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SECTION I

INTRODUCTION

In 1973, the Illinois General Assembly adopted a grant-in-aid formula as an alternative to the existing Strayer-Haig formula. Unlike the Strayer-Haig formula, which allocates state dollars to local school districts on the basis of district wealth as determined by assessed valuation per pupil, the Resource Equalizer formula allocates state effort as determined by the local operating tax rate.

The adoption of the Resource Equalizer formula was partially a result of the Serrano case in California, which challenged the existing system of financing public K-12 education based upon assessed valuation per pupil, a system similar in nature to the Strayer-Haig formula used in Illinois. The Resource Equalizer was designed and adopted in order to move the state system of financing public K-12 education toward the goals of fiscal neutrality and permissible variance.

There are, however, certain flaws in the actual implementation of the Resource Equalizer. The assessment of property for taxation must be on a uniform market value basis if the general state aid formulas are to operate as intended. The lack of uniformity in assessment practices and the

resulting effects on tax rates can unjustly reward one district and punish another. If one district's assessments are too high as compared with the assessments of other districts within a county, two elements in the state aid formula combine to unfairly reduce state aid. First, the high valuation causes the district to be treated as wealthier than others and so to be entitled to less state aid. Second, the high valuation district requires a lower tax rate, with the result that the district is credited with less "tax effort," and so in some cases still less state aid is received.(1)

To add to the complicated task of accurate assessment, market values of agricultural land have risen far more rapidly than has inflation. As a result the cost of the agricultural land as well as the property taxes have lost any reasonable relationship to current earning power.

In August 1977, the Illinois Agricultural Association stated that the biggest problem facing Illinois agriculture was escalating property taxes. From 1972 to 1976, inflation and the demand for farmland brought about land values which today are more than double those in 1972. Assessments based on 33-1/3 per cent of fair market value of $2,500 to $4,000 an acre will mean property taxes of $40 to $50 an acre by 1979.(2) This means that a farmer with a 400-acre farm could face an annual property tax bill of $16,000 to $20,000. This condition, together with the generally accepted notion that property taxes fall far more heavily upon agriculture

than does any other form of taxation, as well as the knowledge that at the level of federal taxation the total phenomenon has been recognized and dealt with by special valuation rules for estate taxes on farms, has led to the adoption of tax reform legislation at the state level.(3)

In August 1977, a new method of determining the assessed valuation of farmland for real estate purposes was adopted by the state legislature in Illinois in an attempt to compensate for this virulent situation.(4) The method was designed to bring moderation to these dramatic increases in the valuation of farmland which have occurred over the past few years. The method selected to achieve this goal was that of shifting the emphasis to the land productivity as a major determinant of farmland value for assessment purposes with market values playing a lesser role than under the previous method.

It should be emphasized that the "Farm Bill" is actually a tax reform and not specifically an educational finance reform. The reform will cut across the entire spectrum of government units which rely upon financial support from monies collected through the real estate tax. In Illinois this amounts to approximately 5,400 units of local government.(5) The "Farm Bill" will, however, have a great impact on the financing of K-12 public education for two major reasons: One, because of the strong reliance on the dollars obtained locally from the property tax; and two, as

a result of the relationship between the local operating tax rate and the dollars obtained from the state through the calculations of the resource equalizer. The fractional assessment at which local property is assessed, which in turn affects the total assessed valuation, has an effect on the local willingness and ability to exert effort as determined by the operating tax rate.

The "Farm Bill" affects only the land which is used in the production of crops. It does not include the farmer's house and related living areas. This portion of the farmer's real property will be assessed using the same method as all other non-farmland in the county and will be subject to the same multiplier that will be used throughout the county. Farmland will not be used in the computation of the multiplier nor subject to it.

The method of determining the valuation of farmland is computed in a formula composed of three parts.

1. Value of Agricultural Products Sold Per Acre. The U.S. Census reports the value of all agricultural products sold per acre for each county for each census year. These statistics are computed every five years and reflect both crop and livestock sales and the differences between counties in the portion of their total farm ground devoted to major crops.

2. Gross Value of Production Per Acre of Principal Crops. These statistics are published annually by the

Cooperative Crop Reporting Service, a cooperative service of the Illinois Department of Agriculture and the U.S. Department of Agriculture. Information is available on a county basis and reports the gross value of corn, soybeans, wheat, and hay produced per acre in each county. To compensate for possible variations from year to year because of the hazards of weather or crop prices, a three-year average is to be used. Because of the lag in the publication of these figures, the three-year figure for the 1977 assessment year for taxes payable in 1978 would be 1973, 1974, and 1975.

3. Sale Prices of Farmland. Sale price per acre would continue to be utilized, but to a lesser degree than under the previous method. Ten per cent of the average sales price per acre of land sold for agricultural use would be determined from Real Estate Transfer Declarations from the county assessor. If there are insufficient sales for agricultural purposes in a county, the average sales of the two closest comparable counties shall be used. The three years sales average to be used shall be for the same three years as used in the computation of product per acre as described in part 2.

The formula, then, is as follows:

Census = average value of agricultural products sold per acre--most recent census

CRS = Crop Reporting Service figures on average gross value of production per acre of principal crops--most recent three-year average

Sales = 10 per cent of the average value per acre of land sold for agricultural use--same three years as used in the CRS figures

$$\frac{\text{Census} + \text{CRS}}{2} + \text{Sales} = \text{Equalized Assessed Valuation for best grade land in the county}$$

Thus the equalized assessed value for the "best grade" farmland in the county can be computed provided a base line for the local assessor. Variation in farm values per acre for land other than that classified as "best grade" is to be determined by local assessing officials based upon its productivity using available soil maps, productivity indexes, and all other available data useful in such determination.

Note that in the formula two sources of land productivity are used. By this method of using a three-year average of gross values of major crops produced and averaging that figure with the census figure of the total value of farm products sold, which stays constant for a five-year period, stability is obtained and yearly variations are minimized.

Included in the new law is a "hold harmless" clause which provides that no unit of local government or school district shall have an equalized assessed valuation for farmland during the 1977 assessment year less than the equalized assessed valuation it had during the 1976 assessment year; except for property changes, deletions, depletions, and

additions in 1977. Complete implementation of the law was to have begun with the 1978 assessments, but the "hold harmless" has been extended by the General Assembly for an additional year subject to approval by the Governor.

It should be emphasized that the purpose of this new method of determining the value of farmland for real estate tax purposes is not to cause a major rollback in farm property taxes, but rather to moderate the dramatic increases that have occurred over the past few years. The "Farm Bill" provides a uniform method throughout the state to determine the assessed valuation of farmland. It should be noted that not all farmland will be assessed at the same value. Due to the many variations of farmland productivity and sales from county to county, different values will be determined. But because of this uniform method farmland will be exempt from the multiplier that is used on all non-farmland.

Purpose of the Study

In August 1977, the Illinois General Assembly enacted into law Public Act 80-247, commonly known as the "Farm Bill." This new law introduced to Illinois the practice of determining the assessed valuation of farmland on the basis of its productivity. To date there has been no formal analysis of the immediate effects or long-term implications of this new law. This new law is a tax reform designed to ease the growing tax burden on the farmland of the state. In

1. What are the effects of the "Farm Bill" on the school districts located in the various community types, consisting of varying degrees of urban land and nonurban land, as identified by the Queen and Carpenter Index of Urbanism?

2. What are the effects of the "Farm Bill" on the local contribution to K-12 public education?

3. What are the effects of the "Farm Bill" on the state contribution to K-12 public education?

4. What are the effects of the "Farm Bill" on the farming and non-farming sectors of a school district?

5. What are the effects of the "Farm Bill" on the ratio of local-state contributions to K-12 public education?

6. What is the mean change in the assessed valuation of the school districts in this study as a result of the implementation of the "Farm Bill?"

7. What is the percentage change in the assessed valuation of the school districts in this study as a result of the implementation of the "Farm Bill?"

8. What is the mean change in the state aid contribution to the school districts in this study as a result of the implementation of the "Farm Bill?"

9. What is the percentage change in the state aid contribution to the school districts in this study as a result of the implementation of the "Farm Bill?"

10. What is the mean change in the local contributions to the school districts in this study as a result of the implementation of the "Farm Bill?"

11. What is the percentage change in the local contributions to the school districts in this study as a result of the implementation of the "Farm Bill?"

12. What is the mean change in the sum total of local and state dollars received by the school districts in this study as a result of the implementation of the "Farm Bill?"

13. What is the percentage change in the sum total of local and state dollars received by the school districts in this study as a result of the implementation of the "Farm Bill?"

14. What is the effect of the "Farm Bill" on the principle of permissible variance?

15. What is the effect of the "Farm Bill" on the principle of fiscal or wealth neutrality?

Population

This study utilized data from 99 of the 102 counties in the state of Illinois. These counties were selected on the basis of the ability to acquire accurate and complete data. The counties are identified with respect to their degree of urbanism in Appendix A. The method used to classify the counties is shown on the Queen and Carpenter Index of

Urbanism and Worksheet shown in Appendix B, with the distribution of Index of Urbanism scores for the 102 Illinois counties shown in Appendix C.

