assessment procedures, particularly assessment rates, across the state. The tax base in each school district consists of the assessed value of real and personal property in the district and the assessed value of public service property for the district as determined by the Oklahoma Tax Commission. County and district millage rates, within the limits established by the state constitution, are levied on the total net assessed value. Each of these factors partially determines the level of revenues from the property tax.

Variation in revenues per ADA among the school districts of Oklahoma may be due to variations in any of the four principal funding sources. In order to assess the relative importance of each in the total variation; the level of support each district would receive if a funding source distributed revenues in an equalized fashion was computed. The variation present in this equalized funding alternative was compared to the actual system to measure the net impact of equalizing that funding source.

The distribution of total expenditures per ADA calculated for each of the alternative changes were compared using four indicators of variation. Decile distribution and Lorenz curves were prepared for each alternative. Population variances were estimated for each alternative and compared to the variance of the actual Oklahoma 1976-77 distribution. Gini coefficients (univariate measures of inequality) were also computed. Variation in local revenues per ADA may be an indirect result of the distribution of net assessed value per ADA. To determine what causes the variation in net assessed value per ADA information about the tax base in each district is needed. The available data for each school district provide only the total net assessed value of real, personal and public service property and the millage rate levied. In order to estimate the effect of changes in assessment rates, the market value of each class of real property is needed for each school district.

These market values were estimated for commerical-industrial, residential, and agricultural property in each district by the use of proxy variables. The proxy variable used to estimate residential property was the number of families by income class for each district. Commercial-industrial property was estimated using the level of non-farm employment within the district. These proxy variables were estimated from 1970 Census data. The value of agricultural property was allocated according to the physical size of each district. For each school district the proportion of the county total for the proxy variable, attributable to the school district was calculated. These proportions were used to allocate net assessed value amont the school districts within a county for each of the property classes.

The effect on the distribution of net assessed value per ADA was estimated for several alternative changes in the property tax system. These alternatives included changes in the tax base and changes in assessment practices. The changes in the tax base considered were equalizing personal property per ADA and equalizing public service property per ADA. One alternative consisted of imposing a state average assessment rate for all classes of property statewide. Another alternative examined was imposing statewide differential assessment rates for agricultural, commercial-industrial, and residential property.

Results

The results of this research indicate that variation in total revenues per ADA is caused by the distribution of revenues. Equalizing state dedicated revenues, federal revenues, or local revenues per ADA all resulted in reducing the variation, ceteris paribus. The results show that state aid served to reduce the variation in total revenues per ADA among students. The alternative of equalizing millage rates increased the variation in total in total revenues per ADA. Hence, most of the variation caused by local revenues is the indirect result of variation in the distribution of net assessed value per ADA.

Variation in the distribution of net assessed value per ADA was substantially reduced when personal property and public service property per ADA were equalized. The results also showed that assessing different classes of property at different rates did not increase variation but was actually preferable to a uniform assessment rate for all property in reducing variation in net assessed value per ADA.

TABLE VII

SUMMARY OF GINI COEFFICIENTS FOR EACH COMMON SCHOOL FUNDING EQUALIZATION ALTERNATIVE, OKLAHOMA

Source of Variation	Actual 1976-77	Source of Variation Which Are Equalized For Each Alternative					
		1	2	3	4	5	6
State Dedicated Revenues		✓				✓	
State Aid			✓				
Federal Aid				✓			
Local Revenues					✓	✓	
Millage Rate							✓
Gini Coefficient*	.0827	.0742	.1098	.0729	.0794	.0816	.0855

*Note = lower Gini coefficients signify more equal distributions of total revenue per ADA.

TABLE VIII

SUMMARY OF GINI COEFFICIENTS FOR EACH PROPERTY TAX EQUALIZATION ALTERNATIVE, OKLAHOMA

Source of Variation	Actual 1976-77	Sources of Variation Which Are Equalized For Each Alternative										
		1	2	3	4	5	6	7	8	9	10	11
Personal Property		✓		✓		✓		✓				
Public Service Property			✓	✓		✓		✓				
Differential Assessment Rates:												
State Mean Rates					✓	✓						
CI and Res. = 13%, Ag-5.13%									✓			
CI and Res. = 13%, Ag-3%										✓		
CI and Res. = 13%, Ag-5%											✓	
CI and Res. = 13%, Ag-7%												✓
Composite Assessment Rate												
State Mean Rate							✓	✓				
Gini Coefficient*	.3203	.2499	.2535	.1799	.3033	.1598	.3196	.1700	.3031	.3052	.3032	.3031

*Note = lower Gini Coefficients signify more equal distribution of net assessed value per ADA

Implications for Oklahoma

The results of this research can be used to answer important questions about the Oklahoma common school funding system. Does the current funding system provide equity in financing and equality of educational opportunity measured as equal educational revenues per ADA? Are inequalities in funding caused in part by the common school funding system itself? How can the system be improved with respect to equity and equality? Are the disparities in assessed value per student as a measure of wealth the result of differences in assessment procedures or the actual distribution of property?

The common school funding system in Oklahoma does not provide equity in school funding with respect to the concept of "fiscal neutrality" in providing equal expenditures for equal tax effort. The current funding formula considers only the millage rate in measuring tax effort, although the real or effective tax rate depends upon the millage rate and the assessment rate. In order to make the Oklahoma system more effective with respect to equity the current funding system could be changed to include the assessment rate in measuring the tax effort of a school district or by imposing standardized assessment rates statewide.

The current system of funding does not provide absolute equality of educational expenditures per pupil. State dedicated revenues and local revenues as they are currently distributed both contribute to the inequality of per pupil expenditures. Equalizing state dedicated revenues can improve the current Oklahoma system of common school funding by eliminating some of these inequalities. Some of the inequalities resulting from the distribution of local revenues are indirectly caused by differences in assessed value per pupil. A substantial amount of the variation in assessed values per pupil can be reduced by equalizing the distribution of personal and public service property assessments. Imposing state average assessment rates for each property class in addition to equalizing personal and public service property would reduce the inequality in assessed value per pupil even more. Another change in the property tax system that would reduce variation is eliminating the tax on personal property. These changes would allow state aid funds to be used more effectively to compensate for differences in the actual distribution of property and not differences caused by variation in assessment rates.

Limitations of the Research

This research is meaningful only to the extent that equal per pupil revenue is the desired measure of equality of educational opportunity. Equality of educational revenue is an adequate measure of equal opportunity only if it is assumed that equal revenues generate equal educational outputs. This implies that the costs and productivities of educational resources are constant throughout the state.

Additional research could provide information concerning the costs of education throughout Oklahoma. The relationship between educational expenditures and actual education outputs could be examined for Oklahoma. Finally research could be conducted to estimate what level of educational output is optimum for Oklahoma.

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APPENDIX A

ESTIMATED MARKET VALUES OF REAL PROPERTY

FOR OKLAHOMA SCHOOL DISTRICTS

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
ACADEMY CENTRAL	OSAGE	3690.	355.	278.	4322.
ACHILLE	BRYAN	387.	88.	529.	1004.
ADA	PONTOTOC	9423.	6213.	162.	15798.
ADAIR	MAYES	905.	231.	1350.	2486.
ADAMS	TEXAS	302.	115.	890.	1307.
AFTON	OTTAWA	1162.	338.	1109.	2609.
AGRA	LINCOLN	148.	35.	213.	397.
ALBION	PUSHMATAHA	276.	34.	255.	565.
ALDERSON	PITTSBURG	13.	4.	93.	111.
ALEX	GRADY	517.	87.	806.	1410.
ALFALFA	CADDO	266.	77.	595.	938.
ALINE-CLEO	MAJOR	453.	119.	1607.	2179.
ALLEN	PONTOTOC	603.	213.	599.	1415.
ALLEN BOWDEN	CREEK	829.	153.	121.	1103.
ALLUWE	NOWATA	210.	48.	871.	1130.
ALTUS	JACKSON	10422.	4321.	980.	15724.
ALVA	WOODS	4658.	2224.	6587.	13469.
AMBER-POCASSET	GRADY	599.	128.	1548.	2274.
AMES	MAJOR	317.	88.	1154.	1559.
ANADARKO	CADDO	2899.	1105.	1328.	5332.
ANDERSON	OSAGE	939.	93.	304.	1336.
ANTLERS	PUSHMATAHA	2163.	311.	1108.	3582.
APACHE	CADDO	504.	153.	902.	1560.
ARAPAHO	CUSTER	447.	135.	937.	1519.
ARDMORE	CARTER	14124.	4323.	357.	18804.
ARKOMA	LEFLORE	514.	117.	23.	654.
ARNETT	HARMON	149.	33.	701.	882.

1976 ESTIMATED MARKET VALUE ($ THOU)

DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
ARNETT	ELLIS	600.	132.	2466.	3198.
ASHER	POTTAWATOMIE	298.	42.	606.	947.
ATOKA	ATOKA	1044.	179.	1077.	2300.
AVANT	OSAGE	196.	19.	333.	548.
BALKO	BEAVER	401.	35.	1849.	2284.
BANNER	CANADIAN	460.	81.	949.	1490.
BARNSDALL	OSAGE	1065.	107.	485.	1657.
BARTLESVILLE	WASHINGTON	41152.	12542.	1171.	54865.
BATTIEST	MCCURTAIN	456.	98.	1608.	2162.
BEARDEN	OKFUSKEE	124.	46.	377.	547.
BEAVER	BEAVER	1279.	105.	1825.	3210.
BEGGS	OKMULGEE	1080.	29.	1168.	2276.
BELFONTE	SEQUOYAH	107.	36.	116.	259.
BELL	ADAIR	34.	10.	191.	235.
BENNINGTON	BRYAN	299.	49.	988.	1336.
BENTLEY	ATOKA	34.	6.	177.	217.
BERRYHILL	TULSA	1828.	1003.	120.	2951.
BERWYN	CARTER	140.	30.	283.	453.
BETHANY	OKLAHOMA	1646.	1028.	7.	2680.
BETHEL	POTTAWATOMIE	1141.	167.	1375.	2683.
BIG CABIN	CRAIG	139.	37.	690.	866.
BIG FOUR	KINGFISHER	222.	56.	1130.	1408.
BIG PASTURE	COTTON	419.	27.	1969.	2414.
BILLINGS	NOBLE	779.	173.	2788.	3739.
BINGER	CADDO	379.	107.	740.	1226.
BISHOP	COMANCHE	470.	109.	229.	809.
BIXBY	TULSA	7458.	3980.	2250.	13688.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
BLACKWELL	KAY	4643.	1482.	800.	6926.
BLAIR	JACKSON	468.	155.	420.	1042.
BLANCHARD	MCCLAIN	1148.	207.	839.	2194.
BLUE	BRYAN	185.	37.	386.	607.
BLUEJACKET	CRAIG	517.	130.	1550.	2197.
BOISE CITY	CIMARRON	1280.	319.	3843.	5442.
BOKCHITO	BRYAN	451.	93.	767.	1311.
BOKOSHE	LEFLORE	356.	62.	274.	692.
BOLEY	OKFUSKEE	219.	69.	367.	656.
BOONE	CADDO	60.	22.	441.	523.
BOSWELL	CHOCTAW	518.	64.	537.	1119.
BOWLEGS	SEMINOLE	329.	54.	273.	656.
BOWRING	OSAGE	808.	79.	1255.	2141.
BOYNTON	MUSKOGEE	337.	109.	341.	786.
BRADLEY	GRADY	170.	37.	437.	643.
BRAGGS	MUSKOGEE	116.	39.	180.	335.
BRAMAN	KAY	1021.	282.	1221.	2524.
BRAY	STEPHENS	167.	44.	2183.	2395.
BRIDGE CREEK	GRADY	321.	69.	555.	944.
BRIGGS	CHEROKEE	327.	61.	410.	797.
BRISTOW	CREEK	4240.	749.	1133.	6121.
BROKEN ARROW	TULSA	25475.	11971.	3290.	40736.
BROKEN BOW	MCCURTAIN	1742.	428.	938.	3108.
BRUXTON	CADDO	79.	27.	503.	609.
BRUSHY	SEQUOYAH	137.	47.	165.	349.
BUFFALO	HARPER	1060.	312.	2876.	4247.
BUFFALO VALLEY	LATIMER	209.	35.	557.	801.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
BURBANK	OSAGE	373.	36.	503.	912.
BURLINGTON	ALFALFA	1417.	276.	3754.	5447.
BURNS FLAT	WASHITA	206.	37.	536.	778.
BUTLER	CUSTER	195.	40.	1276.	1511.
BUTNER	SEMINOLE	580.	109.	355.	1043.
BYARS	MCCLAIN	117.	17.	479.	612.
BYNG	PONTOTOC	1387.	749.	863.	2998.
CACHE	COMANCHE	844.	189.	1113.	2145.
CADDO	BRYAN	611.	143.	824.	1578.
CALERA	BRYAN	615.	158.	332.	1105.
CALUMET	CANADIAN	560.	46.	1498.	2104.
CALVIN	HUGHES	468.	56.	562.	1086.
CAMARGO	DEWEY	49.	17.	492.	557.
CAMERON	LEFLORE	329.	56.	365.	750.
CANADIAN	PITTSBURG	1035.	288.	49.	1372.
CANEY	ATOKA	139.	24.	464.	627.
CANEY VALLEY	WASHINGTON	1231.	341.	1037.	2608.
CANTON	BLAINE	423.	192.	1760.	2374.
CANUTE	WASHITA	324.	65.	941.	1330.
CARMEN-DACUMA	WOODS	1075.	332.	3074.	4481.
CARNEGIE	CADDO	998.	271.	1731.	3000.
CARNEY	LINCOLN	160.	38.	206.	404.
CARTER	BECKHAM	516.	168.	1083.	1767.
CARTER G. WOODSO	WAGONER	260.	14.	101.	375.
CASHION	KINGFISHER	844.	190.	1187.	2220.
CASTLE	OKFUSKEE	27.	11.	78.	116.
CATOOSA	ROGERS	3845.	758.	716.	5319.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
CAVE SPRINGS	ADAIR	30.	9.	150.	189.
CEMENT	CADDO	341.	102.	431.	875.
CENTRAHOMA	COAL	96.	20.	284.	401.
CENTRAL	STEPHENS	131.	34.	1056.	1221.
CENTRAL HIGH	SEQUOYAH	144.	49.	157.	350.
CHANDLER	LINCOLN	1058.	254.	1091.	2403.
CHATTANOOGA	COMANCHE	494.	95.	2125.	2714.
CHECOTAH	MCINTOSH	2486.	345.	1535.	4366.
CHELSEA	ROGERS	1391.	382.	820.	2593.
CHEROKEE	ALFALFA	1119.	292.	4733.	6144.
CHEYENNE	ROGER MILLS	233.	73.	1461.	1767.
CHICKASHA	GRADY	10490.	2831.	627.	13948.
CHOCTAW	OKLAHOMA	5786.	2557.	664.	9007.
CHOTEAU-MAZIE	MAYES	894.	258.	1067.	2220.
CHRISTIE	ADAIR	69.	20.	197.	286.
CLAREMORE	ROGERS	7335.	2230.	381.	9947.
CLAYTON	PUSHMATAHA	607.	66.	891.	1564.
CLEORA	DELAWARE	1268.	168.	555.	1991.
CLEVELAND	PAWNEE	4078.	517.	2230.	6825.
CLINTON	CUSTER	5221.	1633.	1423.	8277.
COALGATE	COAL	851.	198.	1546.	2596.
COLBERT	BRYAN	628.	143.	440.	1210.
COLCORD	DELAWARE	529.	83.	419.	1031.
COLEMAN	JOHNSTON	164.	27.	388.	579.
COLLINSVILLE	TULSA	3566.	1746.	945.	6257.
COMANCHE	STEPHENS	1546.	314.	1632.	3492.
COMMERCE	OTTAWA	1483.	562.	370.	2414.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
CONNERVILLE	JOHNSTON	114.	20.	278.	412.
COPAN	WASHINGTON	678.	200.	667.	1545.
CORDELL	WASHITA	1428.	401.	2855.	4684.
COTTONWOOD	COAL	86.	18.	211.	315.
COVINGTON-DOUGLA	GARFIELD	771.	132.	4063.	4967.
COWETA	WAGONER	2736.	198.	1003.	3936.
COYLE	LOGAN	728.	162.	1090.	1980.
CRAWFORD	ROGER MILLS	61.	19.	1076.	1155.
CRESCENT	LOGAN	1373.	222.	1485.	3080.
CROOKED OAK	OKLAHOMA	3971.	1724.	48.	5743.
CROWDER	PITTSBURG	551.	154.	373.	1078.
CRUTCHO	OKLAHOMA	1719.	748.	119.	2585.
CUSHING	PAYNE	5314.	1620.	616.	7549.
CUSTER	CUSTER	642.	126.	2296.	3064.
CYRIL	CADDO	718.	247.	660.	1626.
DAHLONEGAH	ADAIR	19.	5.	35.	58.
DALE	POTTAWATOMIE	627.	113.	641.	1381.
DARLINGTON	CANADIAN	353.	61.	1058.	1473.
DAUGHERTY	MURRAY	159.	26.	242.	427.
DAVENPORT	LINCOLN	256.	62.	347.	665.
DAVIDSON	TILLMAN	380.	48.	1967.	2395.
DAVIS	MURRAY	1793.	291.	824.	2908.
DEER CREEK	OKLAHOMA	2243.	970.	1094.	4307.
DEER CREEK-LAMON	GRANT	1217.	187.	3736.	5141.
DELAWARE	NOWATA	247.	61.	381.	688.
DENISON	MCCURTAIN	308.	78.	177.	563.
DEPEW	CREEK	465.	80.	188.	734.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
DEWAR	OKMULGEE	328.	9.	121.	459.
DEWEY	WASHINGTON	2830.	900.	662.	4393.
DIBBLE	MCCLAIN	300.	56.	755.	1111.
DICKSON	CARTER	1231.	394.	849.	2475.
DILL CITY	WASHITA	195.	40.	637.	872.
DOVER	KINGFISHER	498.	119.	1723.	2341.
DRUMMOND	GARFIELD	911.	169.	1514.	2594.
DRUMRIGHT	CREEK	1801.	313.	213.	2327.
DUBOIS	MUSKOGEE	88.	30.	63.	181.
DUKE	JACKSON	404.	134.	1449.	1987.
DUNCAN	STEPHENS	15218.	3990.	1194.	20402.
DURANT	BRYAN	6350.	1952.	531.	8833.
DUSTIN	HUGHES	273.	37.	330.	640.
EAGLETOWN	MCCURTAIN	357.	86.	958.	1402.
EAKLY	CADDO	230.	74.	605.	910.
EARLSBORO	POTTAWATOMIE	221.	43.	478.	742.
EDMOND	OKLAHOMA	27459.	13936.	3368.	44762.
EL RENO	CANADIAN	6873.	1359.	549.	8782.
ELDORADO	JACKSON	348.	115.	1434.	1897.
ELGIN	COMANCHE	1214.	280.	849.	2342.
ELK CITY	BECKHAM	4508.	1979.	671.	7157.
ELMORE CITY	GARVIN	603.	128.	1047.	1778.
EMPIRE	STEPHENS	550.	124.	1003.	1677.
ENID	GARFIELD	32476.	8838.	867.	42181.
ERICK	BECKHAM	782.	286.	1643.	2710.
EUFAULA	MCINTOSH	2290.	330.	1042.	3662.
FAIRFAX	OSAGE	1802.	149.	892.	2843.