The counties were divided into four groups on the basis of the Index of Urbanism scores. Group one consisted of twenty-three counties whose Index of Urbanism scores fell between .30 and 1.00. Group two consisted of twenty-five counties whose Index of Urbanism scores fell between .20 and .29. Group three consisted of thirty-five counties whose Index of Urbanism scores fell between .10 and .19. Group four consisted of nineteen counties whose Index of Urbanism scores fell between .00 and .09. Distribution of the 102 Illinois counties by group are shown in Appendix D.

Selection of the school districts to be included in the study was done on the basis of being able to acquire complete assessment data. School districts whose boundaries overlapped into two or more counties were included only when county data were acquired for all of the counties contributing to the assessments of the school district. Due to the lack of farmland in Cook County all school districts whose boundaries encompassed any portion of the county were excluded from the study.

Observation Design

Two simulated computations of school revenues for the 1977-78 school year were conducted. One simulation involved

the computation with the 1977 equalized assessed valuations, with the second using the 1977 adjusted equalized assessed valuations. Data for the 1977 equalized assessed valuation for an acre of "best grade" farmland by county was obtained from the Office of Financial Affairs, Department of Local Government Affairs. Data for the 1976 equalized assessed valuation for an acre of "best grade" farmland by county were obtained from the county supervisor of assessments. All other data used in the two simulations were obtained from the Illinois Office of Education. These data were from the 1977-78 school year.

Farmland Assessments in Other States

In addition to Illinois, there are presently seven other states which determine the assessed valuation of farmland either partially or totally on the basis of productivity. While it is beyond the scope of this study to describe in detail each of the systems, selected aspects from each of the seven states are identified to emphasize that the Illinois system is but one of many ways to deal with the assessments of farmland on the basis of productivity. There are characteristics common to all of the states. There are also aspects in some of the states that are unique to that state alone.

In addition to Illinois, the states which determine the assessed valuation of farmland either partially or

totally on the basis of productivity are Iowa, Kansas, Missouri, Nevada, Oregon, South Dakota, and Texas.

The determination of the assessed valuation of real property in the state of Nevada involves the practice of land classification. One such classification is that of "agricultural land." All agricultural land in Nevada is subclassified by the county assessor into one of nineteen categories. Assessment of the land for purposes of taxation is based on its subclassification.(7)

The proper subclassification and ultimate assessment of agricultural land is performed by the county assessor through the analysis of information from various sources. Typically, these sources of information about the land are the owners and managers of the land, agricultural extension agents, university agronomists, soil, line and topographical maps, as well as actual physical inspection of the land by qualified appraisers.(8)

In Nevada, the initial classification of land as agricultural is done through application by the land owner to the county assessor. Actual dollar amounts of assessments for each of the nineteen subclassifications are set by the Nevada Tax Commission, a power granted to them by the Nevada State Legislature.(9) Final assessments of the agricultural land by the Nevada Tax Commission are generally less than 35 per cent of the fair market value of the land. This system of assessment and taxation is advantageous to the land

classified as agricultural. All other land classifications are determined at a full 35 per cent of fair market value.(10)

The law in Missouri also provides for the classification of land. To qualify for classification as agricultural, land must have been used agriculturally for five years preceding the official application by the owner of the land to the county assessor for such a purpose. All agricultural land in Missouri is subclassified by the county assessor into one of seven categories. Subclassification of the agricultural land is performed typically on the basis of information such as: soil survey data; economic factors; parity ratios from research provided by the College of Agriculture, University of Missouri; and the recommendations regarding the relative productive value of land as determined by the Missouri State Tax Commission.(11) Productivity ratings are assigned to each of the seven soil grade categories. This provides the base by which the Missouri State Tax Commission determines the actual assessed valuation for each of the seven categories.(12)

South Dakota has a system whereby all property is classified as either agricultural or nonagricultural. To qualify for classification as agricultural, the land must have been used exclusively for agricultural purposes for the five years preceding the year in which it is being assessed. Land being held for resale by either wholesale or retail

dealers may not qualify for agricultural classification regardless of its actual use during the assessment year.(13)

The actual determination of the assessed value of agricultural land in South Dakota is based upon consideration by the county assessor of the following factors: a ten-year average of land production; soil, terrain, and topographical condition of the land; current fair market value; location of the land; and other such factors as deemed applicable by the local assessing official.(14)

In application of the above criteria, South Dakota has developed and is using a method of valuing agricultural land based on its capacity to produce agricultural products as well as actual sales of the agricultural land.(15) Basic to this method is a highly developed set of soil maps for much of the state. Some of the factors considered in the determination of land quality in addition to soil quality are climate, terrain, and topographical conditions of the land. This method of determination leads to as many as 40 to 70 separate soil classifications delineated on soil maps for each of the counties where the system has been fully developed.(16)

In Oregon, the assessed valuation of farmland, referred to as the "Farm Use Value," is determined by five figures which are determined from the estimated costs of accepted farm practices based upon typical yield, commodity prices, rents, and expenses in a typical area. On the basis

of this information, the Oregon State Department of Revenue determines the tax code rates for the various subclassifications of farmland. The tax code rate information is then supplied to the county assessors who in turn apply the tax code rates to the various qualities of agricultural land in their counties.

Iowa law provides for the determination of the assessed valuation of farmland on the basis of both market value and productivity. Market value is determined through an analysis of sales ratios for various categories of agricultural land. The market value of agricultural land is given equal weight with the productivity value in the determination of the assessed valuation of farmland.(17)

The other 50 per cent weight in determination of the assessed valuation of agricultural property is that of productivity as measured by the earning capacity of the land. The earning capacity of Iowa farmland is based upon the net income derived from the land. Calculation of the net income is based upon the subtraction of production expenses from the gross income derived from the land.(18) All calculations of farmland productivity are based upon a base figure as calculated from a five-year average of forty-acre tracts of farmland which are in turn classified by crop produced and soil type. Variations from the base figure are then determined by the local assessor.(19)

In 1966, the Texas State Constitution was amended, allowing agricultural land to be valued on the basis of productivity. This amendment provided an exception for farmland to the existing law that all property be taxed at market value.(20)

In order to qualify for classification as agricultural land in Texas, the following conditions must be met: all land must be owned by natural persons and be used as an agricultural business venture for profit; application for agricultural classification of land must be made annually in the form of a written sworn statement, to the local assessor, describing the use to which the land is devoted; inspection of the land by the local assessor is to be allowed if requested; submission of evidence required in the determination of the actual use of the land is to be provided to the local assessor upon request; the land must have been used for agricultural purposes for three successive years immediately preceding the assessment year and agricultural business must be the primary occupation and source of income of the owner.(21)

As stated by Charles Whitford, an Economist-Appraiser for the Office of Comptroller for the state of Texas, factors creating value of farmland have far outdistanced the production value of the land. Inflation is probably the major culprit. Higher and better uses, supply and demand, consumption usage, financial influences, and many other

interrelated forces have joined in various degrees to escalate sale prices above agricultural use-values.(22)

The actual calculation of the assessed valuation of farmland in Texas is based on a five-year average of land productivity.(23) Productivity ratings are calculated for each of eight basic categories of agricultural land as determined by the use of the land.(24)

The term used in Texas to refer to the measurement and ultimate taxation of land on the basis of productivity is "agricultural use-value." This represents the net income return on the land after the deduction of production expenses. The application of the income approach in this case assumes that because agricultural lands are utilized to produce income, then logically the value of the productive land would be reflected by the value of the income produced.(25)

Kansas has also joined the ranks of those states which determine the assessed valuation of agricultural land on the basis of productivity. Kansas law provides for the subclassification of agriculturally classified land based upon eight-year averages of production figures. Information used in the determination of the subclassification of the land is obtained from the state and federal crop reporting services and the soil conservation services, as well as any other available sources of data that the director of property valuation considers appropriate.(26)

In 1977, Flinchbaugh conducted a study of the effects of the valuation of farmland on the basis of productivity, referred to in Kansas as "Use Value Appraisal of Agricultural Land," and its effects on state aid to education. Flinchbaugh concluded that in Kansas, where the state aid to education is based on a form of "District Power Equalization," the valuation system would require additional state aid dollars to education over the other method of determining the assessed valuation of farmland. The new valuation system would have basically no effect on state aid to school districts with little or no agricultural land. It would increase state aid to those school districts that have a relatively large amount of agricultural land.(27)

SECTION II

PRESENTATION AND INTERPRETATION OF THE DATA

In this section, the data are presented and interpreted. The data were collected from 99 of the 102 Illinois counties. The counties not included in the study were Cook, Hardin, and Jefferson. Cook county was not included because of the lack of farmland in the county. Hardin and Jefferson counties were not included because of the lack of availability of appropriate data.

A total of 784 school districts was included in the study. Of the 784 school districts, 394 were unit, 91 were high school, and 299 were elementary school districts. All data were analyzed by district type. School districts existing in the 99 counties but not included in the study were excluded because of the lack of availability of appropriate data. The counties included in the study are listed in Appendix E in alphabetical order.

Statement of the Problem

The problem of this study was to determine through simulation the effects of Illinois Public Act 80-247, commonly referred to as the "Farm Bill," on the local and state contributions to K-12 public education.

Statistical Treatment of the Data

Since the class of inquiry was a study, internal validity was a major concern. The findings were not generalized to any other population. Therefore, descriptive statistics were considered appropriate for the study. All data were examined from two bases: tax base and revenue raised.

The effects of the "Farm Bill" on the two bases were reported in terms of range of changes, mean changes, and percentage of assessed valuation attributed to farmland and each of the two data bases.

In the determination of equity the criteria of permissible variance and fiscal neutrality were used. The criterion of permissible variance requires a narrowing of the variation of school revenue per educational need unit, which in Illinois is the TWADA (Title I weighted average daily attendance) among the school districts of the state. The criterion of fiscal or wealth neutrality calls for the reduction of dependence of school revenue per weighted student upon district wealth.

In this study, two measures were used to operationalize the criterion of permissible variance: the coefficient of variation and the McLoone Index. The coefficient of variation is the standard deviation divided by the mean and multiplied by one hundred:(28)

$$\text{Coefficient of Variation} = \frac{\text{Standard Deviation}}{\text{Mean}} \times 100$$

The application of the coefficient of variation is that the smaller the value, the closer the approach toward the criterion of permissible variance.

The McLoone Index is an equity measure which examines the variation of revenue distribution below the median. The purpose of the index is to provide more money to the school districts receiving revenue below the median in order to move those districts closer to the median position.(29) The McLoone Index is the total revenue below the median divided by the sum of the total revenue below the median and the total deviation from the median:

$$\text{McLoone Index} = \frac{\text{Total Revenue Below the Median}}{\text{Total Revenue Below the Median} + \text{Total Deviation from the Median}}$$

The application of the McLoone Index is that the larger the fraction, the closer the approach toward the criterion of permissible variance.

Equity was also defined in terms of fiscal or wealth neutrality. To operationalize the criterion of fiscal neutrality a simple unweighted regression analysis was used. The unweighted regression uses the school district as the unit of analysis, thereby giving each district equal weight in the calculations regardless of the student enrollment.

The regression analysis was used to measure the relationships between the school district wealth before and after

implementation of the "Farm Bill" and the resulting changes in revenue received. Results of the regression analysis were reported in the form of coefficients of determination, R^2, and Beta values. The R^2 may vary from zero to one with zero implying no explained variation and one implying all the variation of the dependent variable explained. The Beta values are standardized regression coefficients.(30)

The application of the Beta value is that the smaller the value the closer the approach toward the criterion of fiscal or wealth neutrality.

Research Findings

The changes in the assessed valuations of school districts as a result of the "Farm Bill" resulted in a dual effect on the concept of equity. The first effect was the change in the local revenue collected, with the local revenue being a function of the tax rate and the assessed valuation. The second effect was the change in the wealth of the district. With the wealth of the school district being a factor in the calculation of state aid a change in the wealth then results in a change in the amount of state aid received. This section presents a detailed description of the results of the simulations of the state and local contributions to K-12 education in Illinois as a result of implementing the "Farm Bill."

Range, Mean, and Percentage Changes

Queen and Carpenter Index. The changes in the assessed valuations for an acre of "best grade" farmland by county as classified by the Queen and Carpenter Index of Urbanism are displayed in Table 1. Each of the classifications of the index have a greater number of counties with a loss in the assessed valuation than with a gain. Totals show that nineteen of the counties gained in the assessed valuation of an acre of "best grade" farmland with a mean gain of $33.47 per acre. Eighty counties lost assessed valuation with a mean loss of $73.69 per acre.

Percentage of Farmland. The changes in the percentages of the assessed valuations attributed to farmland are shown in Table 2. Prior to implementation of the "Farm Bill" elementary districts had a mean of 47.25 per cent of the assessed valuation which could be attributed to farmland, while after implementation the mean was 45.23 per cent. This represents a change in the mean of -2.02 per cent and a percentage change in the mean of -4.28 per cent that can be attributed to the "Farm Bill." High school districts had a mean of 47.86 per cent of the assessed valuation attributed to farmland prior to the "Farm Bill," with a mean of 45.57 per cent after. This was a change in the mean of -2.29 per cent and a percentage change in the mean of -4.78 per cent. Unit districts had a mean of 59.82 per cent of the assessed

valuation attributed to farmland before implementation of the "Farm Bill," with a mean of 56.57 per cent after implementation. This was a change in the mean of -3.28 per cent and a percentage change in the mean of -5.48 per cent. All three of the district types showed a decline in the mean percentage of the assessed valuation that was attributed to farmland. Unit districts had the largest decline, with the elementary districts having the least decline of the three district types.

Change in Wealth. The changes in the wealth of the school districts, with the wealth being represented by the assessed valuation per weighted student, are presented in Table 3. The elementary districts had a mean wealth of $44,447 prior to the "Farm Bill." After the implementation of the "Farm Bill" the mean wealth changed to $41,497. This represents a change in the mean of -$2,950 and a percentage change in the mean of -6.64 per cent. High school districts began with a mean wealth measurement of $64,657 and ended with a mean measurement of $60,364. This was a change in the mean of -$4,293 and a percentage change in the mean of -6.64 per cent. Unit districts began with a mean wealth value of $25,046 and ended with a mean value of $22,590. This was a change in the mean of -$2,456 and a percentage change in the mean of -9.80 per cent. All three district types ended with a lower mean wealth value. Unit districts had the largest percentage decrease with high school districts

having the largest change in the mean, which is represented in Table 3 in terms of dollars per weighted student.

District Changes. Displayed in Table 4 are the number of school districts gaining, losing, and remaining constant in total state and local revenue per TWADA. Of the 299 elementary school districts, twelve gained, 154 lost, and 133 remained constant in total revenue per TWADA. Out of the ninety-one high school districts thirteen gained, seventy-eight lost, and none remained constant in revenue per TWADA. From the 394 unit districts, twenty gained, 196 lost, and 178 remained the same.

A school district gaining in total revenue per TWADA can be accounted for by its location in a county where the assessed valuation for an acre of "best grade" farmland was increased by the "Farm Bill."

A school district in which revenue per TWADA remained constant can be explained in one of two ways. One, implementation of the "Farm Bill" caused no change in the assessed valuation for an acre of "best grade" farmland for the county in which the school district was located. Or two, the loss in the assessed valuation of school district which in turn resulted in less local revenue was compensated for by the state aid contribution through the state aid calculations of the resource equalizer formula. For this to occur, the loss of revenue at the local level would have to be such that the

additional state dollars needed would fall within the 25 per cent increase limitation of the grant-in-aid formula.

A school district which lost total revenue per TWADA can be explained in one of three ways. One, the district was receiving state aid on the Strayer-Haig portion of the state grant-in-aid system. Two, the district was receiving state aid on the resource equalizer portion of the state grant-in-aid system, but was taxing above the maximum. Or three, the district lost more local revenue than can be compensated for with the current 25 per cent increase limitation over the state aid of the previous school year.

State Aid Per TWADA. The changes in the state aid per TWADA are displayed in Table 5. The mean state aid per weighted student in elementary districts before implementation of the "Farm Bill" was $458.34, while after its implementation the figure rises to $468.42. This is a change in the mean of $10.08 with a percentage change in the mean of 2.20 per cent. The figures for high school districts show the mean state aid per TWADA to be $434.49 before and $437.16 after implementation of the "Farm Bill." This is a change in the mean of $2.67 and a percentage change in the mean of .61 per cent. Unit districts also show an increase of state aid per TWADA. With unit districts the figures are $474.14 before and $497.45 after implementation of the "Farm Bill." Unit districts had the largest change in the mean and the largest percentage change of the three district types, with

$23.31 and 4.92 per cent respectively.

Local Revenue Per TWADA. Displayed in Table 6 are the changes in local revenue per TWADA. All three district types showed a decrease in the mean revenue per student. Elementary districts declined from $685.79 before the "Farm Bill" to $644.34. This represents a change in the mean of -$41.45 and a percentage decrease of -6.04 per cent. High school districts declined from $952.21 to $891.66. The change in the mean of -$60.54 is the largest change of the three district types. The percentage change for high school districts is -5.99 per cent. The mean local revenue per student for unit districts declined from $628.48 before the "Farm Bill" to $569.60 after. This is a mean decrease of -$58.88 and a percentage change of -9.37 per cent, which is the largest percentage decrease of the three district types.

State Aid Plus Local Revenue Per TWADA. The changes in the state aid plus local revenue per TWADA are presented in Table 7. For elementary districts the mean total per weighted student before implementation of the "Farm Bill" was $1,144.12, with the mean decreasing to $1,112.76 after the "Farm Bill" was implemented. There was a change in the mean of -$31.36 and a percentage change in the mean of -2.74 per cent for elementary districts. High school districts had the biggest overall changes as a result of the "Farm Bill." The mean total declined from $1,386.70 to $1,328.82

after the "Farm Bill" was implemented. The change in the mean for the high school districts was -$57.88 with a percentage change in the mean of -4.17 per cent. Unit districts decreased from $1,102.62 to $1,067.04 as a result of the "Farm Bill." The change in the mean of -$35.58 and the percentage change in the mean was a -3.23 per cent.

A shifting of the task of financing schools from the local to the state level as a result of the implementation of the "Farm Bill" is displayed in Tables 5, 6, and 7. However, because of the limitations of the current funding system in Illinois, it is not possible for all of the school districts to indemnify from state aid that which was lost in local revenue as a result of the decreased assessed valuations.

Permissible Variance Criterion

The criterion of permissible variance employed two statistical methods to measure the equity effects of the "Farm Bill." The first method was the coefficient of variation which focuses on the entire distribution. The second method was the McLoone Index which measures the distributions below the median. The results of the computations were reported for both before and after implementation of the "Farm Bill."