1976 ESTIMATED MARKET VALUE ($ THOU)

DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
FAIRLAND	OTTAWA	936.	296.	864.	2097.
FAIRVIEW	MAJOR	1746.	498.	3094.	5338.
FALLS	CLEVELAND	786.	196.	527.	1508.
FANSHAWE	LEFLORE	131.	24.	232.	388.
FARGO	ELLIS	423.	117.	1247.	1788.
FARRIS	ATOKA	109.	19.	509.	637.
FAXON	COMANCHE	268.	62.	362.	691.
FELT	CIMARRON	137.	33.	2060.	2231.
FILLMORE	JOHNSTON	45.	8.	139.	193.
FLETCHER	COMANCHE	682.	165.	342.	1189.
FLOWER MOUND	COMANCHE	264.	62.	103.	429.
FOREST GROVE	MCCURTAIN	144.	38.	192.	374.
FORGAN	BEAVER	362.	24.	1915.	2300.
FORT COBB	CADDO	440.	146.	806.	1392.
FOX	CARTER	590.	142.	724.	1456.
FOYIL	ROGERS	221.	63.	270.	554.
FREDERICK	TILLMAN	3137.	678.	2232.	6047.
FREEDOM	WOODS	344.	135.	1782.	2260.
FRIEND	GRADY	409.	88.	499.	996.
FRINK CHAMBERS	PITTSBURG	367.	103.	442.	913.
FT. GIBSON	MUSKOGEE	922.	298.	775.	1994.
FT. SUPPLY	WOODWARD	619.	235.	972.	1826.
FT. TOWSON	CHOCTAW	627.	67.	444.	1138.
GAGE	ELLIS	389.	107.	1162.	1659.
GANS	SEQUOYAH	188.	64.	185.	437.
GARBER	GARFIELD	1328.	245.	2568.	4142.
GARRETT	BEAVER	155.	14.	925.	1094.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
GATE	BEAVER	127.	9.	621.	756.
GEARY	BLAINE	754.	232.	2018.	3004.
GERONIMO	COMANCHE	613.	138.	575.	1326.
GLENCOE	PAYNE	359.	95.	1066.	1520.
GLENPOOL	TULSA	234.	79.	981.	1294.
GLOVER	MCCURTAIN	67.	17.	100.	184.
GOODLAND	CHOCTAW	66.	11.	73.	149.
GOODWELL	TEXAS	376.	143.	1186.	1706.
GORE	SEQUOYAH	1153.	353.	1012.	2519.
GOTEBO	KIOWA	431.	59.	1536.	2027.
GOULD	HARMON	240.	53.	1767.	2060.
GRACEMONT	CADDO	311.	121.	690.	1122.
GRAHAM	CARTER	258.	55.	488.	801.
GRAHAM	OKFUSKEE	65.	25.	205.	295.
GRANDFIELD	TILLMAN	723.	106.	2147.	2975.
GRANDVIEW	STEPHENS	378.	86.	85.	549.
GRANDVIEW	CHEROKEE	618.	114.	286.	1018.
GRANITE	GREER	660.	157.	2071.	2889.
GRANT	CHOCTAW	427.	57.	281.	766.
GREASY	ADAIR	30.	9.	150.	189.
GREENFIELD	BLAINE	176.	99.	1402.	1676.
GREENVILLE	LOVE	178.	22.	187.	387.
GREGORY	ROGERS	203.	58.	130.	391.
GROVE	POTTAWATOMIE	808.	155.	338.	1302.
GROVE	DELAWARE	5627.	745.	3097.	9469.
GUM SPRINGS	SEQUOYAH	299.	98.	89.	486.
GUTHRIE	LOGAN	7134.	1498.	2457.	11089.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
GUYMON	TEXAS	5576.	2554.	3524.	11654.
GYPSY	CREEK	203.	40.	297.	540.
HAILEYVILLE	PITTSBURG	608.	168.	92.	868.
HAMMON	CUSTER	259.	51.	1578.	1888.
HANNA	MCINTOSH	225.	26.	394.	645.
HARDESTY	TEXAS	252.	95.	1173.	1520.
HARMONY	ATOKA	83.	15.	321.	419.
HARRAH	OKLAHOMA	1949.	734.	786.	3469.
HARTSHORNE	PITTSBURG	840.	224.	368.	1432.
HASKELL	MUSKOGEE	1200.	320.	1072.	2592.
HAWORTH	MCCURTAIN	467.	88.	589.	1145.
HAYWOOD	PITTSBURG	112.	32.	321.	465.
HEALDTON	CARTER	1216.	370.	364.	1950.
HEAVENER	LEFLORE	572.	107.	624.	1303.
HELENA	ALFALFA	370.	82.	2837.	3289.
HENNESSEY	KINGFISHER	2317.	521.	4225.	7063.
HENRYETTA	OKMULGEE	4027.	99.	622.	4748.
HILLDALE	MUSKOGEE	2476.	933.	550.	3959.
HINTON	CADDO	927.	189.	2260.	3376.
HITCHCOCK	BLAINE	232.	129.	1442.	1803.
HOBART	KIOWA	2966.	710.	1390.	5065.
HODGEN	LEFLORE	72.	13.	264.	350.
HOLDENVILLE	HUGHES	2929.	360.	581.	3870.
HOLLIS	HARMON	1243.	262.	2029.	3534.
HOLLY CREEK	MCCURTAIN	153.	39.	138.	330.
HOMINY	OSAGE	2197.	211.	1068.	3475.
HOOKER	TEXAS	1189.	395.	1650.	3235.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
HOWE	LEFLORE	186.	34.	147.	366.
HUGO	CHOCTAW	2325.	319.	443.	3087.
HULBERT	CHEROKEE	557.	109.	562.	1227.
HYDRO	CADDO	886.	311.	1482.	2679.
IDABEL	MCCURTAIN	3365.	812.	850.	5026.
IDEAL	CRAIG	162.	43.	930.	1135.
INDIAHOMA	COMANCHE	340.	78.	570.	989.
INDIAN CAMP	OSAGE	776.	76.	878.	1730.
INDIANOLA	PITTSBURG	537.	150.	357.	1044.
INOLA	ROGERS	1039.	294.	570.	1903.
JAY	DELAWARE	2489.	334.	2067.	4890.
JENKS	TULSA	27879.	15200.	4465.	47543.
JENNINGS	PAWNEE	264.	35.	79.	377.
JET-NASH	ALFALFA	772.	142.	2987.	3901.
JONES	OKLAHOMA	1758.	677.	432.	2867.
JOY	MURRAY	268.	42.	284.	594.
JUSTICE	SEMINOLE	162.	29.	39.	230.
JUSTUS	ROGERS	523.	149.	192.	864.
KANSAS	DELAWARE	435.	55.	606.	1097.
KAW CITY	KAY	142.	41.	214.	396.
KELLYVILLE	CREEK	1219.	222.	606.	2047.
KENWOOD	DELAWARE	9.	2.	47.	58.
KEOTA	HASKELL	476.	80.	477.	1033.
KETCHUM	CRAIG	940.	244.	1655.	2839.
KEYES	CIMARRON	794.	187.	1639.	2620.
KEYS	CHEROKEE	1175.	213.	892.	2280.
KEYSTONE	TULSA	761.	422.	291.	1474.

DISTRICT	COUNTY	1976 ESTIMATED MARKET VALUE ($ THOU) RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
KIEFER	CREEK	582.	116.	52.	749.
KILDARE	KAY	627.	175.	921.	1723.
KINGFISHER	KINGFISHER	3802.	932.	2863.	7597.
KINGSTON	MARSHALL	1744.	240.	1090.	3074.
KINTA	HASKELL	300.	61.	536.	897.
KIOWA	PITTSBURG	289.	79.	848.	1215.
KONAWA	SEMINOLE	1008.	152.	606.	1766.
KREBS	PITTSBURG	662.	184.	404.	1250.
KREMLIN	GARFIELD	1023.	189.	2058.	3270.
LAHOMA	GARFIELD	524.	100.	869.	1493.
LANE	ATOKA	110.	19.	475.	603.
LANGSTON	LOGAN	114.	19.	217.	349.
LATTA	PONTOTOC	1570.	865.	1409.	3844.
LAVERNE	HARPER	887.	206.	3417.	4510.
LAWTON	COMANCHE	50653.	11062.	1337.	63053.
LEACH	DELAWARE	185.	26.	140.	350.
LEEDY	DEWEY	255.	78.	2061.	2394.
LEFLORE	LEFLORE	170.	27.	482.	679.
LEHIGH	COAL	46.	11.	78.	135.
LENAPAH	NOWATA	380.	81.	1199.	1659.
LEON	LOVE	121.	15.	154.	290.
LEONARD	TULSA	81.	29.	544.	655.
LEXINGTON	CLEVELAND	1256.	333.	805.	2394.
LIBERTY	TULSA	191.	67.	1209.	1467.
LIBERTY	SEQUOYAH	79.	27.	108.	214.
LIBERTY	OKMULGEE	160.	4.	462.	626.
LINDSAY	GARVIN	2536.	661.	2371.	5568.