Coefficient of Variation. Coefficients of variation were computed for the district wealth, state aid, local

revenue, and state aid plus local revenue for elementary, high school, and unit school districts. Results of the computations are presented in Tables 8, 9, and 10 respectively.

Displayed in Table 8 are the coefficients of variation for the elementary districts. Coefficient values for district wealth increased from 105.65517 to 106.67759. State aid values decreased from 57.69251 to 56.77234. Local revenue also decreased from 67.54963 to 67.33169. Values for state aid plus local revenue were 27.83124 before implementation of the "Farm Bill" and decreased to 26.93004 afterwards. The combined state aid plus local revenue showed a slight movement toward the goal of permissible variance.

The coefficients of variation for district wealth, state aid, local revenue, and state aid plus local revenue for high school districts before and after implementation of the "Farm Bill" are displayed in Table 9. The coefficient values for district wealth decreased from 47.24159 to 46.03074. State aid values decreased from 54.54106 to 53.96160 as did local revenue from 39.78924 to 39.76358. State aid plus local revenue showed a movement toward the criterion of permissible variance with coefficient values of 16.36910 before and 16.19643 after implementation of the "Farm Bill."

Results of the calculations of the coefficients of variation for unit school districts are displayed in Table 10. District wealth declined from 48.90601 to 48.57901. State aid showed a decline from 48.51066 to 45.95897. Local revenue increased slightly from 44.82868 to 45.64541. The values for state aid plus local revenue increased from 13.98138 to 14.47223. This increase in the index values for state aid plus local revenue shows a movement away from the criterion of permissible variance.

McLoone Index. Results of the McLoone Index for each of the three school district types are reported in Table 11. The index value for elementary school districts before the "Farm Bill" was .8841 with .8950 afterwards. This represents a slight movement toward equity. High school districts showed a movement away from equity with values of .9170 before and .9128 after the "Farm Bill" was implemented. Unit districts with values of .9059 before and .9052 after also indicated a movement away from equity.

Fiscal Neutrality Criterion

Regression Analysis. The regression analysis was employed to determine the effects of the "Farm Bill" on the criterion of fiscal neutrality. Results of the regression were reported in the form of Beta values and coefficients of determination, R^2. Two wealth measurements, assessed valuation per TWADA before and after implementation of the

"Farm Bill," were used separately as independent variables. State aid, local revenue, and state aid plus local revenue were used as the dependent variables.

The Beta values indicate the degree of revenue equity. The smaller the positive Beta values, the closer the approach toward the criterion of fiscal neutrality. The negative signs of the state aid Beta values indicate a relationship between district wealth and state aid in which less state aid is received as the wealth of a school district increases. The positive signs of the local revenue and state aid plus local revenue indicate a relationship of increased dollars as the wealth of a school district increases.

The results of the regression analysis for the elementary school districts representing the distribution of funds with respect to wealth are shown in Table 15. The Beta values for all three of the dependent variables decreased after implementation of the "Farm Bill" when compared to the wealth measurement before the "Farm Bill" was implemented. Beta values for state aid decreased from -0.60076 to -0.58348. Local revenue decreased from 0.88085 to 0.87276. The Beta values for state aid plus local revenue declined from 0.78258 to 0.74574. The figures in Table 15 imply that the adoption of the "Farm Bill" had some equalizing effects causing some progress toward the criterion of fiscal neutrality.

The Beta values computed for the high school districts are listed in Table 13. State aid Beta values show only a slight decline from -0.81576 to -0.81521. Local revenue had a decline from 0.89010 to 0.88740. The Beta values for state aid plus local revenue decreased from 0.63404 to 0.56837 indicating an overall movement toward fiscal neutrality after the inclusion of the "Farm Bill" in the determination of the wealth of a school district.

The results of the regression analysis for unit school districts are displayed in Table 14. As with the elementary and high school districts, unit districts showed a slight but significant movement toward the criterion of fiscal neutrality. Beta values for state aid declined from -0.86852 to -0.85546 with local revenue dropping from 0.91461 to 0.91064, also a slight movement. Beta values for state aid plus local revenue dropped from 0.37577 to 0.26671. However, in this case the Beta values must be interpreted with some caution, as the values of R^2 for the two Beta values are 0.14120 and 0.07113 respectively. This represents a relatively weak relationship between the variables of the regression analysis which became even weaker after the implementation of the "Farm Bill."

SECTION III

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study was designed to determine the effects of Illinois Public Act 80-247, commonly referred to as the "Farm Bill," on the funding of K-12 public education. The "Farm Bill" introduced to Illinois a new method of determining the assessed valuation of farmland for real estate purposes. The method was designed to bring moderation to the dramatic increases in the assessed valuation of farmland which have occurred over the past few years.

To achieve this goal of limiting the rate of increase in the assessed valuation of farmland, the past emphasis on the fair market value as the sole determinate of the assessed valuation of farmland was dropped. The new method included productivity of the land as well as the fair market value in the determination of the assessed valuation.

Included in the new method was a "hold harmless" clause which provided that no unit of local government or school district shall have an equalized assessed valuation for farmland during the 1977 assessment year less than the equalized assessed valuation it had during the 1976 assessment year. As the new law included the "hold harmless" for just the 1977 assessments with no guarantee of an extension

of the "hold harmless," it was a major concern of this study to determine the effects of the "Farm Bill" without the inclusion of the "hold harmless" for the 1977 assessments.

While this study examined the effects of the "Farm Bill" with respect to the funding of K-12 public education, it should be noted that the "Farm Bill" was actually a tax reform. Its purpose was to aid farmers with the escalating real estate tax that would, if not slowed down, threaten to overburden some farmers to the point of driving some out of the farming business. Because it was a tax reform and not specifically a school finance reform, the effects of the "Farm Bill" are sure to cut across the entire spectrum of government units which rely upon revenue collected through the real estate tax.

Emphasis of the "Farm Bill" was to provide relief from the current rate of tax increases on the land used by the farmer to raise crops. The "Farm Bill" formula does not include the non-farming portion such as the house and related living areas. This portion of the farmer's real property will be assessed using the same method as all other non-farm property. It should also be noted that the "Farm Bill" does not provide for a major rollback in farm property taxes.

In spite of the fact that the "Farm Bill" was a tax reform and not a school finance reform, because of the relationship between property valuation and the funding of public

schools it had the potential of a major impact on the funding of the Illinois K-12 public educational system. The analysis and interpretation of the data from the study on the "Farm Bill" yielded findings which are summarized in the remainder of this section.

Problem of the Study

The problem of this study was to simulate an analysis of the 1977-78 school year along with 1977 assessments and adjusted assessments to determine the estimated effects of the "Farm Bill" on the state and local contributions to K-12 public education in Illinois. The study was designed to provide an accurate estimation of the effects of the "Farm Bill" based on accepted research techniques. A summary of the data yields results which would be of concern to those interested in the effects of such farm-related legislation on the funding of schools.

Procedure

The population of this study consisted of 784 Illinois school districts from 99 counties. Of the 784 school districts, 394 were unit, 91 were high school, and 299 were elementary school districts. All data were analyzed by district type.

The determination of the possible effects of the "Farm Bill" on the local and state contributions to K-12 public

education in Illinois was done through two computations of local revenue and state aid for each of the school districts. Variations in the two computations were the two wealth measurements as determined by the implementation of the "Farm Bill." Except for the different wealth specification, all other factors contributing to the calculation of the local revenue and state aid remained the same.

The estimates of school revenue derived from the simulations were exposed to tests of equity. The goal of equity was measured with respect to the criteria of permissible variance and fiscal or wealth neutrality. Permissible variance requires a narrowing of the variation of school revenue per weighted student among the school districts of the state. Fiscal neutrality calls for the reduction of dependence of school revenue per weighted student upon district wealth.

Two statistical procedures were employed to operationalize the criterion of permissible variance: the coefficient of variation and the McLoone Index. A simple unweighted regression analysis was used to operationalize the criterion of fiscal neutrality. Results of the regression were reported in the form of coefficients of determination, R^2, and Beta values. Calculations were made for each of the school district types: elementary, high school, and unit.

Summary of the Findings

The results of the calculations based upon the measurements of the assessed valuations before and after implementation of the "Farm Bill" are as follows.

Range, Mean, and Percentage Changes

The changes in the assessed valuation for an acre of "best grade" farmland by county as classified by the Queen and Carpenter Index of Urbanism show a greater number of counties with a loss than with a gain for each of the index classifications. Totals show only nineteen counties gained in the assessed valuation for an acre of "best grade" land with an average gain of $33.47 per acre with eighty counties losing an average of $73.69 per acre.

Measurement of the changes in the percentages of assessed valuations attributed to farmland for each of the school districts showed an overall decline. The largest decline was found in the unit districts, followed by the high school districts, with the smallest decline in the elementary districts.

Analysis of the data with respect to the number of elementary and unit school districts which experienced changes in the total state and local revenue per TWADA indicates the largest portion, from each of the two district types, to have lost revenue. The second largest phenomenon was that of districts experiencing no change, with the

smallest portion representing school districts which gained revenue.

High school districts showed a different pattern. The largest portion of the high school districts lost in total state plus local revenue per TWADA. The smaller portion of high school districts experienced an increase with none of the high school districts remaining the same.

A school district gaining in total revenue per TWADA can be accounted for by its location in a county where the assessed valuation for an acre of "best grade" farmland for the county in which the school district was located. Or two, the loss in the assessed valuation of the school district, which in turn resulted in less total revenue, was compensated for by the state aid contribution through the state aid calculations of the resource equalizer formula.

A school district which experienced a loss of total state and local revenue per TWADA can be explained in one of three ways. One, the district was receiving state aid on the Strayer-Haig portion of the state grant-in-aid system. Two, the district was receiving state aid on the resource equalizer portion of the state grant-in-aid system, but was taxing above the maximum. Or three, the district lost more local revenue than can be compensated for with the current 25 per cent increase limitation over the state aid of the previous school year.

Changes in the mean state aid per TWADA show an overall increase for each of the three district types. The largest increase took place in the unit districts, followed by the elementary districts. The smallest increase was in the high school districts.

Changes in the mean local revenue per TWADA show an overall decrease for all three district types. The largest percentage decrease was in the unit districts with the largest dollar amount decrease in the high school districts. Elementary schools showed the smallest amount of decrease in both dollars and per cent.

Changes in the combined state aid plus local revenue per TWADA declined for all three district types. High school districts experienced the largest decline followed by the unit districts. Elementary districts experienced the smallest decline.

Permissible Variance Criterion

The permissible variance criterion was analyzed through the use of two statistical tests. The coefficient of variation examined the total variation of the revenue per weighted student and the McLoone Index focused only on that part of the distribution below the median.

As indicated by the coefficients of variation for the combined state aid plus local revenue, implementation of the "Farm Bill" caused a slight movement toward the criterion of

permissible variance for elementary school districts. High school districts as well showed a slight movement toward the criterion of permissible variance, with unit districts showing a slight movement away from the criterion of permissible variance.

Analysis of the values of the McLoone Index for the combined state aid plus local revenue indicates that elementary school districts had a slight movement toward equity. The changes for the index values for both high school and unit districts would indicate a slight movement in the direction away from the goal of equity.

Fiscal Neutrality Criterion

The criterion of fiscal or wealth neutrality was measured through a regression analysis. Results were reported in the form for coefficients of determination, R^2, and Beta values. The smaller the Beta values, the closer the approach toward the criterion of fiscal neutrality. Results of the regression analysis were interpreted as showing a slight movement toward the criterion of fiscal neutrality for each of the school district types.

Results of the statistical analysis of the effects of the "Farm Bill" on the funding of K-12 public education showed a slight but general movement toward a more equitable state of affairs. Even in the instances where the statistical measurements indicated a movement away from the

criterion of permissible variance, the movement was only slight. The results of the analysis for the criterion of permissible variance are summarized in Table 15. The table represents a general summary of slight but general movements based upon the statistical tests.

Selected Examples of Local Districts

Results of the statistical analysis of the effects of the "Farm Bill" on K-12 public education emphasize the general state of affairs with respect to the state goal of equity among the districts of the state. However, when there is a reduction in the variation of the overall expenditures with the reduction being caused by a general loss of revenue at the local level which is not totally compensated for through state aid, then the achievement of the more equitable state comes at the price of a general financial hardship to many of the local school districts. The effects of the "Farm Bill" for one of each of the school district types are displayed in Table 16. Each of the districts received state aid from the resource equalizer portion of the grant-in-aid formula.

The Brussels-Richwood Elementary School District has a TWADA count of 119.71 with an operating tax rate of 1.781999. The assessed valuation per TWADA before implementation of the "Farm Bill" was $46,010. After implementation

of the "Farm Bill" this figure drops to $30,160, a change in wealth of -34.45 per cent. The revenue per TWADA of the district prior to the "Farm Bill" was $1,181.48 dropping to $939.38 afterwards. This represents a change in revenue of -20.49 per cent.

The Fairfield Community High School District has a TWADA count of 827.85 with an operating tax rate of 1.425399. The assessed valuation per TWADA before implementation of the "Farm Bill" was $1,200.72 dropping to $1,098.75 afterwards. This represents a change in revenue of -8.49 per cent.

The Mason City Community Unit School District has a TWADA of 787.12 with an operating tax rate of 2.144999. The assessed valuation per TWADA before implementation of the "Farm Bill" was $27,900. After implementation of the "Farm Bill" this figure drops to $20,180, a change in wealth of 27.68 per cent. The revenue per TWADA of the district prior to the "Farm Bill" was $930.71, dropping to $804.70 afterwards. This represents a change in revenue of -13.54 per cent.

As stated earlier, a few districts gained as a result of the "Farm Bill" with others remaining unchanged. But the majority of the districts experienced losses in the combined state aid plus local revenue. This was due to the 25 per cent increase limitation over the previous year which currently exists in the Illinois grant-in-aid formula. As such,

the loss in the total revenue, while very real, is only temporary. Future increases at the current rate of 25 per cent per year will allow most districts to achieve the guaranteed per pupil level, as determined by their operating tax rate, over a period of one or more years. This of course will depend on the total amount actually lost. Districts with the greatest initial loss will be the last to recover the total guaranteed amount. As this guaranteed level of funding is achieved, it should be noted that the actual revenue lost during this period of "catch-up" will never be retrieved. Actual retrieval or initial loss could be achieved only through the passage of special legislation for this purpose. Under the current system this is not possible.

Policy Implications

The results of simulating the two measurements of school district wealth before and after implementation of the "Farm Bill" had mixed results on the goal of equity. The concern for the effects of the "Farm Bill" at the local level leads one to conclude that the movement toward equity, however slight, came at the price of hardship to the majority of the local school districts.

The "Farm Bill" has unquestionably had a dual effect on the funding of Illinois public schools. It resulted in the changing of the assessed valuation of school districts,

which in turn changed the amount of local revenue collected as well as the amount of state aid to be received. The combined effect, in the majority of the cases, resulted in an overall loss of total revenue per TWADA. As a result of the findings of this study, the following implications for policy development have been made.

Analysis of the data indicated that the majority of school districts experienced short-range losses in the combined state aid plus local revenue per TWADA as a result of the "Farm Bill." The policy implication here suggests that measures could be taken to ensure that a loss of total revenue would not be experienced as a result of the changes in the assessed valuation because of the "Farm Bill." This would of course involve the modification of the current 25 per cent limitation on the increase of state aid over the previous year. As stated earlier, legislation is currently being considered that would increase the present 25 per cent limitation to 35 per cent. While this would be an improvement over the present situation, it is unlikely that the change to a 35 per cent increase would be sufficient to offset the magnitude of the losses caused by the "Farm Bill."

It would appear that there are two alternative solutions to this problem. One, that there be a total removal of the per cent increase limitation, allowing state aid to compensate for the loss in local revenue. Two, that there be special legislation allowing for the continuation of the

25 or 35 per cent limitation but compensating through a supplementary state aid claim for any loss of revenue due specifically to the "Farm Bill." Legislation such as this would also allow for the losses experienced by the districts receiving state aid on the Strayer-Haig portion of the grant-in-aid formula.

The losses of the resource equalizer districts because of the 25 per cent limitation and the losses of the Strayer-Haig school districts would also imply a need for an extension of the "hold harmless" until such time that the assessments through the "Farm Bill" formula could catch up to the 1976 assessment level.

Mixed results for the criterion of permissible variance were reported. Policy implications for the finding would suggest that the "Farm Bill" was slightly damaging to the overall criterion of permissible variance. The consideration of measures to decrease the effects of the "Farm Bill" would be in order.

Results of the regression analysis reported the "Farm Bill" to have a slight but positive effect on the criterion of fiscal or wealth neutrality. Policy implications from the results of the "Farm Bill" can be made only after a major value judgment has been made, that judgment being to determine whether or not the slight and sometimes dubious movements toward equity are worth the hardship caused at the local level.

Recommendations

Education policy analysts may quickly conclude that the movement toward equity caused by the implementation of the "Farm Bill" comes at a very high price to the local school district. However, it should be remembered that the "Farm Bill" was not designed as an education finance reform, but rather as a measure of tax relief for the Illinois farmers. As a result, any recommendations made to improve the status of Illinois school districts with respect to additions, deletions, or total elimination of the "Farm Bill" would quickly bring the issue to the political arena. Because of this situation, the following recommendations are presented on the basis of the findings of this study, as well as the political realities of their usefulness.

1. In light of the past evaluations of the 1973 reform which indicate a steady movement toward a more equitable state of affairs, it is recommended that the education policy analyst give special attention to the findings of this study in order to obtain a clear understanding of the possible effects such noneducational legislation might have on the funding of Illinois schools.

2. It is recommended that any extension of the "hold harmless" of the "Farm Bill" be extended until such a time that the farmland assessments catch up to the 1976 assessment levels.

3. It is further recommended that a monitoring of the effects of the "Farm Bill" on education be conducted. Such monitoring should include effects of the "Farm Bill" with the proposed extension of the "hold harmless" together with the increased values of the non-farm sector due to additions and inflation.

4. It is recommended that this study be duplicated taking into account the following changes and additions:

a. That the statistical measurements of fiscal neutrality and permissible neutrality be made using family income as a constant measurement of district wealth;

b. To calculate the state aid contribution both with the proposed 35 per cent increase limitation as well as with no percentage increase limitation;

c. That the study include the updated and adjusted "Farm Bill" figures now being calculated by the Division of Local Government Affairs.