DISTRICT	COUNTY	1976 ESTIMATED MARKET VALUE ($ THOU)			
		RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
LITTLE AXE	CLEVELAND	418.	107.	548.	1073.
LOCUST GROVE	MAYES	1071.	244.	807.	2122.
LOMEGA	KINGFISHER	587.	140.	2993.	3720.
LONE GROVE	CARTER	970.	262.	743.	1975.
LONE STAR	CREEK	1756.	378.	401.	2534.
LONE WOLF	KIOWA	635.	104.	1672.	2411.
LONGDALE	BLAINE	104.	53.	646.	802.
LOOKEBA-SICKLES	CADDO	499.	142.	956.	1598.
LOST CITY	CHEROKEE	72.	14.	147.	232.
LOWREY	CHEROKEE	200.	37.	302.	539.
LUKFATA	MCCURTAIN	165.	42.	104.	310.
LUTHER	OKLAHOMA	879.	309.	1136.	2324.
MACOMB	POTTAWATOMIE	372.	72.	1025.	1469.
MADILL	MARSHALL	70.	17.	5071.	5158.
MANGUM	GREER	108.	22.	6289.	6419.
MANITOU	TILLMAN	59.	14.	696.	769.
MANNFORD	CREEK	2662.	457.	1163.	4282.
MANNSVILLE	JOHNSTON	270.	53.	322.	646.
MAPLE	CANADIAN	356.	61.	1309.	1726.
MARBLE CITY	SEQUOYAH	104.	33.	90.	227.
MARIETTA	LOVE	1470.	202.	648.	2320.
MARLAND	NOBLE	349.	80.	1544.	1973.
MARLOW	STEPHENS	2560.	580.	835.	3976.
MARTHA	JACKSON	311.	114.	546.	971.
MARYETTA	ADAIR	127.	37.	187.	350.
MASON	OKFUSKEE	180.	66.	594.	840.
MAUD	POTTAWATOMIE	659.	106.	686.	1450.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
MAYSVILLE	GARVIN	1054.	277.	1049.	2380.
MCALESTER	PITTSBURG	8487.	2956.	182.	11626.
MCCORD	OSAGE	1080.	87.	323.	1489.
MCCURTAIN	HASKELL	241.	52.	386.	680.
MCLISH	PONTOTOC	301.	164.	546.	1011.
MCLOUD	POTTAWATOMIE	1246.	320.	1118.	2684.
MEDFORD	GRANT	1699.	275.	3317.	5290.
MEDICINE PARK	COMANCHE	75.	18.	95.	189.
MEEKER	LINCOLN	313.	74.	534.	921.
MERRITT	BECKHAM	512.	167.	980.	1658.
MIAMI	OTTAWA	11075.	4551.	1885.	17511.
MIDDLEBERG	GRADY	106.	23.	416.	545.
MIDWAY	MCINTOSH	359.	41.	340.	740.
MIDWEST CITY	OKLAHOMA	49571.	21450.	882.	71903.
MILBURN	JOHNSTON	158.	26.	289.	473.
MILFAY	CREEK	211.	41.	342.	594.
MILL CREEK	JOHNSTON	514.	81.	676.	1271.
MILLWOOD	OKLAHOMA	4635.	2170.	160.	6964.
MINCO	GRADY	811.	171.	1244.	2225.
MINGO	TULSA	736.	259.	1163.	2159.
MOFFETT	SEQUOYAH	167.	57.	36.	261.
MONROE	LEFLORE	160.	29.	191.	380.
MOORE	CLEVELAND	33788.	11875.	2235.	47898.
MOORELAND	WOODWARD	1109.	359.	2400.	3868.
MORRIS	OKMULGEE	925.	21.	928.	1873.
MORRISON	NOBLE	377.	86.	1697.	2160.
MOSELEY	DELAWARE	371.	58.	117.	546.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
MOSS	HUGHES	518.	62.	558.	1137.
MOTON	MUSKOGEE	178.	67.	139.	384.
MOUNDS	CREEK	722.	142.	176.	1041.
MOYERS	PUSHMATAHA	352.	43.	352.	747.
MT. PARK	KIOWA	270.	58.	445.	773.
MT. VIEW	KIOWA	853.	118.	2253.	3225.
MULDROW	SEQUOYAH	680.	236.	361.	1277.
MULHALL-ORLANDO	LOGAN	1048.	235.	1683.	2966.
MUSKOGEE	MUSKOGEE	27900.	10613.	1921.	40434.
MUSTANG	CANADIAN	7640.	1556.	3610.	12805.
NASHOBA	PUSHMATAHA	5.	1.	66.	71.
NAVAJO	JACKSON	289.	106.	873.	1268.
NEW LIMA	SEMINOLE	441.	75.	141.	657.
NEWCASTLE	MCCLAIN	1266.	225.	1158.	2649.
NEWKIRK	KAY	1579.	430.	1784.	3793.
NINNEKAH	GRADY	781.	158.	1153.	2091.
NO. ROCK CREEK	POTTAWATOMIE	439.	71.	626.	1136.
NOBLE	CLEVELAND	2081.	638.	1200.	3918.
NOBLETOWN	SEMINOLE	97.	18.	22.	136.
NORMAN	CLEVELAND	48627.	17559.	1681.	67867.
NORTH ENID	GARFIELD	2240.	646.	2151.	5038.
NORWOOD	CHEROKEE	182.	34.	202.	419.
NOWATA	NOWATA	2212.	674.	1639.	4525.
NUYAKA	OKMULGEE	69.	2.	374.	445.
OAK GROVE	PAYNE	66.	18.	383.	468.
OAKDALE	OKLAHOMA	1022.	446.	168.	1637.
OAKS MISSION	DELAWARE	156.	21.	258.	436.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
OGLESBY	WASHINGTON	353.	99.	313.	764.
OILTON	CREEK	566.	100.	118.	784.
OKARCHE	KINGFISHER	1052.	191.	2722.	3966.
OKAY	WAGONER	577.	34.	313.	925.
OKEENE	BLAINE	1233.	543.	3005.	4781.
OKEMAH	OKFUSKEE	1234.	452.	810.	2495.
OKLAHOMA CITY	OKLAHOMA	279090.	124941.	2435.	406466.
OKMULGEE	OKMULGEE	10507.	312.	1175.	11993.
OKTAHA	MUSKOGEE	281.	94.	605.	980.
OLIVE	CREEK	731.	130.	431.	1292.
OLNEY	COAL	208.	42.	529.	779.
OLUSTEE	JACKSON	293.	97.	973.	1363.
ONEY	CADDO	121.	54.	953.	1128.
OOLEGAH	ROGERS	1570.	387.	1404.	3361.
OPTIMA	TEXAS	96.	38.	354.	489.
OSAGE	MAYES	341.	105.	174.	620.
OSAGE HILLS	OSAGE	777.	77.	216.	1070.
OWASSO	TULSA	6199.	3269.	1065.	10533.
PADEN	OKFUSKEE	279.	85.	473.	838.
PANAMA	LEFLORE	589.	99.	351.	1039.
PANOLA	LATIMER	176.	30.	451.	658.
PAOLI	GARVIN	385.	98.	692.	1176.
PAULS VALLEY	GARVIN	3676.	996.	899.	5571.
PAWHUSKA	OSAGE	3467.	387.	793.	4648.
PAWNEE	PAWNEE	2283.	280.	2016.	4580.
PEAVINE	ADAIR	60.	18.	154.	232.
PECKHAM	KAY	720.	200.	857.	1776.

DISTRICT	COUNTY	1976 ESTIMATED MARKET VALUE ($ THOU)			
		RESIDENT.	CUMM/INDR	AGRICUL.	TOTAL
PEGGS	CHEROKEE	194.	37.	336.	567.
PERKINS-TRYON	PAYNE	1545.	446.	1224.	3215.
PERNELL	GARVIN	170.	43.	767.	980.
PERRY	NOBLE	3717.	1002.	2601.	7320.
PICHER	OTTAWA	284.	98.	109.	490.
PICKETT-CENTER	PONTOTOC	271.	151.	136.	558.
PIEDMONT	CANADIAN	1379.	232.	2210.	3821.
PIONEER	GRADY	185.	40.	421.	646.
PIONEER-PLEASANT	GARFIELD	1516.	279.	2277.	4072.
PITTSBURG	PITTSBURG	220.	65.	232.	517.
PLAINVIEW	CARTER	1909.	576.	1254.	3738.
PLAINVIEW	CIMARRON	84.	22.	1976.	2082.
PLEASANT GROVE	POTTAWATOMIE	263.	49.	93.	404.
PLEASANT GROVE	SEMINOLE	358.	54.	98.	510.
PLEASANT VIEW	PAYNE	459.	151.	255.	865.
POCOLA	LEFLORE	637.	143.	205.	985.
PONCA CITY	KAY	22832.	7777.	2506.	33115.
POND CREEK	GRANT	1097.	183.	3476.	4756.
PORTER	WAGONER	966.	51.	781.	1798.
PORUM	MUSKOGEE	423.	131.	621.	1175.
POTEAU	LEFLORE	2993.	699.	595.	4287.
PRAGUE	LINCOLN	1109.	208.	1594.	2911.
PRESTON	OKMULGEE	211.	5.	471.	688.
PRETTY WATER	CREEK	257.	51.	108.	417.
PROGRESSIVE	MAJOR	408.	119.	1390.	1917.
PRUE	OSAGE	631.	62.	643.	1336.
PRYOR	MAYES	6122.	1772.	1223.	9117.

1976 ESTIMATED MARKET VALUE ($ THOU)

DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
PURCELL	MCCLAIN	2990.	616.	807.	4413.
PUTNAM CITY	OKLAHOMA	106367.	48045.	1411.	155823.
QUAPAW	OTTAWA	543.	191.	643.	1378.
QUINTON	PITTSBURG	448.	103.	351.	901.
RALSTON	PAWNEE	575.	71.	920.	1565.
RATTAN	PUSHMATAHA	443.	66.	944.	1453.
RAVIA	JOHNSTON	86.	15.	251.	352.
RED OAK	LATIMER	251.	42.	541.	834.
RED ROCK	NOBLE	238.	55.	1290.	1583.
REYDON	ROGER MILLS	87.	26.	1467.	1580.
RINGLING	JEFFERSON	686.	81.	2079.	2846.
RINGWOOD	MAJOR	444.	123.	1536.	2102.
RIPLEY	PAYNE	1040.	303.	77.	1419.
RIVERSIDE	CANADIAN	473.	82.	845.	1400.
ROBIN HILL	CLEVELAND	177.	46.	194.	416.
ROCKY MT.	ADAIR	24.	7.	95.	126.
ROFF	PONTOTOC	594.	283.	1085.	1962.
ROLAND	SEQUOYAH	397.	132.	224.	753.
ROOSEVELT	KIOWA	661.	132.	1984.	2777.
RUSH SPRINGS	GRADY	942.	157.	1273.	2371.
RYAL	MCINTOSH	21.	3.	62.	86.
RYAN	JEFFERSON	524.	68.	1923.	2516.
SALINA	MAYES	725.	139.	363.	1227.
SALLISAW	SEQUOYAH	2002.	676.	637.	3315.
SAND SPRINGS	TULSA	12550.	7103.	1160.	20812.
SAPULPA	CREEK	13251.	2855.	202.	16307.
SASAKWA	SEMINOLE	.432.	76.	299.	807.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
SAVANNA	PITTSBURG	297.	89.	172.	559.
SAYRE	BECKHAM	1947.	829.	1944.	4720.
SCHULTER	OKMULGEE	221.	5.	185.	412.
SCHWARTZ	CLEVELAND	494.	126.	241.	861.
SEILING	DEWEY	478.	166.	2321.	2966.
SEMINOLE	SEMINOLE	4209.	811.	79.	5099.
SENTINEL	WASHITA	635.	140.	3220.	3994.
SEQUOYAH	ROGERS	852.	242.	521.	1615.
SHADY GROVE	CHEROKEE	60.	12.	103.	174.
SHADY POINT	LEFLORE	129.	24.	32.	185.
SHAMROCK	CREEK	163.	33.	260.	455.
SHARON-MUTUAL	WOODWARD	857.	340.	1910.	3107.
SHATTUCK	ELLIS	1334.	369.	2452.	4154.
SHAWNEE	POTTAWATOMIE	15713.	3235.	651.	19599.
SHIDLER	OSAGE	1385.	117.	1846.	3348.
SILO	BRYAN	631.	158.	967.	1756.
SKELLY	ADAIR	56.	14.	295.	365.
SKIATOOK	TULSA	2888.	1017.	1302.	5207.
SMITHVILLE	MCCURTAIN	274.	55.	1294.	1623.
SNYDER	KIOWA	838.	182.	1429.	2449.
SO. COFFEYVILLE	NOWATA	481.	117.	595.	1193.
SO. ROCK CREEK	POTTAWATOMIE	721.	139.	469.	1329.
SOPER	CHOCTAW	404.	51.	460.	916.
SOUTHSIDE	JACKSON	421.	153.	1165.	1740.
SPARKS	LINCOLN	81.	19.	122.	223.
SPAVINAW	MAYES	381.	61.	98.	539.
SPERRY	TULSA	1238.	551.	365.	2154.

1976 ESTIMATED MARKET VALUE ($ THOU)

DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
SPIRO	LEFLORE	1517.	297.	686.	2500.
SPRINGER	CARTER	194.	63.	662.	918.
ST. LOUIS	POTTAWATOMIE	123.	24.	347.	493.
STERLING	COMANCHE	644.	154.	563.	1362.
STIDHAM	MCINTOSH	125.	14.	219.	358.
STIGLER	HASKELL	1800.	416.	1298.	3514.
STILLWATER	PAYNE	23984.	10699.	1473.	36156.
STILWELL	ADAIR	1064.	291.	855.	2210.
STONEWALL	PONTOTOC	512.	239.	560.	1311.
STONY POINT	COMANCHE	90.	22.	111.	223.
STRAIGHT	TEXAS	223.	102.	1464.	1789.
STRATFORD	GARVIN	786.	145.	996.	1927.
STRINGTOWN	ATOKA	113.	14.	789.	916.
STROTHER	SEMINOLE	982.	165.	276.	1423.
STROUD	LINCOLN	976.	240.	1134.	2350.
STUART	HUGHES	350.	42.	469.	860.
SULPHUR	MURRAY	3057.	447.	692.	4197.
SUMNER	NOBLE	156.	36.	798.	991.
SWEETWATER	BECKHAM	139.	44.	1331.	1514.
SWINK	CHOCTAW	89.	8.	146.	243.
TAHLEQUAH	CHEROKEE	6072.	1575.	1167.	8815.
TALIHINA	LEFLORE	353.	53.	587.	993.
TALOGA	DEWEY	1351.	445.	912.	2708.
TANNEHILL	PITTSBURG	148.	43.	178.	369.
TECUMSEH	POTTAWATOMIE	2391.	417.	1527.	4335.
TEMPLE	COTTON	647.	54.	1844.	2546.
TENKILLER	CHEROKEE	192.	36.	282.	509.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
TERRAL	JEFFERSON	268.	37.	552.	857.
TEXHOMA	TEXAS	638.	121.	1690.	2449.
THACKERVILLE	LOVE	211.	27.	240.	478.
THOMAS	CUSTER	1076.	257.	2311.	3644.
TIAWAH	ROGERS	328.	94.	238.	660.
TIPTON	TILLMAN	834.	162.	1577.	2573.
TISHOMINGO	JOHNSTON	1464.	319.	1419.	3202.
TOM	MCCURTAIN	191.	36.	198.	425.
TONKAWA	KAY	2216.	753.	1338.	4307.
TULSA	TULSA	390145.	214809.	5057.	610011.
TUPELO	COAL	366.	85.	748.	1198.
TURKEY FORD	OTTAWA	393.	135.	211.	738.
TURNER	LOVE	1097.	117.	2093.	3308.
TURPIN	BEAVER	745.	48.	2677.	3469.
TUSHKA	ATOKA	97.	17.	362.	475.
TUSKAHOMA	PUSHMATAHA	196.	24.	188.	409.
TUTTLE	GRADY	1648.	357.	1268.	3274.
TWIN HILLS	OKMULGEE	223.	6.	806.	1034.
TYRONE	TEXAS	340.	129.	608.	1076.
UNION	TULSA	24237.	12665.	5349.	42250.
UNION	KAY	355.	100.	387.	842.
UNION CITY	CANADIAN	563.	94.	1591.	2248.
UTICA	BRYAN	73.	15.	198.	286.
VALLIANT	MCCURTAIN	696.	129.	502.	1326.
VAMOOSA	SEMINOLE	232.	35.	153.	420.
VANOSS	PONTOTOC	490.	262.	531.	1283.
VARNUM	SEMINOLE	396.	69.	89.	554.