5. It is recommended that such legislation be considered that would allow all school districts to recover any loss resulting from the implementation of the "Farm Bill" through:

a. A supplementary state aid claim;

b. The removal of the percentage increase limitation now existing in the grant-in-aid formula.

Anecdotal Comments

This section of the study was added as a result of the general impressions gathered during the research process. The comments included in this section are not based upon any statistical analysis nor other formal accepted research procedure, but they are presented in an effort to air concerns over the value of the "Farm Bill" as it presently exists.

The "Farm Bill" specifically states that the farmland will be removed from that portion used in the calculation of the county multiplier. Neither will that same farmland be subject to the multiplier once it is set. The removal of this farmland from the calculation of the multiplier would indicate at first that the "Farm Bill" would indirectly aid the urban dweller.

This would be due to the past general practice of computing one multiplier for the entire county based upon the combined assessments of farm and all non-farm property. Traditionally farmland has been assessed at a lower percentage of its fair market value than the urban property. If the farmland were removed from the calculation of the multiplier this then would indicate that a lower multiplier

would be needed in order to move the county to the legislated value of 33-1/3 per cent. If this happens, it will in effect cause a loss in the assessed valuation within the county, causing an indirect but very real loss in the assessed valuation for many school districts. The "Farm Bill" does not deal with losses of this type. If this does not happen, then an explanation from the Department of Local Government Affairs as to why it did not occur is very much in order.

Another general impression in need of amplification is that of the formula established by the "Farm Bill." The formula sets a consistent state-wide method for determining the assessed valuation for an acre of "best grade" farmland for each of the counties, but leaves to the local assessors the task of determining the assessed valuation of the land which is less than the top-grade land. This is an obvious weakness in the law as it presently exists. The local judgments which have existed in the past have caused many disparities in assessment practices in the state. The existence of county multipliers is just one example and result of such disparities.

It should also be noted that the "Farm Bill" comes as a particularly heavy burden to those school districts receiving state aid on the Strayer-Haig portion of the grant-in-aid formula. For these districts, by far the largest portion of the total revenue comes from the local property

tax. A loss in the assessed valuation, such as that caused by the "Farm Bill," results in a loss of revenue that will not be made up in state aid. Thus a loss of this nature is more severe than that experienced by a resource equalizer district whose loss was due to the 25 per cent limitation.

It would seem logical that a Strayer-Haig district which is relying upon an annual increase in local dollars in order to keep up with the corresponding rise in the annual cost of maintaining an educational program will be severely hurt by the "Farm Bill" even with the current and probable extension of the "hold harmless." This is because of the fact that even with the "hold harmless," which protects against a lower assessment in farmland than in 1976, the annual rise in the local assessment will take place only in the non-farm portion of the total assessment. This will in all probability not produce a large enough increase to meet the local demands for greater dollars.

Thus the "Farm Bill" could ultimately be a catalyst for the elimination of a portion of Illinois school districts. As it is not unusual for such Strayer-Haig school districts to be small and rural, the very "Farm Bill" designed to aid the farm community would provide the tax relief at the cost of the local school system.

In conclusion, it should be pointed out that the full impact of the "Farm Bill" on the state and local contributions to K-12 public education will not be experienced until

the 1979-80 school year. This is due to the fact that the 1977 assessments are subject to the "hold harmless" clause, causing full impact on the 1978 assessments. Due to the time lag from assessment to collection of taxes, and collection to distribution of tax revenue to the schools, the 1978 assessments will therefore not reach the public school financial picture until the 1979-80 school year.

POSTSCRIPT

Since the completion of this study, a number of topical issues in the areas of assessment practices and school funding formulas have developed in Illinois and other states. These issues affect the policy recommendations of this study as well as future of the financing of K-12 public education throughout the country. Because of these issues, this postscript has been added to update the policy analysis and to inform the reader of these issues with respect to the financing of K-12 public education.

First, the "hold harmless" of the "Farm Bill" originally designated for the 1977 assessments has been extended for an additional year. Without this extension of the "hold harmless" the potential loss of assessed valuation created by the "Farm Bill" would have become a reality in the majority of the Illinois counties. With the one-year extension it appears that the determination of the assessed valuation for an acre of best-grade farmland in 1979, from the formula established by the "Farm Bill," will be equal to or above the 1976 assessment level in nearly all of the counties. This extension of the "hold harmless" for the 1978 assessments should essentially meet the needs of the farmers in slowing down the rate of increase in assessments while

providing a stable tax base for governmental agencies which rely upon local tax dollars.

Second, the Illinois General Assembly has recently sent to the Governor a bill which specifies parameter changes in the present Illinois grant-in-aid formula. Among these changes are such items as:

1. The reduction of the maximum tax rates for units and elementary school districts by .07 and .04 per cent respectively;

2. The increase of the state guaranteed per pupil of $1,293.00;

3. The percentage increase for schools receiving state aid from Strayer-Haig portion of the funding formula from 25 per cent to 50 per cent;

4. The percentage increase for schools receiving state aid from the resource equalizer portion of the funding formula from 25 per cent to 35 per cent;

5. The guarantee of 90 per cent of the previous year's state aid.

These changes could combine with the "Farm Bill" to produce effects on the funding of schools. The monitoring of these potential effects would be of particular importance to those interested in the financing of public schools. As stated earlier in this study, there is a need to be aware of both the tax assessment and school funding practices in order to properly understand the current financial status

of public schools.

In addition to the above, there is currently considerable interest in items such as "circuit breakers" and tax assessment freezes. While it is beyond the scope of this study to deal with these issues, they are of considerable importance. Consideration should be given to research in these areas.

TABLES

TABLE 1

CHANGES IN THE ASSESSED VALUATIONS FOR AN ACRE OF "BEST GRADE" FARMLAND AS DETERMINED BY THE FARM BILL

Index of Urbanism	Number of Counties Gaining	Mean Gain	Number of Counties Losing	Mean Loss
1	5	$52.00	17	$61.65
2	3	$39.00	21	$63.38
3	5	$32.20	30	$90.97
4	6	$25.50	12	$65.58
Totals	19	$33.47	80	$73.69

TABLE 2

CHANGES IN THE PERCENTAGES OF THE ASSESSED VALUATIONS ATTRIBUTED TO FARMLAND

	Elementary Districts	High School Districts	Unit Districts
Mean Per Cent of Farmland			
Before Farm Bill	47.25%	47.86%	59.85%
After Farm Bill	45.23%	45.57%	56.57%
Change in the Mean	-2.02%	-2.29%	-3.28%
Per Cent Change in the Mean	-4.28%	-4.78%	-5.48%
Range of Per Cent Change			
Before Farm Bill	98.58%	93.30%	94.88%
After Farm Bill	98.31%	91.13%	94.56%

TABLE 3

CHANGES IN THE WEALTH OF SCHOOL DISTRICTS (AV/TWADA)

	Elementary Districts	High School Districts	Unit Districts
Mean Wealth			
Before Farm Bill	$44,447	$64,657	$25,046
After Farm Bill	$41,497	$60,364	$22,590
Change in the Mean	-$2,950	-$4,293	-$2,456
Per Cent Change in the Mean	-6.64%	-6.64%	-9.80%
Range			
Before Farm Bill	$523,141	$174,437	$98,955
After Farm Bill	$506,858	$165,055	$96,096

TABLE 4

NUMBER OF SCHOOL DISTRICTS GAINING AND LOSING IN REVENUE PER TWADA

	Elementary Districts	High School Districts	Unit Districts
Per Cent of Districts Gaining	12	13	20
Per Cent of Districts Remaining the Same	133	0	178
Per Cent of Districts Losing	154	78	196
Total Per Cent of Districts	299	91	394

TABLE 5

CHANGES IN STATE AID
PER TWADA

	Elementary Districts	High School Districts	Unit Districts
Mean State Aid			
Before Farm Bill	$458.34	$434.49	$474.14
After Farm Bill	$468.42	$437.16	$497.45
Change in the Mean	$10.08	$2.67	$23.31
Per Cent Change in the Mean	2.20%	.61%	4.92%
Range			
Before Farm Bill	$1,019.28	$951.52	$1,125.91
After Farm Bill	$1,033.93	$961.45	$1,127.07

TABLE 6

CHANGES IN LOCAL REVENUE
PER TWADA

	Elementary Districts	High School Districts	Unit Districts
Mean Local Revenue Before Farm Bill	$685.79	$952.21	$628.48
After Farm Bill	$644.34	$891.66	$569.60
Change in the Mean	-$41.45	-$60.55	-$58.88
Per Cent Change in the Mean	-6.04%	-5.99%	-9.37%
Range Before Farm Bill	$3,673.96	$2,085.73	$1,670.47
After Farm Bill	$3,595.77	$1,966.78	$1,483.12

TABLE 7

CHANGE IN STATE AID PLUS LOCAL REVENUE PER TWADA

	Elementary Districts	High School Districts	Unit Districts
Mean State Plus Local			
Before Farm Bill	$1,144.12	$1,386.70	$1,102.62
After Farm Bill	$1,112.76	$1,328.82	$1,067.04
Change in the Mean	-$31.36	-$57.88	-$35.58
Per Cent Change in the Mean	-2.74%	-4.17%	-3.23%
Range			
Before Farm Bill	$3,204.26	$1,432.88	$1,224.94
After Farm Bill	$3,118.65	$1,372.31	$1,075.60

TABLE 8

PERMISSIBLE VARIANCE CRITERION:
COEFFICIENT OF VARIATION FOR
ELEMENTARY SCHOOL DISTRICTS

	Before Farm Bill	After Farm Bill
District Wealth	105.56617	106.67759
State Aid	57.69251	56.77234
Local Revenue	67.54963	67.33169
State Aid Plus Local Revenue	27.83124	26.93004

TABLE 9

PERMISSIBLE VARIANCE CRITERION:
COEFFICIENT OF VARIATION FOR
HIGH SCHOOL DISTRICTS

	Before Farm Bill	After Farm Bill
District Wealth	47.24159	46.03074
State Aid	54.54106	53.96160
Local Revenue	39.78924	39.76358
State Aid Plus Local Revenue	16.36910	16.19643

TABLE 10

PERMISSIBLE VARIANCE CRITERION:
COEFFICIENT OF VARIATION FOR
UNIT SCHOOL DISTRICTS

	Before Farm Bill	After Farm Bill
District Wealth	48.90601	48.57901
State Aid	48.51066	45.95897
Local Revenue	44.82868	45.64541
State Aid Plus Local Revenue	13.98138	14.47223

TABLE 11

PERMISSIBLE VARIANCE CRITERION:
McLOONE INDEX FOR ILLINOIS
SCHOOL DISTRICTS

	Elementary Districts	High School Districts	Unit Districts
State Aid Plus Local Revenue			
Before Farm Bill	.8841	.9170	.9059
After Farm Bill	.8950	.9128	.9052

TABLE 12

FISCAL NEUTRALITY: REGRESSION APPROACH FOR ELEMENTARY SCHOOL DISTRICTS WITH STATE AID, LOCAL REVENUE AND STATE AID PLUS LOCAL REVENUE AS A FUNCTION OF WEALTH

	Before Farm Bill		After Farm Bill	
	R^2	Beta	R^2	Beta
State Aid	0.36092	-0.60076	0.34046	-0.58349
Local Revenue	0.77590	0.88085	0.76172	0.87276
State Aid Plus Local Revenue	0.61244	0.78258	0.55613	0.74574

TABLE 13

FISCAL NEUTRALITY: REGRESSION APPROACH FOR HIGH SCHOOL DISTRICTS WITH STATE AID, LOCAL REVENUE AND STATE AID PLUS LOCAL REVENUE AS A FUNCTION OF WEALTH

	Before Farm Bill		After Farm Bill	
	R^2	Beta	R^2	Beta
State Aid	0.66546	-0.81576	0.66457	-0.81521
Local Revenue	0.79227	0.89010	0.78748	0.88740
State Aid Plus Local Revenue	0.40201	0.63404	0.32306	0.56838

TABLE 14

FISCAL NEUTRALITY: REGRESSION APPROACH FOR UNIT DISTRICTS WITH STATE AID, LOCAL REVENUE AND STATE AID PLUS LOCAL REVENUE AS A FUNCTION OF WEALTH

	Before Farm Bill		After Farm Bill	
	R^2	Beta	R^2	Beta
State Aid	0.75433	-0.86852	0.73181	-0.85546
Local Revenue	0.83662	0.91467	0.82927	0.91064
State Aid Plus Local Revenue	0.14120	0.37577	0.07113	0.26671

TABLE 15

PERMISSIBLE VARIANCE CRITERION:
GENERAL SUMMARY

	Elementary Districts	High School Districts	Unit Districts
Coefficient of Variation	Toward	Toward	Away
McLoone Index	Toward	Away	Away

TABLE 16

SELECTED EXAMPLES OF THE EFFECTS OF THE FARM BILL ON LOCAL SCHOOLS

	Brussels-Richwood C.C.S.D. 41 Elementary District	Fairfield C.H.S.D. 225 High School District	Mason City C.U.S.D. 123 Unit District
TWADA	119.71	827.85	787.12
Operating Tax Rate	1.78199	1.425399	2.144999
AV/TWADA			
Before FB	$46,010.	$32,370.	$27,900.
After FB	$30,160.	$25,210.	$20,180.
Per Cent Change in Wealth	-34.45%	-22.12%	-27.67%
Revenue/TWADA			
Before FB	$1,181.48	$1,200.72	$930.71
After FB	$939.38	$1,098.75	$804.70
Per Cent Change in Revenue	-20.49%	-8.49%	-13.54%

NOTES

[1]Citizens Commission on School Finance, Report of the Citizens Commission on School Finance (Springfield, Illinois: Illinois Office of Education, July 14, 1977), p. 19.

[2]Legislative and Local Government Division, Illinois Agricultural Association, "Farmland Valuation Bill," January 1977, pp. 1-3.

[3]Glenn W. Fisher, Taxes and Politics: A Study of Illinois Public Finance (Urbana: University of Illinois Press, 1969), p. 165.

[4]Report of the Citizens Commission on School Finance, p. 8.

[5]Illinois, Property Tax Series: The Illinois Property Tax System, Department of Local Government Affairs, March 1977, p. 10.

[6]Ibid., p. 3.

[7]State of Nevada, Nevada Tax Commission, Instructions for Assessment, Bulletin No. 139 (Carson City, Nevada, 1977).

[8]Ibid., p. 3.

[9]Ibid., p. 4.

[10]Ibid.

[11]State of Missouri, Missouri State Tax Commission, Guidelines Necessary to Qualify for "Agricultural Use" Value for Tax Purposes According to Senate Bill 203, Seventy-eighth General Assembly (Jefferson City, Missouri, 1977), p. 2.

[12]Ibid.

[13]State of South Dakota, State Department of Revenue, Annual Assessment of Property (Pierre, South Dakota, 1977), p. 18.

[14]Ibid., p. 19.

[15]Ibid., p. 2.

[16]State of Oregon, Oregon Department of Revenue, Instructions to Assessors for Determining Value of Lands Eligible for Farm Use Assessment (Salem, Oregon, 1978), pp. 1-15.

[17]State of Iowa, Iowa State Department of Revenue, Agricultural Land Schedule (Des Moines, Iowa, 1977), pp. 8-40.

[18]Ibid., pp. 8-41.

[19]Ibid., pp. 8-42.

[20]Bob Bullock, Agricultural Use-Valuation (Austin, Texas: Office of the Comptroller, 1977), p. 1.

[21]Ibid., p. 3.

[22]Ibid., p. 2.

[23]Ibid., p. 12.

[24]Ibid., p. 17.

[25]Ibid., p. 4.

[26]B. L. Flinchbaugh, Use Value Appraisal Impact Study (Manhattan, Kansas: Department of Economics, Kansas State University, 1977), p. 3.

[27]Ibid., p. 12.

[28]Thomas Wei-Chi Yang, Measurement of School Revenue Equity in the States of Illinois, Michigan, and Kansas (Normal, Illinois: The Center for the Study of Educational Finance, Department of Educational Administration, Illinois State University, 1975), p. 81.

[29]Eugene P. McLoone, Profiles in School Support: 1969-70, National Center for Educational Statistics (Washington, D.C.: U.S. Government Printing Office, 1974).

[30]Norman H. Nie, C. Hadlai Hull, Jean G. Jenkins, Karin Steinbrenner, and Dale H. Bent, Statistical Package for the Social Sciences, 2nd ed. (New York: McGraw-Hill, Inc., 1975), p. 327.

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APPENDICES

APPENDIX A

INDEX OF URBANISM IN RANK ORDER[a]

County	Index of Urbanism	County	Index of Urbanism
Cook	.80	McHenry	.22
Peoria	.59	Massac	.22
Winnebago	.57	Richland	.22
Macon	.52	Franklin	.21
Kane	.48	Alexander	.21
Rock Island	.47	Edgar	.20
Champaign	.45	Perry	.20
Sangamon	.43	White	.18
Lake	.40	Montgomery	.18
Knox	.40	Effingham	.18
Adams	.40	Crawford	.18
DuPage	.39	Clay	.18
St. Clair	.37	Jersey	.17
DeKalb	.37	Macoupin	.17
Madison	.36	Randolph	.17
Coles	.36	Livingston	.17
Stephenson	.35	Lawrence	.17
Vermilion	.35	Grundy	.17
Will	.34	Bureau	.17
McLean	.34	Douglas	.16
Tazewell	.34	Ogle	.16
Morgan	.33	Ford	.15
McDonough	.31	Mason	.15
Boone	.28	Wayne	.15
Williamson	.28	Moultrie	.14
Jackson	.28	Monroe	.14
Logan	.28	Greene	.14
Saline	.28	Clark	.14
Warren	.27	Carroll	.14
Whiteside	.27	Fayette	.13
Kankakee	.27	Hancock	.13
LaSalle	.26	Marshall	.13
Lee	.26	Piatt	.13
Marion	.26	Union	.13
Christian	.25	Schuyler	.12
Jefferson	.25	Menard	.12
Wabash	.25	Jo Davies	.12
Henry	.24	Bond	.11
Fulton	.24	Pike	.11
Cass	.22	Woodford	.11
DeWitt	.22	Iroquois	.10

County	Index of Urbanism	County	Index of Urbanism
Shelby	.10	Washington	.08
Clinton	.09	Scott	.07
Hamilton	.09	Stark	.07
Mercer	.09	Cumberland	.06
Brown	.08	Johnson	.06
Edwards	.08	Putnam	.06
Gallatin	.08	Henderson	.05
Jasper	.08	Calhoun	.04
Kendall	.08	Hardin	.03
Pulaski	.08	Pope	.02

[a]John Bernard Canfield, "Self-concepts of School Board Members" (unpublished Ed.D. dissertation, Illinois State University, 1976), pp. 145, 146.