1976 ESTIMATED MARKET VALUE ($ THOU)

DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
VELMA-ALMA	STEPHENS	607.	146.	2009.	2763.
VERDEN	GRADY	691.	169.	1097.	1957.
VERDIGRIS	ROGERS	3345.	1010.	979.	5334.
VIAN	SEQUOYAH	796.	240.	778.	1814.
VICI	DEWEY	200.	67.	1328.	1594.
VINITA	CRAIG	3366.	1014.	1652.	6033.
WAGONER	WAGONER	4913.	295.	1337.	6546.
WAINWRIGHT	MUSKOGEE	304.	104.	234.	642.
WAKITA	GRANT	546.	101.	3390.	4037.
WALKER	GARVIN	133.	35.	558.	726.
WALTERS	COTTON	1303.	102.	2179.	3585.
WANETTE	POTTAWATOMIE	368.	52.	1570.	1989.
WANN	NOWATA	199.	49.	450.	699.
WAPANUCKA	JOHNSTON	334.	54.	801.	1190.
WARNER	MUSKOGEE	763.	243.	703.	1708.
WASHINGTON	MCCLAIN	661.	133.	1354.	2148.
WASHITA HEIGHTS	WASHITA	387.	83.	2213.	2682.
WATONGA	BLAINE	2200.	1098.	1913.	5210.
WATSON	MCCURTAIN	155.	39.	204.	398.
WATTS	ADAIR	151.	39.	263.	453.
WAUKOMIS	GARFIELD	821.	135.	1681.	2638.
WAURIKA	JEFFERSON	1058.	175.	2511.	3744.
WAYNE	MCCLAIN	703.	131.	1435.	2269.
WAYNOKA	WOODS	733.	215.	2899.	3847.
WEATHERFORD	CUSTER	4496.	1744.	1689.	7929.
WEAVER	TILLMAN	350.	80.	1566.	1996.
WEBBERS FALLS	MUSKOGEE	362.	113.	627.	1102.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
WELCH	CRAIG	670.	162.	1765.	2597.
WELEETKA	OKFUSKEE	562.	140.	703.	1405.
WELLSTON	LINCOLN	324.	71.	537.	932.
WESTERN HEIGHTS	OKLAHOMA	12713.	6064.	706.	19482.
WESTVILLE	ADAIR	618.	126.	1037.	1781.
WETUMKA	HUGHES	959.	122.	498.	1579.
WEWOKA	SEMINOLE	3022.	553.	139.	3714.
WHITE OAK	CRAIG	190.	49.	1177.	1416.
WHITE ROCK	LINCOLN	92.	22.	174.	287.
WHITEBEAD	GARVIN	439.	113.	563.	1115.
WHITEFIELD	HASKELL	100.	21.	157.	278.
WHITESBORO	LEFLORE	190.	28.	652.	871.
WICKLIFFE	MAYES	62.	10.	53.	125.
WILBURTON	LATIMER	1136.	224.	932.	2292.
WILSON	CARTER	709.	175.	452.	1336.
WILSON	OKMULGEE	213.	5.	237.	455.
WISTER	LEFLORE	270.	41.	173.	484.
WOODALL	CHEROKEE	159.	30.	168.	357.
WOODWARD	WOODWARD	8506.	3387.	1938.	13832.
WRIGHT CITY	MCCURTAIN	372.	102.	613.	1086.
WYANDOTTE	OTTAWA	884.	267.	1016.	2166.
WYNNEWOOD	GARVIN	1386.	361.	1186.	2933.
WYNONA	OSAGE	334.	33.	470.	836.
YALE	PAYNE	1092.	274.	817.	2184.
YARBROUGH	TEXAS	923.	331.	2413.	3668.
YUBA	BRYAN	282.	55.	536.	874.
YUKON	CANADIAN	12871.	2852.	2275.	17998.

		1976 ESTIMATED MARKET VALUE ($ THOU)			
DISTRICT	COUNTY	RESIDENT.	COMM/INDR	AGRICUL.	TOTAL
ZANEIS	CARTER	149.	32.	342.	524.
ZION	ADAIR	94.	28.	195.	317.

APPENDIX B

FIGURES

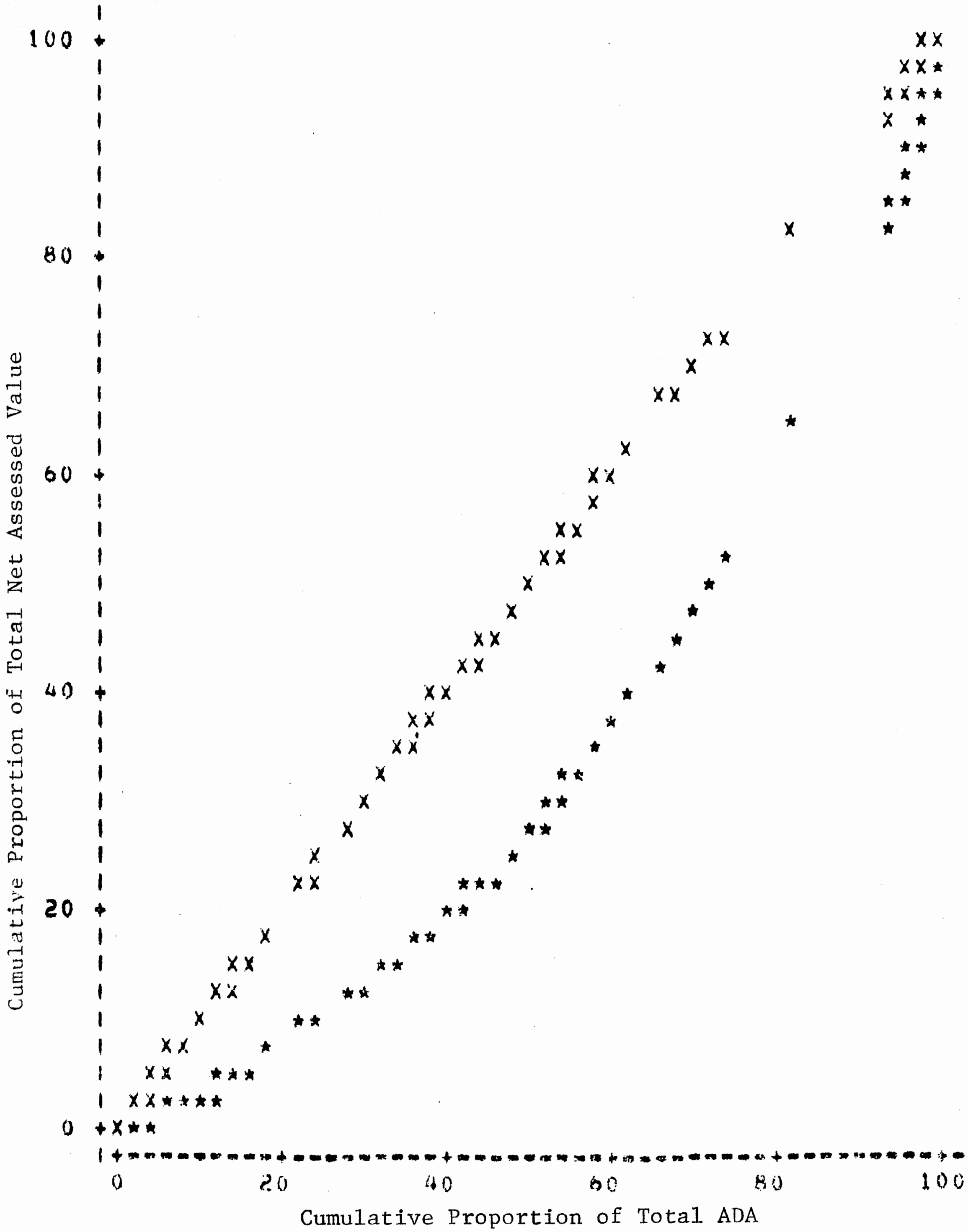

Figure 4. Lorenz Curve for Actual 1976-77 Distribution of Total Net Assessed Value

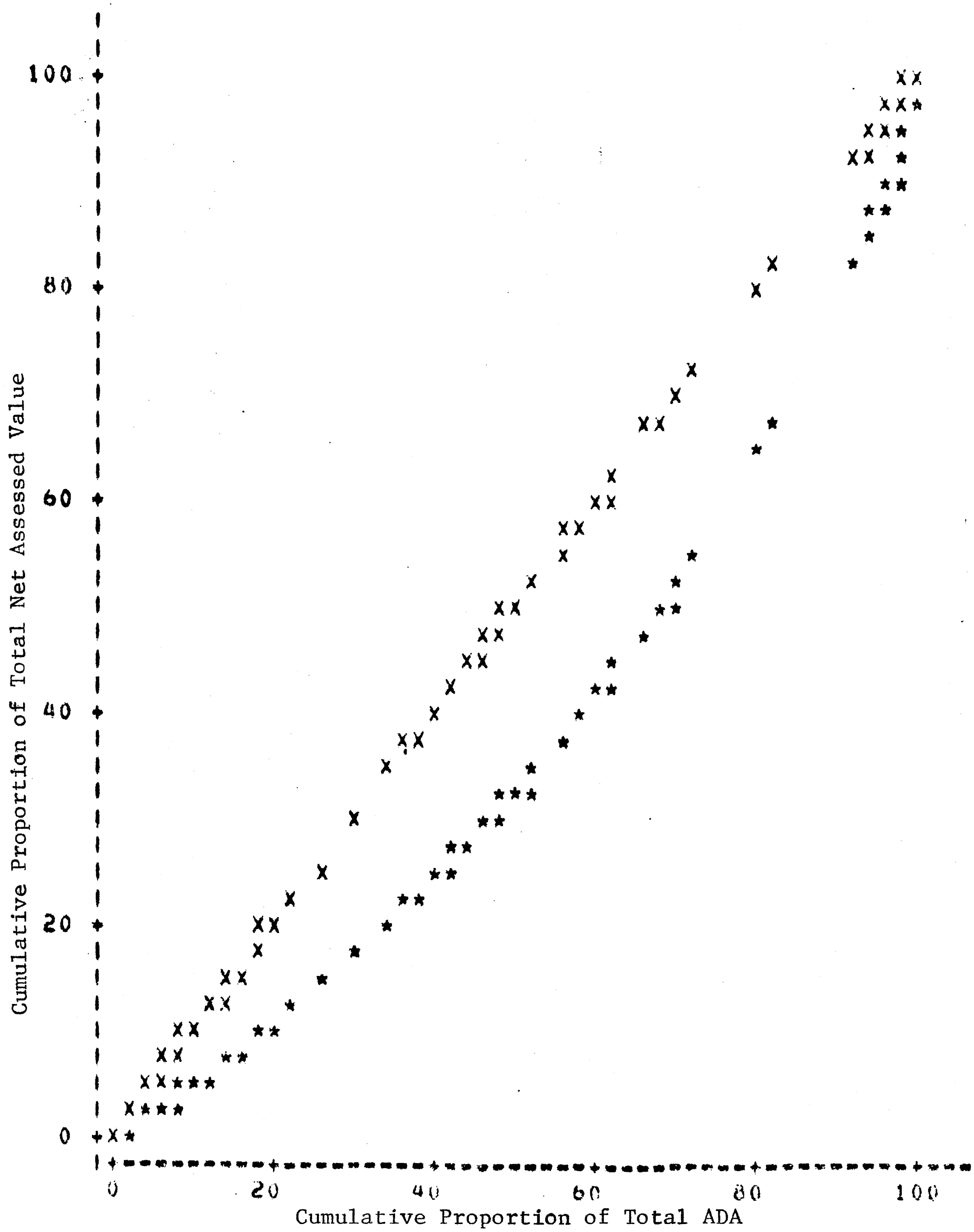

Figure 5. Lorenz Curve for 1976-77 Distribution of Total Net Assessed Value with Personal Property Per ADA Equalized

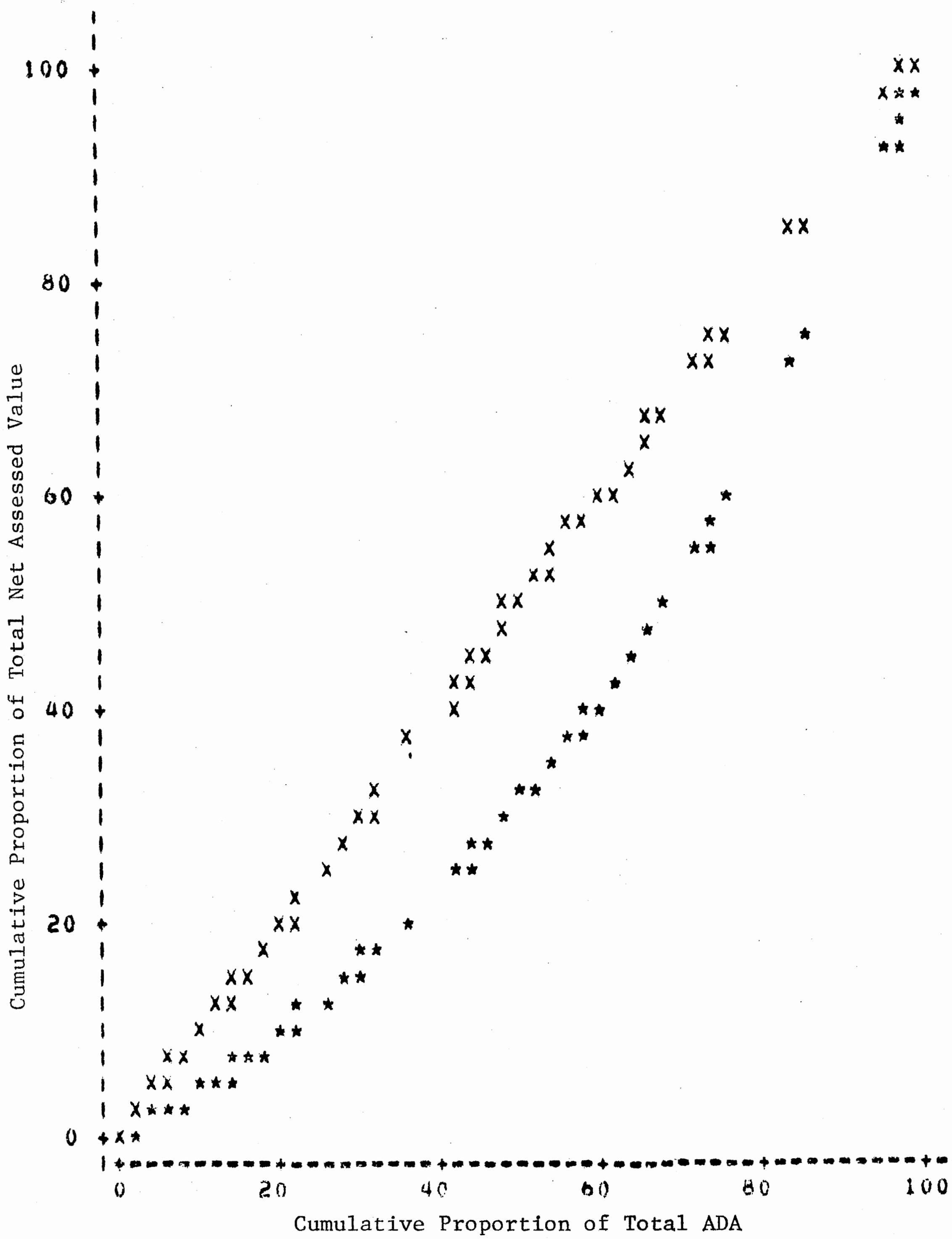

Figure 6. Lorenz Curve for the 1976-77 Distribution of Total Net Assessed Value with Public Service Property Per ADA Equalized

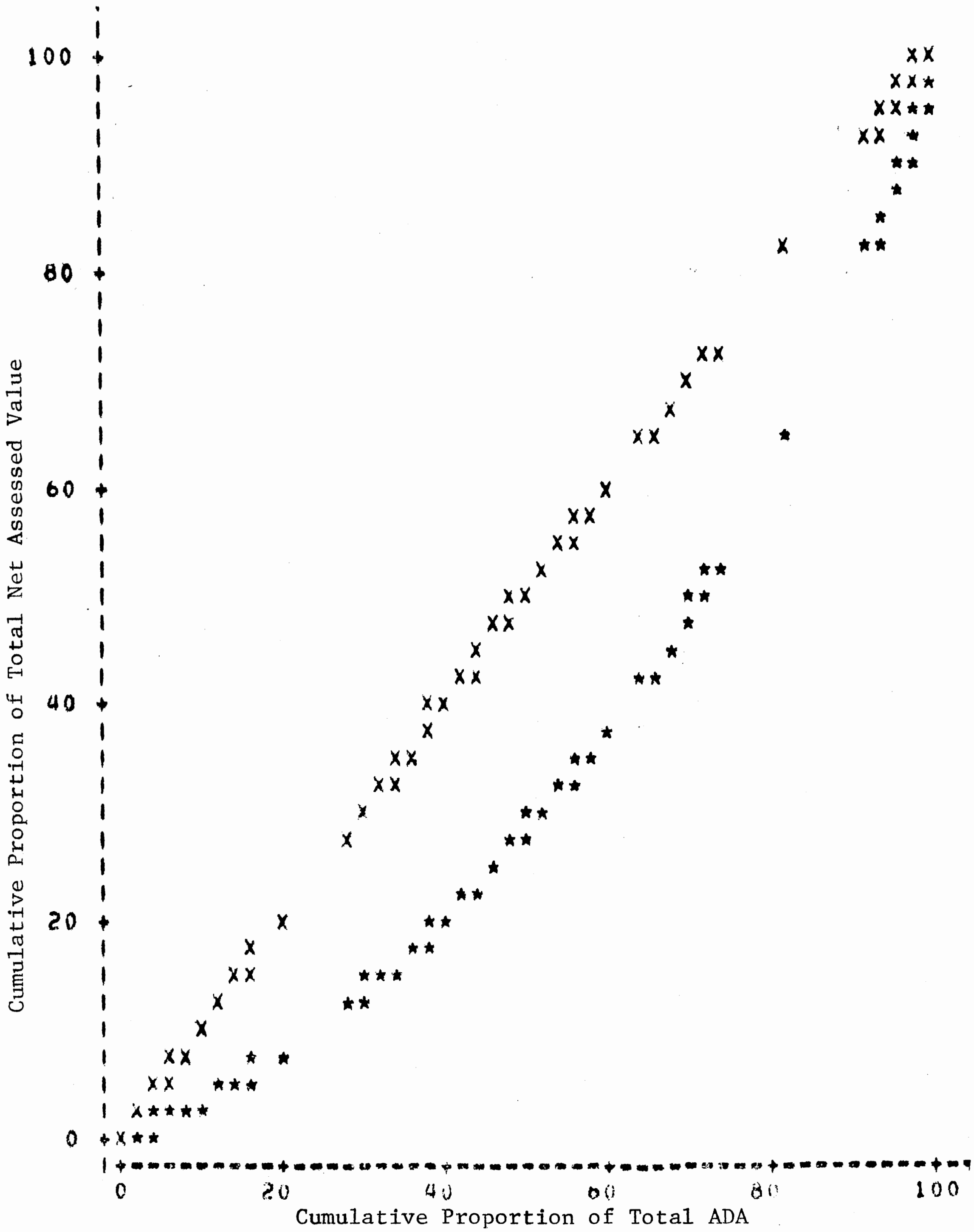

Figure 7. Lorenz Curve for the 1976-77 Distribution of Total Net Assessed Value with State Average Assessment Rates for Commercial-Industrial, Residential and Agricultural Property

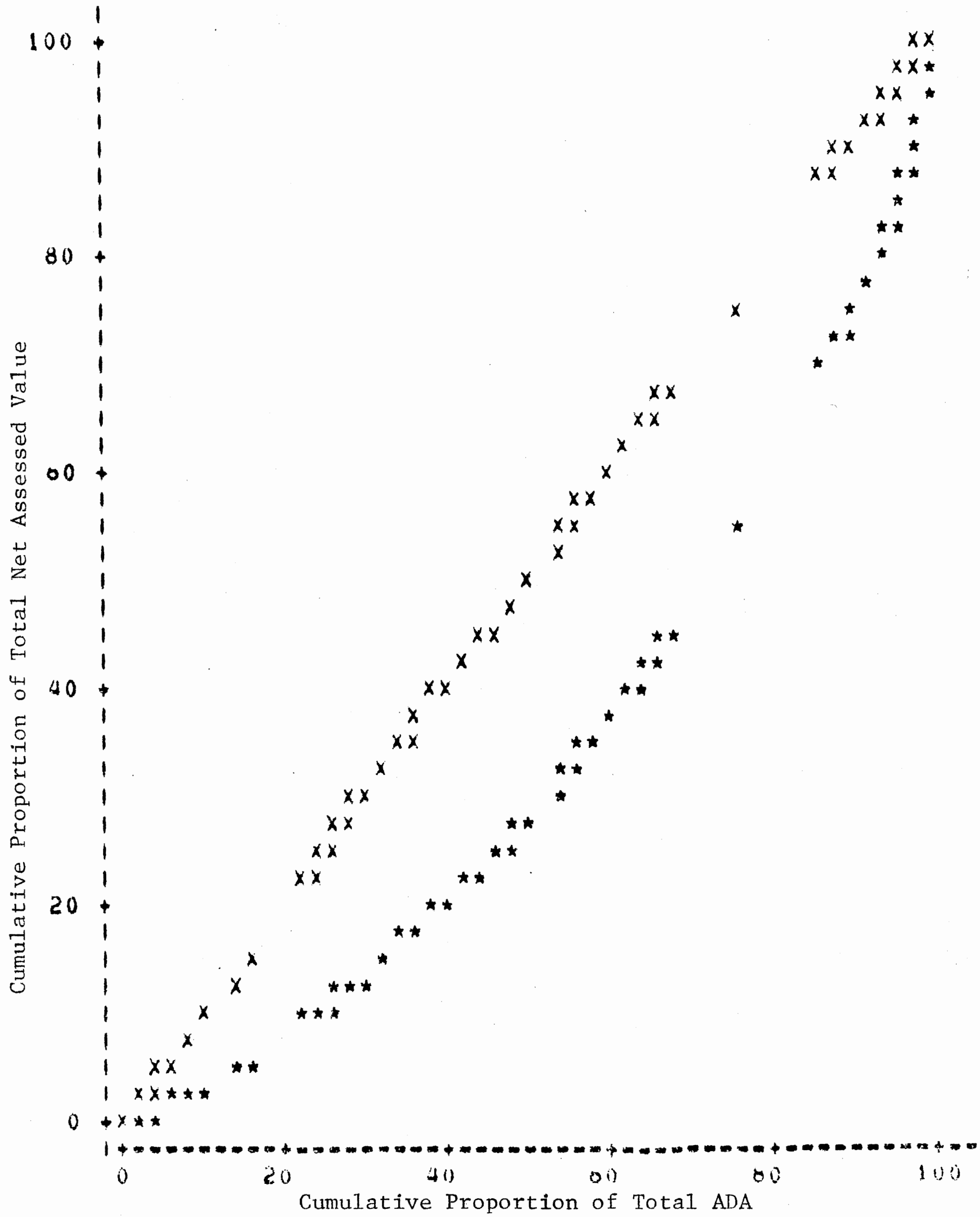

Figure 8. Lorenz Curve for the 1976-77 Distribution of Total Net Assessed Value with State Average Assessment Rate

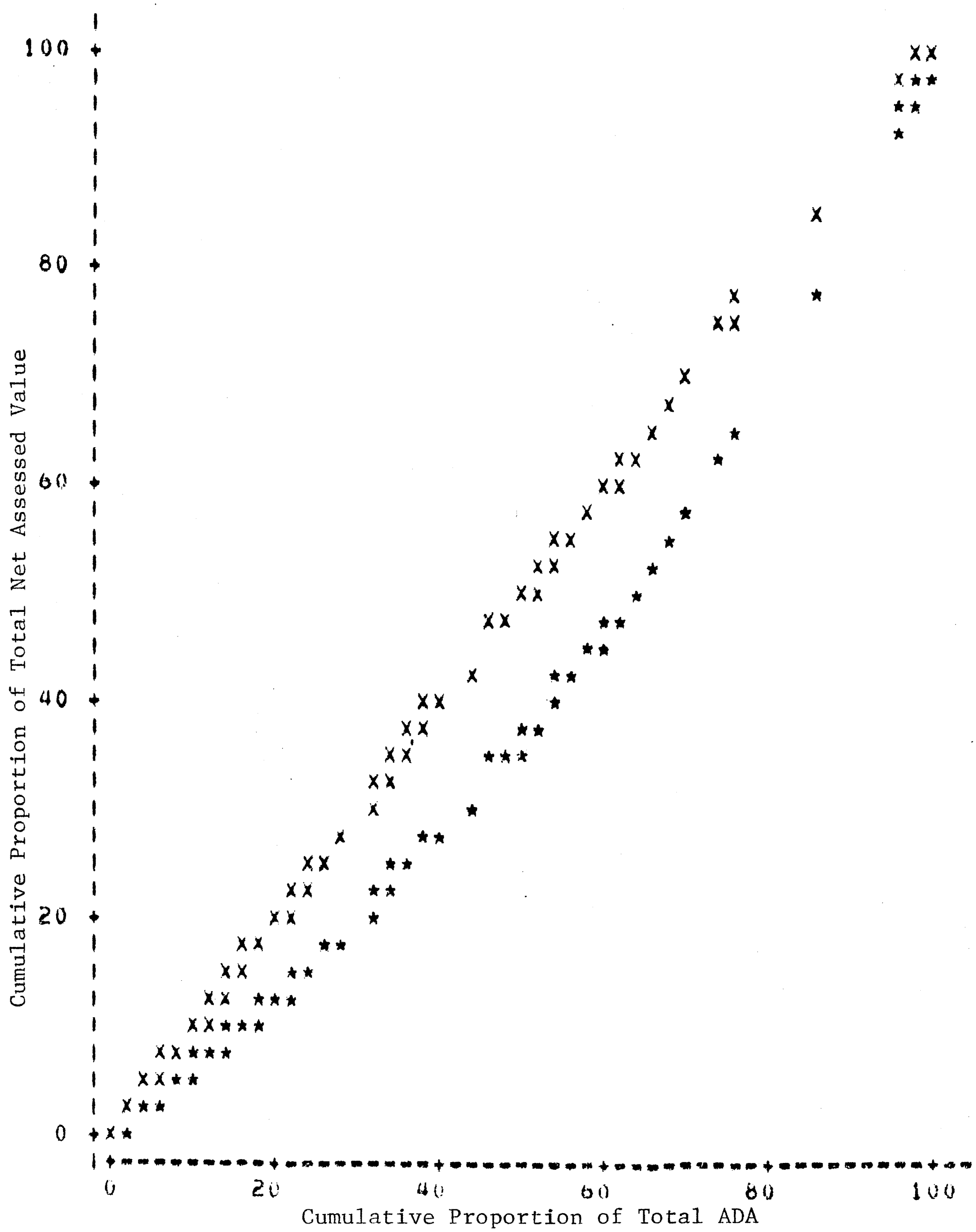

Figure 9. Lorenz Curve for the 1976-77 Distribution of Total Net Assessed Value with Public Service and Personal Property Per ADA Equalized

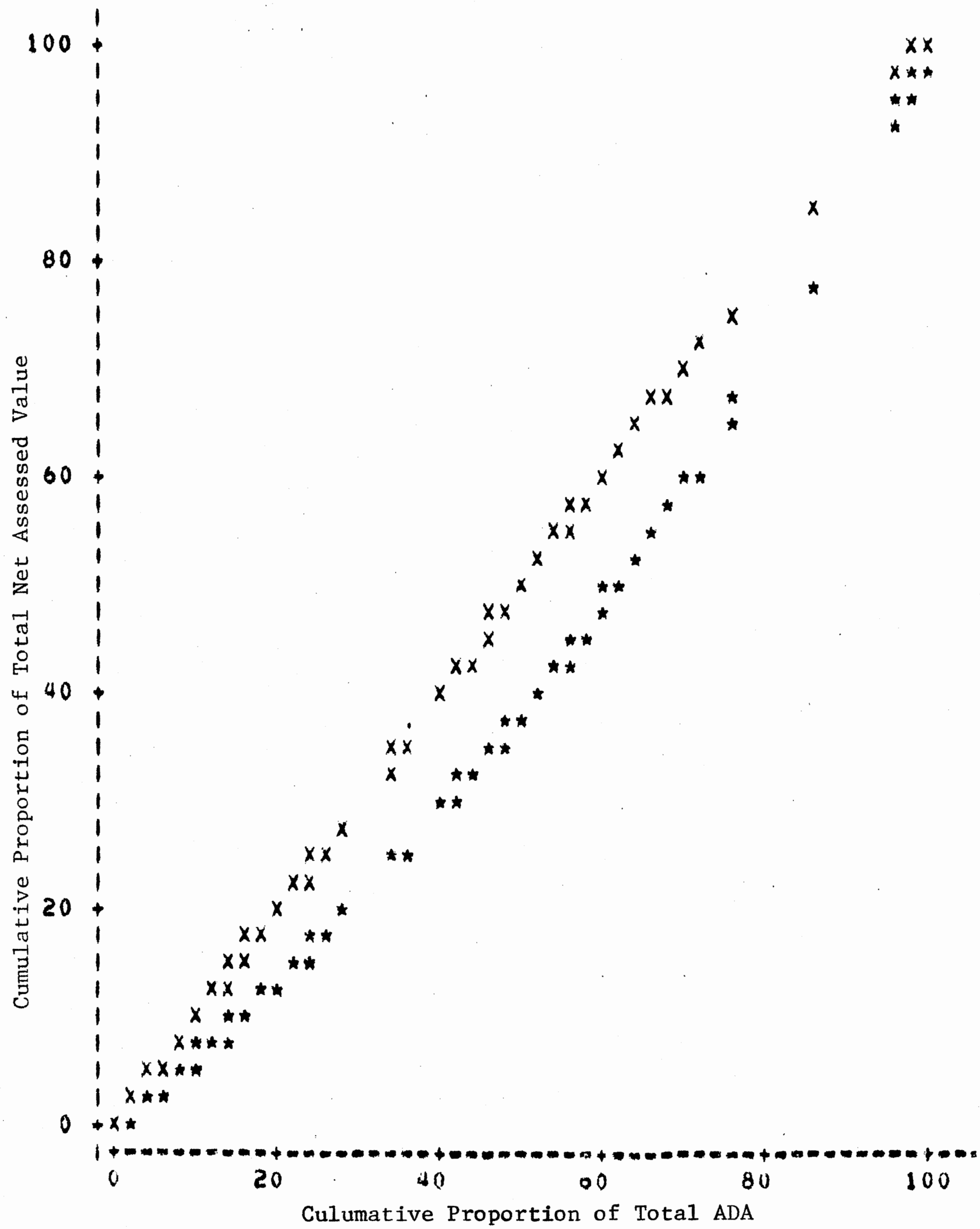

Figure 10. Lorenz Curve for the 1976-77 Distribution of Total Net Assessed Value with Public Service and Personal Property Per Ada Equalized and State Average Assessment Rates for Commercial-Industrial, Residential, and Agricultural Property

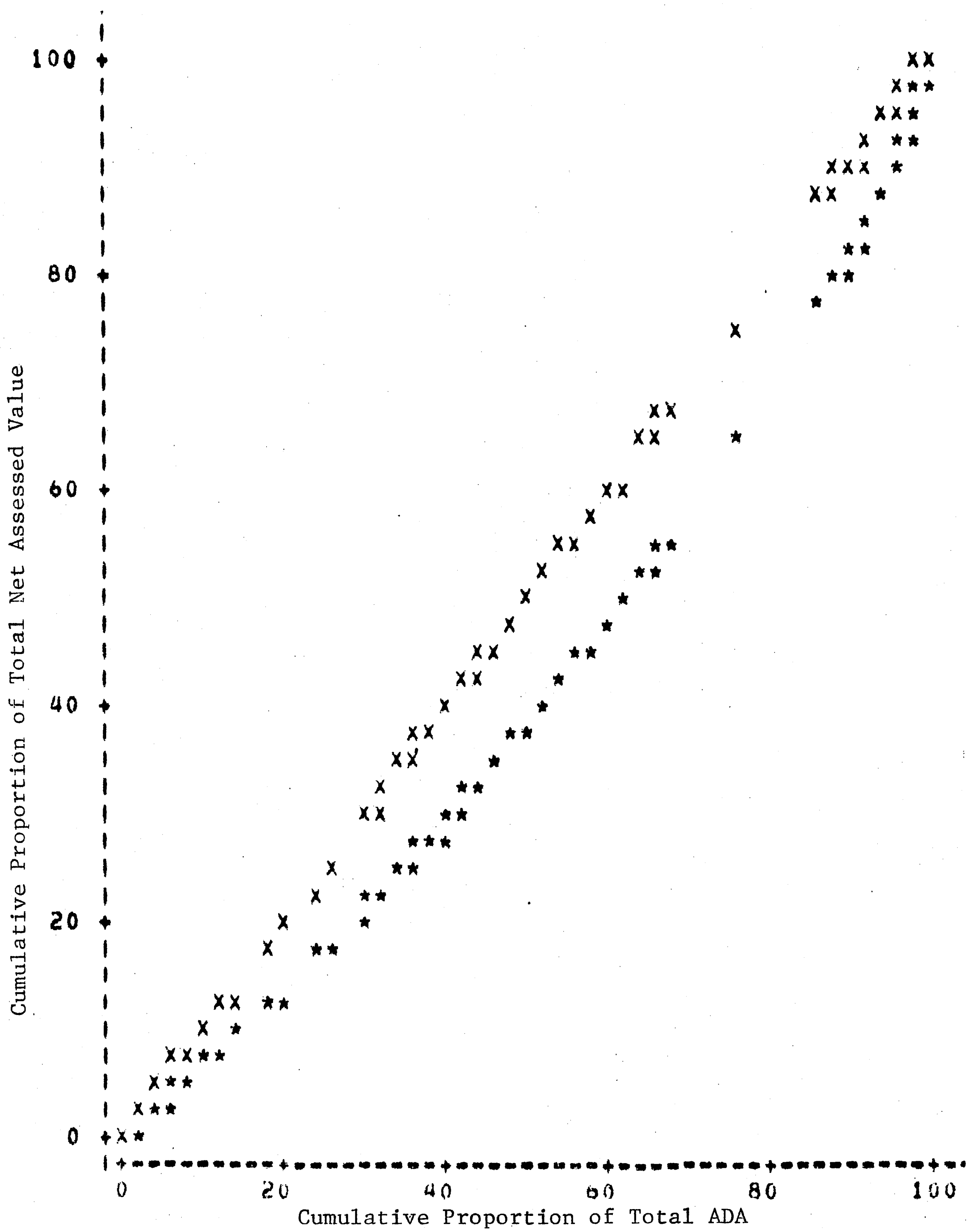

Figure 11. Lorenz Curve for the 1976-77 Distribution of Total Net Assessed Value with Public Service and Personal Property Per ADA Equalized and State Average Assessment Rate

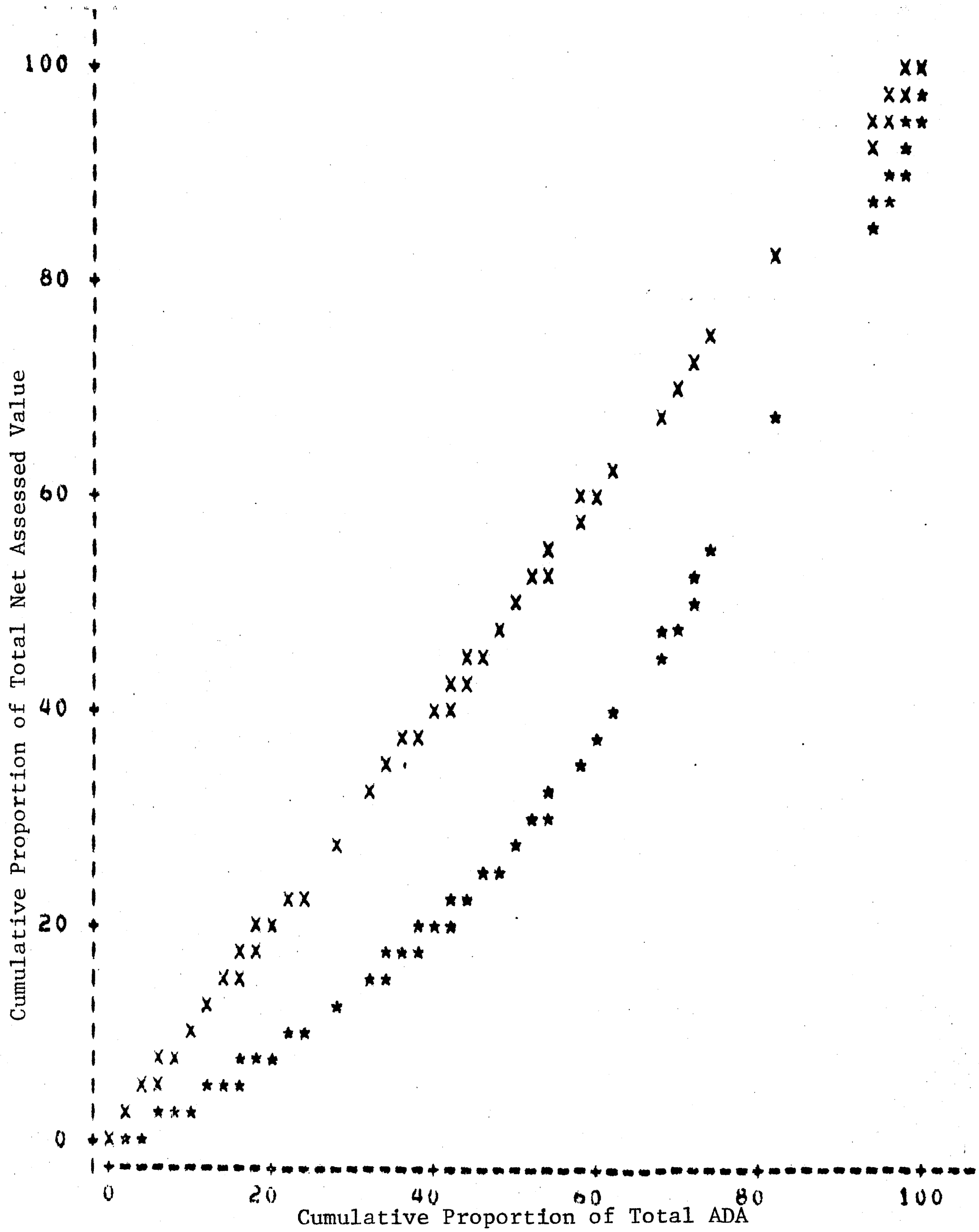

Figure 12. Lorenz Curve for the 1976-77 Distribution of Total Net Assessed Value with Commercial-Industrial and Residential Assessment Rate of 13.00% And State Average Agricultural Assessment Rate

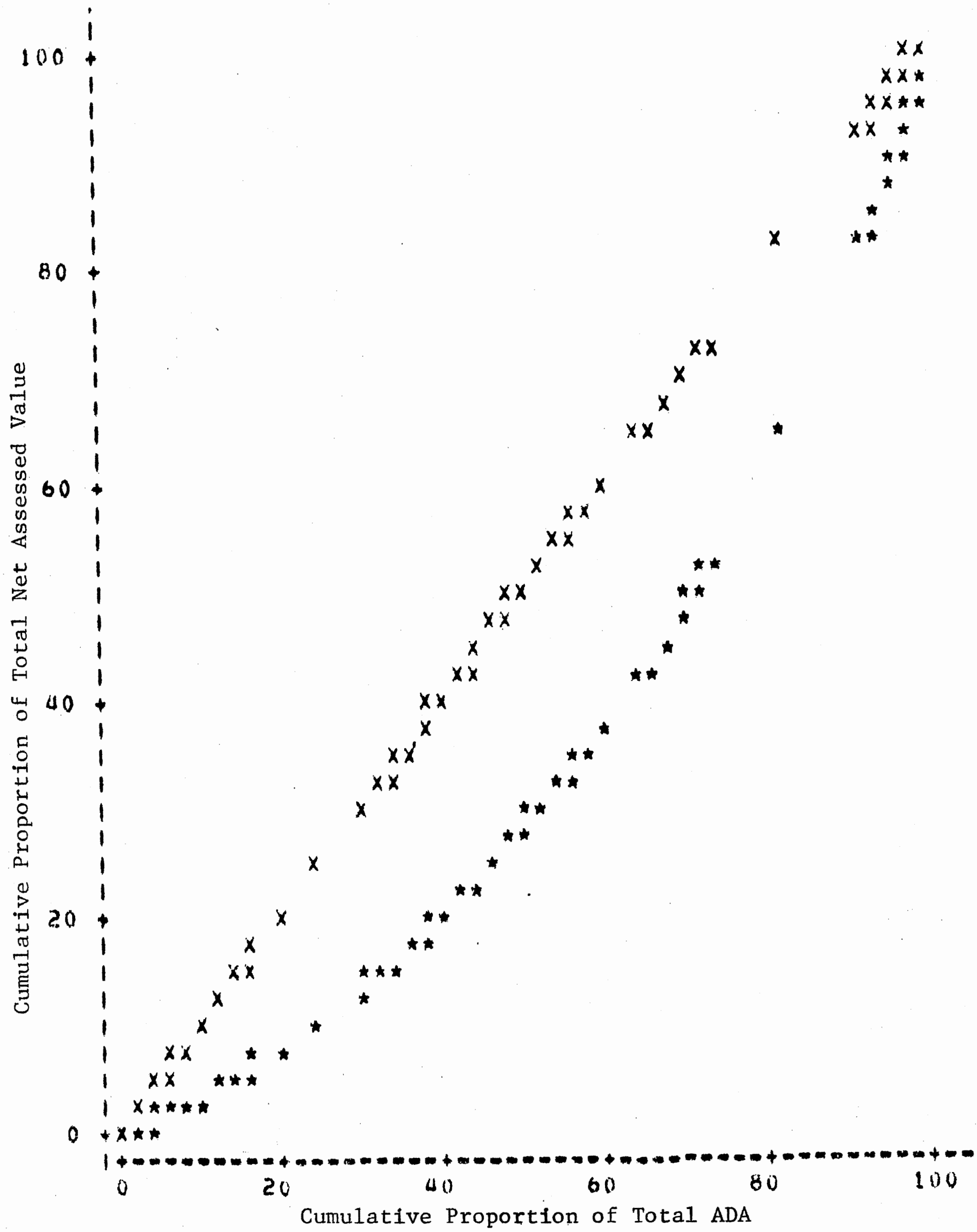

Figure 13. Lorenz Curve for the 1976-77 Distribution of Total Net Assessed Value with Commercial-Industrial and Residential Assessment Rate of 13.00% and Agricultural Assessment Rate of 3.00%

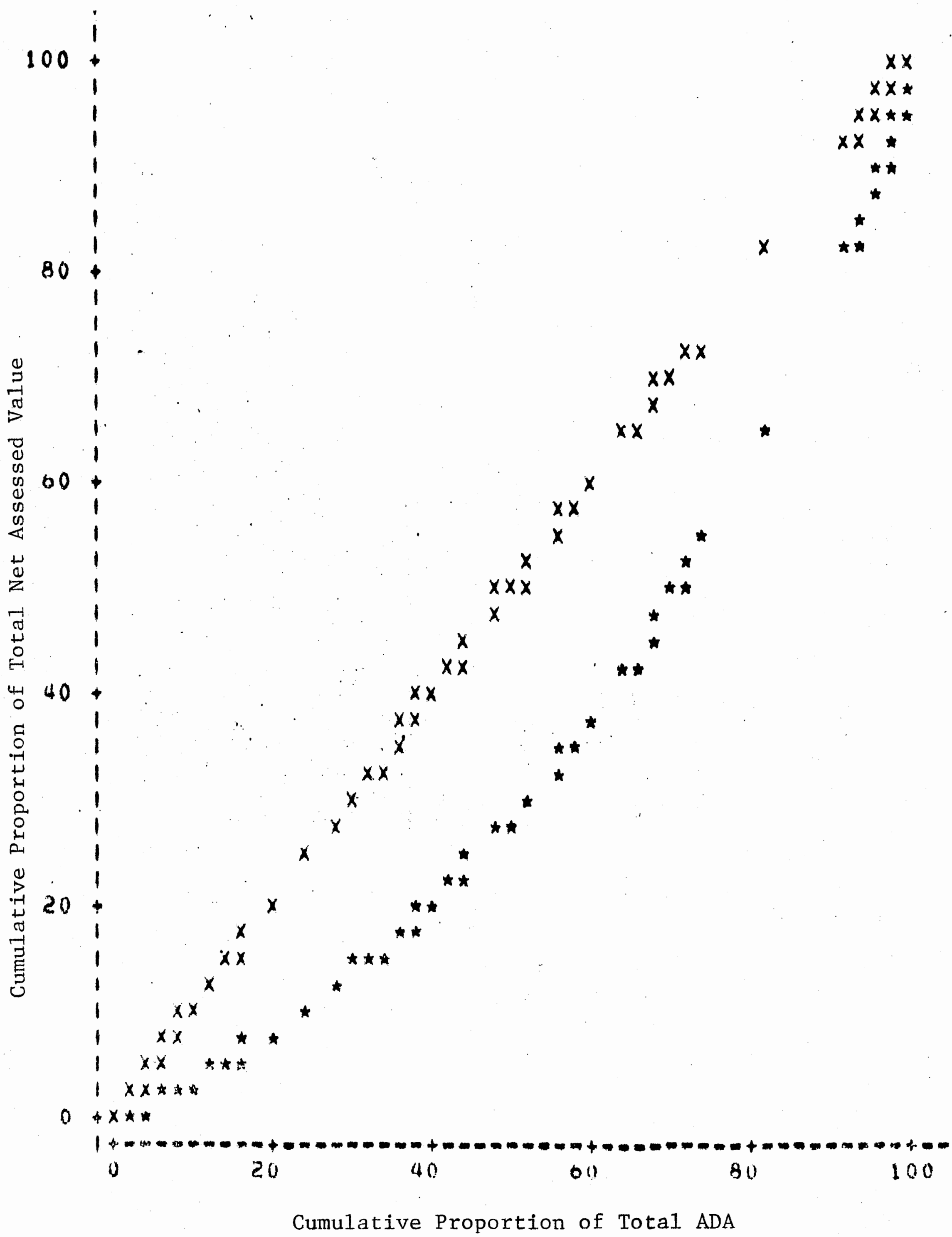

Figure 14. Lorenz Curve for the 1976-77 Distribution of Total Net Assessed Value with Commercial-Industrial and Residential Assessment Rate of 13.00% and Agricultural Assessmetn Rate of 5.00%

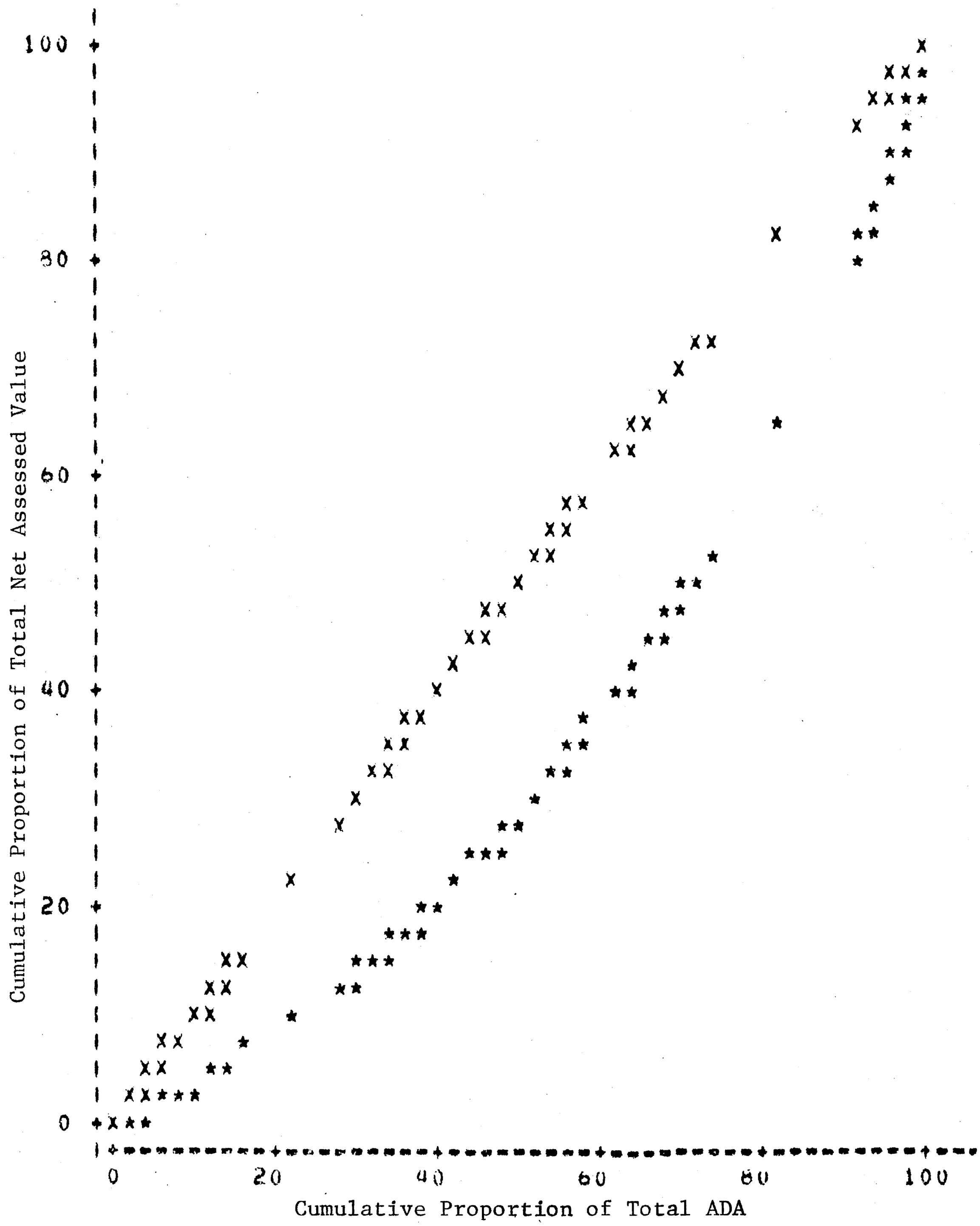

Figure 15. Lorenz Curve for the 1976-77 Distribution of Total Net Assessed Value with Commercial-Industrial and Residential Assessment Rate of 13.00% and Agricultural Assessment Rate of 7.00%

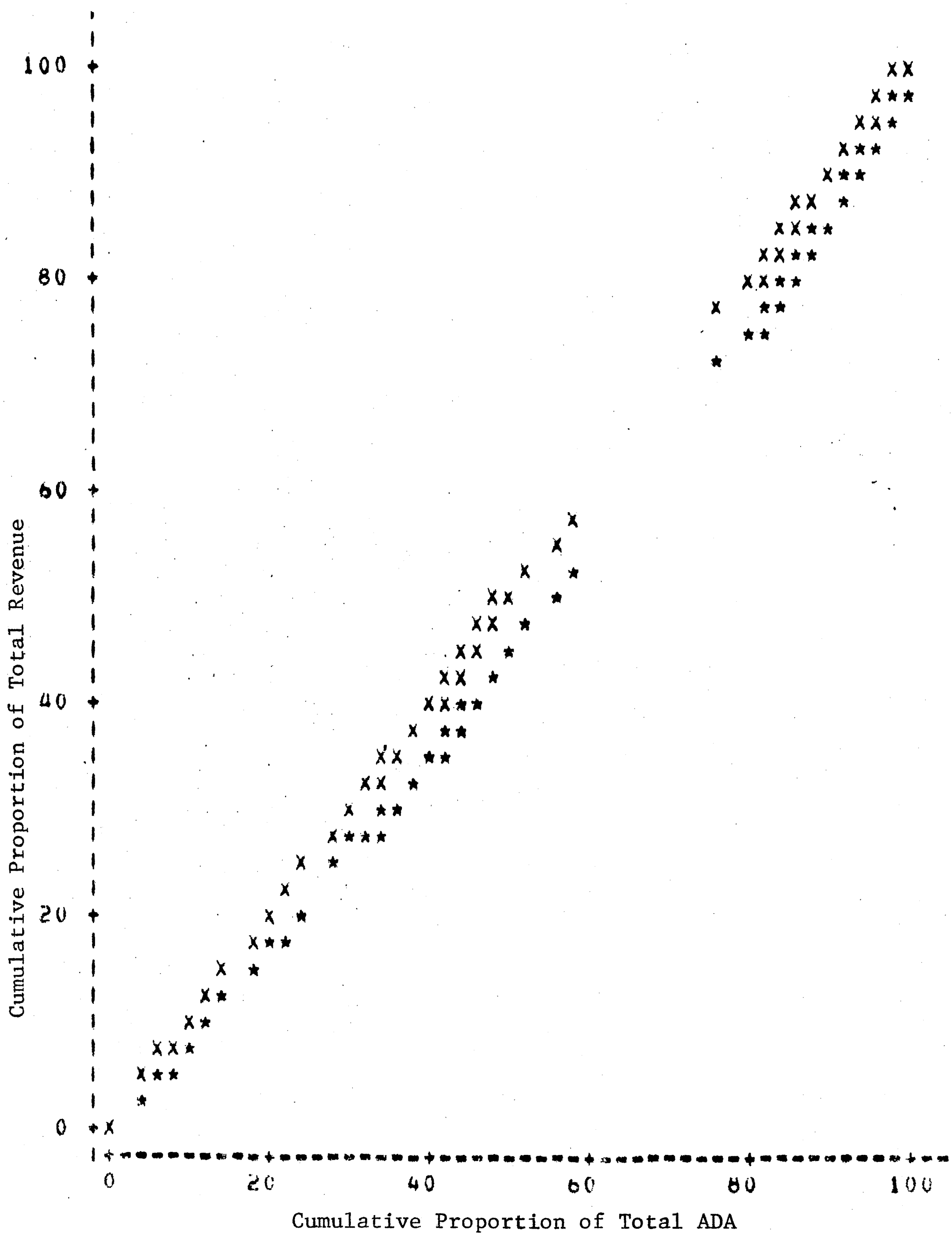

Figure 16. Lorenz Curve for the 1976-77 Distribution of Total Revenue

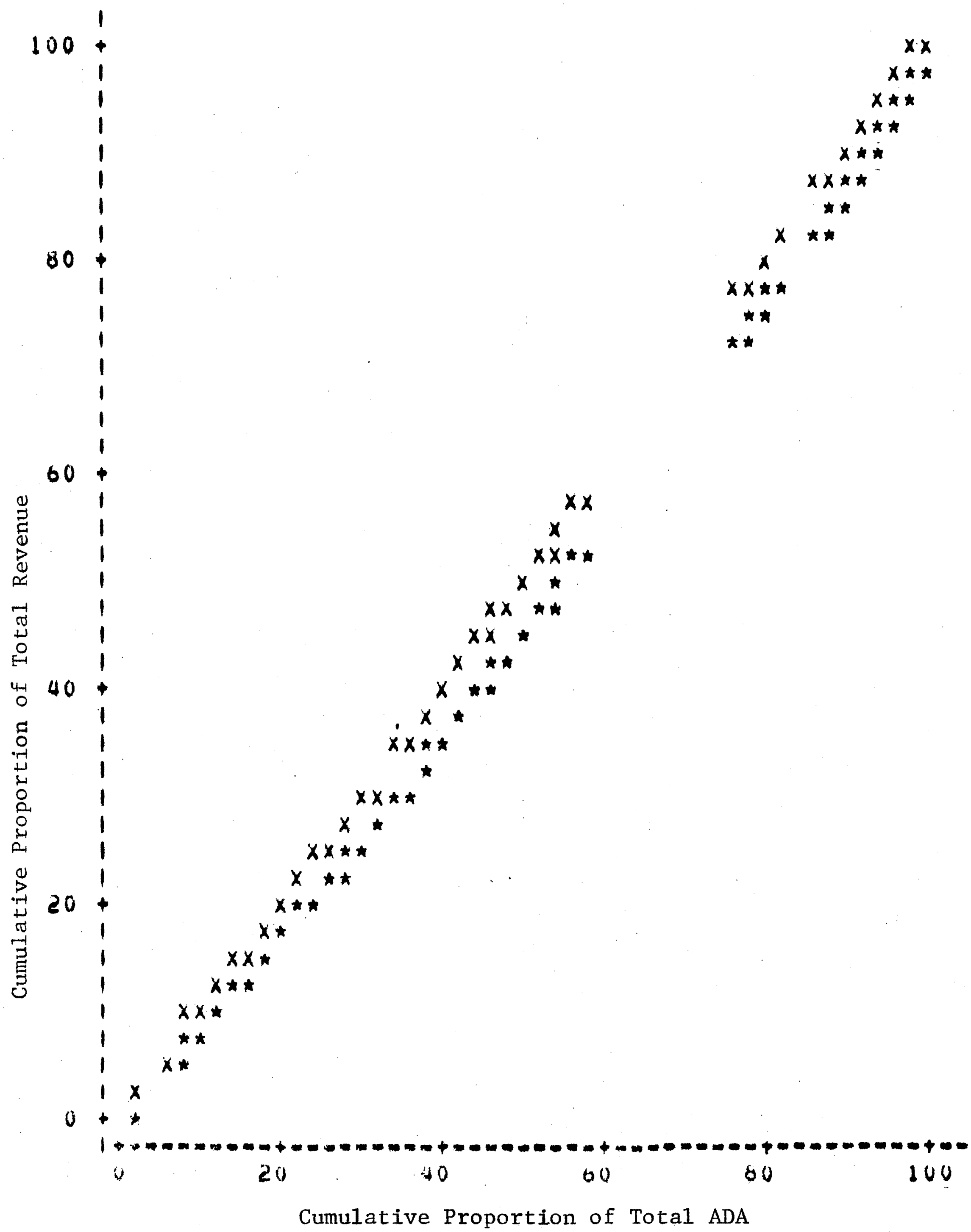

Figure 17. Lorenz Curve for the 1976-77 Distribution of Total Revenue with State Dedicated Revenues Per ADA Equalized

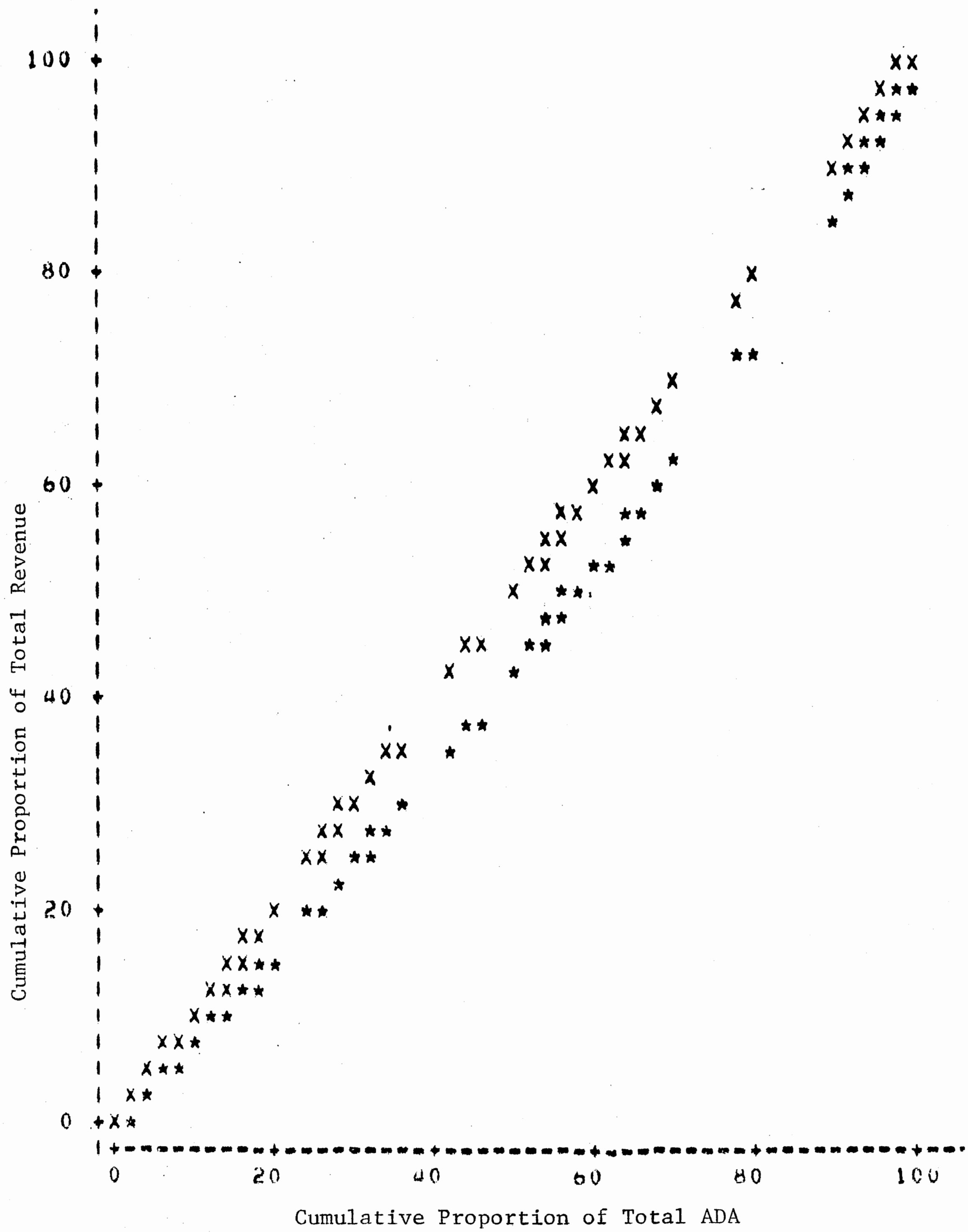

Figure 18. Lorenz Curve for the 1976-77 Distribution of Total Revenue with State Aid Per ADA Equalized

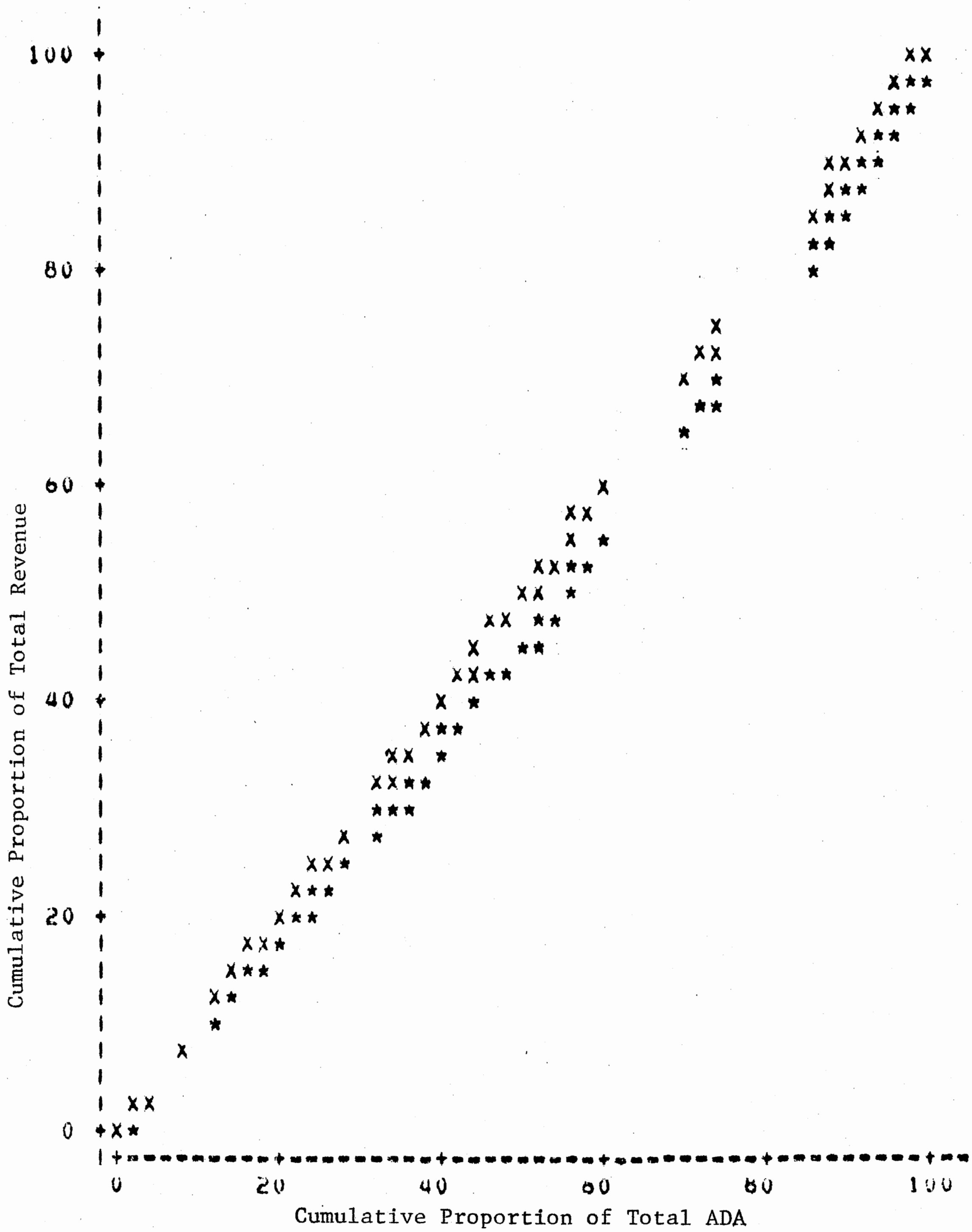

Figure 19. Lorenz Curve for the Distribution of Total Revenue Federal Aid Per ADA Equalized

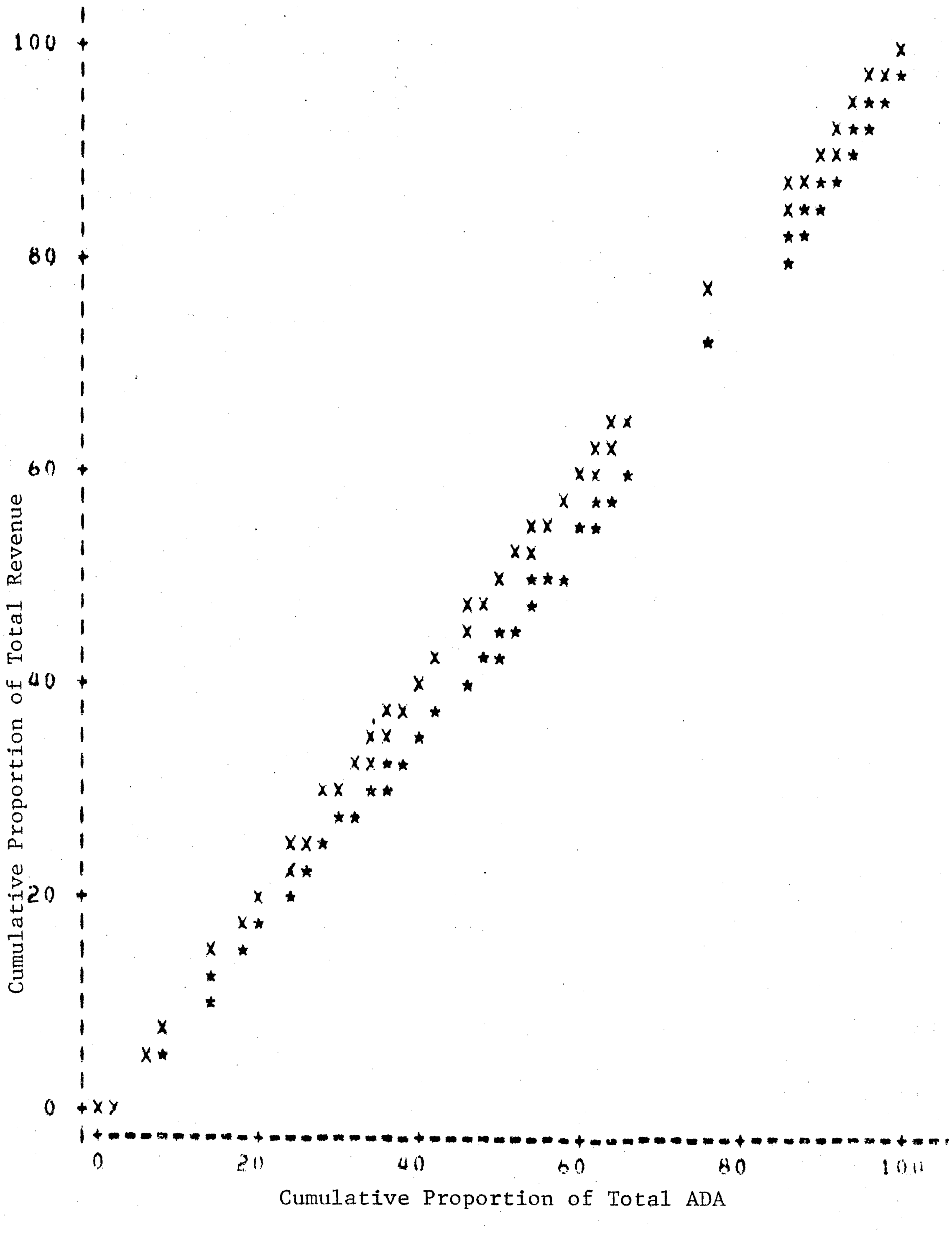

Figure 20. Lorenz Curve for the 1976-77 Distribution of Total Revenue with a State Average Millage Rate

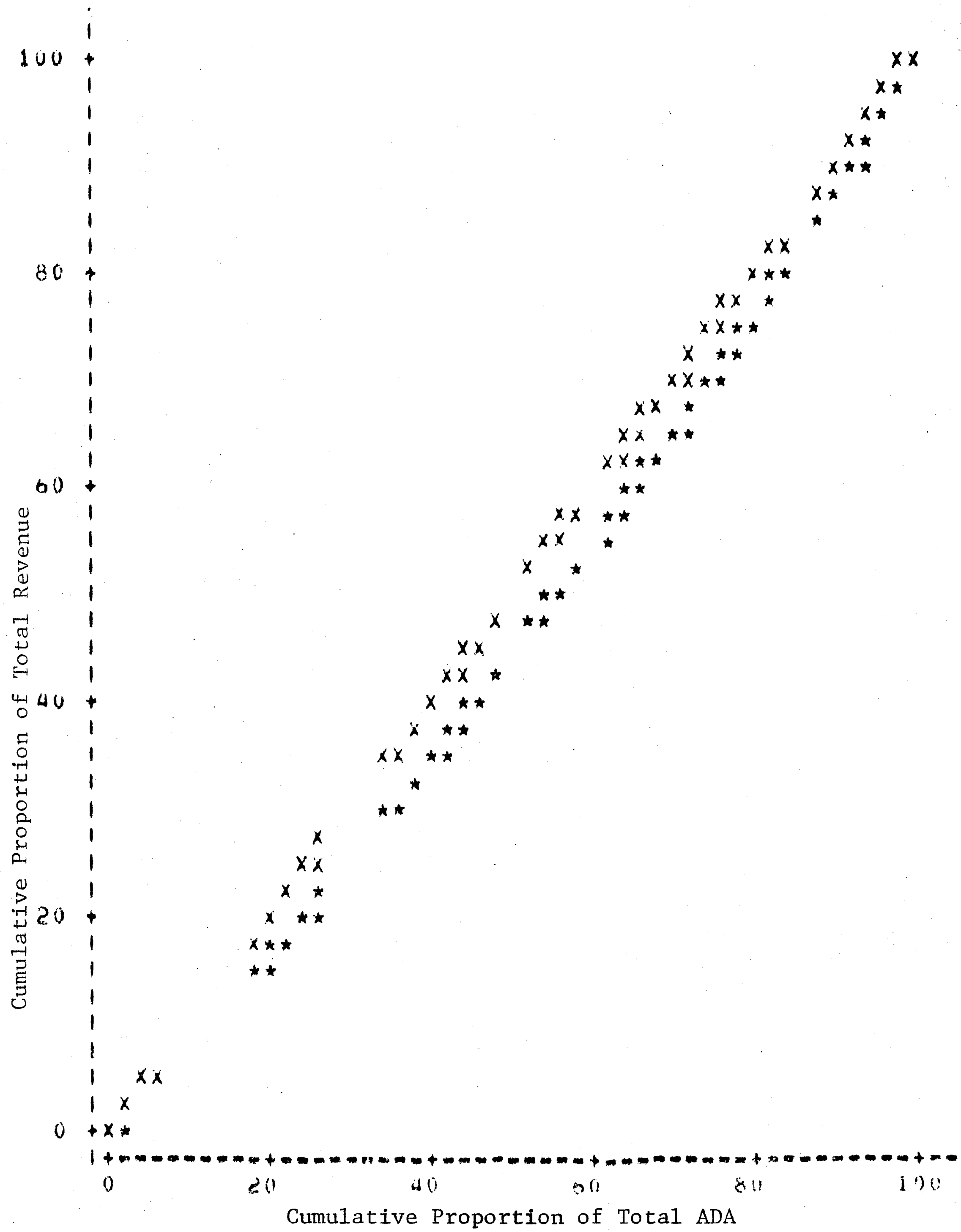

Figure 21. Lorenz Curve for the 1976-77 Distribution of Total Revenue with Local Revenues Per ADA Equalized

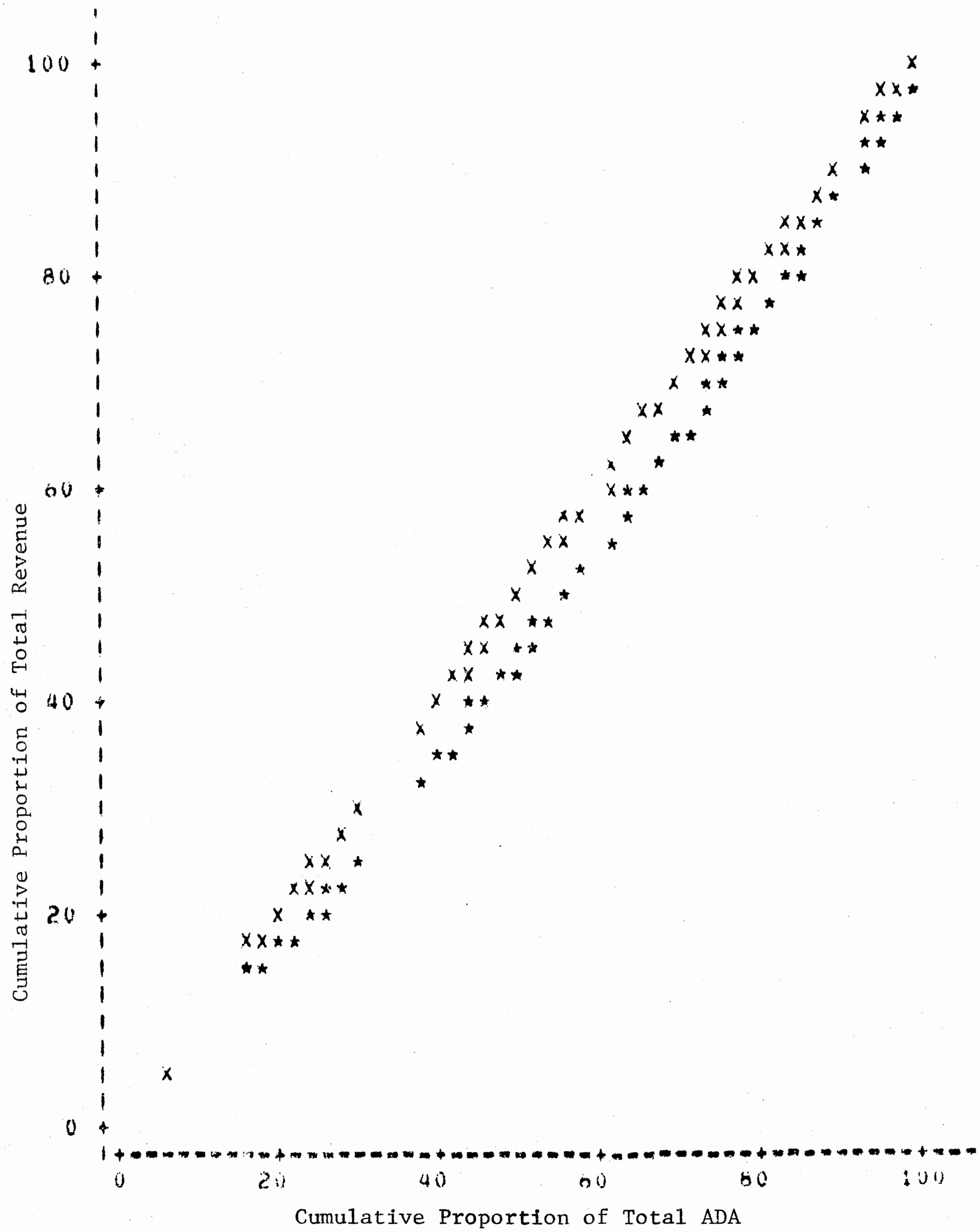

Figure 22. Lorenz Curve for the 1976-77 Distribution of Total Revenue with Local and State Dedicated Revenues Per ADA Equalized

VITA

Nona Roman French

Candidate for the Degree of

Master of Science

Thesis: AN ECONOMIC ANALYSIS OF FACTORS AFFECTING INEQUALITY OF EDUCATIONAL EXPENDITURES FOR OKLAHOMA COMMON SCHOOLS

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