APPENDIX B

QUEEN AND CARPENTER INDEX OF URBANISM AND WORKSHEET[a]

1.	Percentage of population resident in places of 500,000 or more[b]	_____%
2.	Percentage of population resident in places of 250,000 or more	_____%
3.	Percentage of population resident in places of 100,000 or more	_____%
4.	Percentage of population resident in places of 50,000 or more	_____%
5.	Percentage of population resident in places of 25,000 or more	_____%
6.	Percentage of population resident in places of 10,000 or more	_____%
7.	Percentage of population resident in places of 5,000 or more	_____%
8.	Percentage of population resident in places of 2,500 or more	_____%
9.	Percentage of population resident in places of 1,000 or more	_____%
10.	Percentage of population resident in places of 500 or more	_____%
	Index of Urbanism	_____%

[a]J H McGrath, "A Study of Selected Characteristics of Urban-Rural Community School Districts in Iowa" (unpublished Ph.D. dissertation, State University of Iowa, 1963), p. 15.

[b]Each category is divided by the population of the county to determine this percentage figure. These percentage figures are then added and divided by 10 to obtain the index.

the index.

the index.

APPENDIX C

DISTRIBUTION OF INDEX OF URBANISM SCORES, 102 COUNTIES, STATE OF ILLINOIS

Index of Urbanism Scores[a]	Number of Counties
.00 - .09	19
.10 - .19	35
.20 - .29	25
.30 - .39	12
.40 - .49	7
.50 - .59	3
.60 - .69	0
.70 - .79	0
.80 - .89	1
.90 - 1.00	0
Total	102

[a]The larger the index value, the higher the degree of urbanism.

APPENDIX D

DISTRIBUTION OF COUNTIES BY GROUP

Index of Urbanism Scores	Number of Counties	Group
.30 - 1.00	23	1
.20 - .29	25	2
.10 - .19	35	3
.00 - .09	19	4
Total	102	

APPENDIX E

COMPARISON OF EQUALIZED ASSESSED VALUATION FOR AN ACRE OF BEST GRADE OF FARMLAND BEFORE AND AFTER IMPLEMENTATION OF THE FARM BILL

County	Before Farm Bill	After Farm Bill	Loss	Gain
Adams	$274	$215	$59	
Alexander	295	138	157	
Bond	212	192	20	
Boone	295	266	29	
Brown	$306	$165	$141	
Bureau	325	298	27	
Calhoun	283	181	102	
Carroll	325	274	51	
Cass	$207	$236		$29
Champaign	382	353	$29	
Christian	436	332	104	
Clark	243	193	50	
Clay	$116	$144		$28
Clinton	281	215	$66	
Coles	399	280	119	
Crawford	240	176	64	
Cumberland	$173	$202		$29
DeKalb	250	355		105
DeWitt	459	342	$117	
Douglas	348	327	21	
DuPage	$432	$403	$29	
Edgar	333	279	54	
Edwards	222	182	40	
Effingham	223	186	37	
Fayette	$326	$160	$166	
Ford	399	303	96	
Franklin	130	151	21	
Fulton	401	208	193	
Gallatin	$309	$189	$120	
Greene	375	241	134	
Grundy	335	283	52	
Hamilton	143	144		$1

County	Before Farm Bill	After Farm Bill	Loss	Gain
Hancock	$422	$241	$181	
Henderson	341	265	76	
Henry	322	302	20	
Iroquois	381	307	74	
Jackson	$272	$143	$129	
Jasper	217	191	26	
Jersey	328	237	91	
Jo Davies	250	190	60	
Johnson	$95	$116		$21
Kane	350	398		48
Kankakee	333	288	$45	
Kendall	370	367	3	
Knox	$385	$268	$90	
Lake	365	351	14	
LaSalle	360	310	50	
Lawrence	160	177		$17
Lee	$345	$272	$73	
Livingston	427	308	119	
Logan	420	342	78	
Macon	353	355		$2
Macoupon	$390	$235	$155	
Madison	310	248	62	
Marion	133	149		$16
Marshall	382	282	100	
Mason	$381	$238	$143	
Massac	171	156	15	
McDonough	410	286	124	
McHenry	270	342		$72
McLean	$409	$357	$52	
Menard	366	304	62	
Mercer	242	273		$31
Monroe	184	197		13
Montgomery	$300	$240	$60	
Morgan	378	320	76	
Moultrie	473	326	147	
Ogle	255	296		$41

County	Before Farm Bill	After Farm Bill	Loss	Gain
Peoria	$300	$282	$18	
Perry	155	148	7	
Piatt	432	355	77	
Pike	290	211	79	
Pope	$70	$110		$40
Pulaski	112	143		31
Putnam	374	295	$79	
Randolph	235	164	71	
Richland	$210	$167	$43	
Rock Island	331	280	51	
Saline	178	157	21	
Sangamon	440	356	104	
Schuyler	$302	$179	$123	
Scott	254	241	13	
Shelby	411	243	168	
Stark	380	318	62	
St. Clair	$208	$246		$38
Stephenson	204	271		67
Tazewell	420	318	$102	
Union	127	134		7
Vermilion	$296	$279	$17	
Wabash	325	214	111	
Warren	330	316	14	
Washington	238	179	59	
Wayne	$285	$141	$144	
White	232	175	57	
Whiteside	275	269	6	
Will	375	307	68	
Williamson	$180	$136	$44	
Winnebago	283	249	34	
Woodford	419	319	100	
Total Counties	99	99	80	19

APPENDIX F

DEFINITIONS

The following definitions were applied to the study to clarify the research design and to facilitate the interpretation of the findings of the study.

Public Act 80-247--The general provisions of Public Act 80-247, commonly referred to as the "Farm Bill," are as follows:

I. Covers all agricultural, including horticultural and livestock, operations except those where the primary use of the property is for residential purposes, even though some farm products may be grown.

II. Eligibility for farm value assessment: any owner of a farm where the land has been used for farming for the preceding two years.

III. Determination of the value of the land.

A. Value of the "Best Grade" land determined by the Department of Local Government Affairs by using the following:

1. Value per acre of agricultural products sold from the county where the land is located.

2. Average value per acre per year of principal crops (corn, soybeans, wheat, and hay) for the most recent three years. The

1977 assessment was based on the years 1973, 1974, and 1975.

3. Ten per cent of the average sale price per acre of land for the same three years as in the paragraph above. If there are insufficient sales in a county, the average sale price of two comparable counties selected by the supervisor of assessment or county assessor may be used.

B. Value of "lower grade" land is to be determined by its relative productivity as related to the "best grade" land. This determination of relative productivity is made by the local assessing officials using soil maps, productivity indices, and other available data.

C. Residential dwellings on a farm are to be considered as part of the farming unit but are to be assessed in a manner comparable to that which non-farm dwellings are assessed.

IV. A "hold harmless" clause to this Bill provides that no unit of local government or school district shall have an equalized assessed valuation for farmland during the 1977 assessment year less than the equalized assessed valuation of the 1976 assessment year; except property changes, depletions, deletions, and additions in 1977 shall be excluded in making such computations.

Assessed Valuation--The assessed valuation refers to the 1977 assessed valuation as determined prior to the implementation of the "Farm Bill."

Adjusted Assessed Valuation--The adjusted assessed valuation refers to the 1977 assessed valuation as altered by the "Farm Bill."

Local Operating Revenues--The local operating revenues are the product of 1977 district assessed valuation multiplied by its operating tax rate as determined prior to the implementation of the "Farm Bill."

Adjusted Local Operating Revenues--The adjusted local operating revenues are the product of 1977 district adjusted assessed valuation multiplied by its operating tax rate.

Estimated Revenues--Actual operating revenues were not used in this study, but rather were calculated by adding the estimated 1977-78 state aid to the estimated local operating revenues.

Estimated State Aid 1977-78--In this study two figures of estimated 1977-78 state aid were calculated. The first calculation was made using the 1977 assessed valuation; the second used the 1977 adjusted assessed valuation.

Operational Tax Rates--Operational tax rates are: "All taxes used to support funds, except bonds and interest; rent; special education building; capital improvement fund; summer school and vocational building are included in the operational taxes and are used to establish the effort of

the district.(1)

District Wealth--The wealth of each school district was determined by calculating the assessed valuation per weighted pupil. The weight assigned to each of the classifications of pupils were .5 for kindergarten, 1.0 for elementary, and 1.25 for high school pupils.

Adjusted District Wealth--The adjusted wealth of each school district was determined by calculating the adjusted assessed valuation per weighted pupil.

Equity--The meaning of equity is different from that of equality. The principle of equality implies that the same amount of dollars should be spent on each student within the state regardless of need. The principle of equity implies that each student within the state should have access to education according to need and that in the process differing amounts of dollars per student can be spent. It also implies that school revenues per student should not be solely a function of district wealth. These two aspects of equity can be operationalized in terms of permissible variance and fiscal or wealth neutrality.

Permissible Variance--Permissible variance implies a narrowing of the variation in the level of expenditure per pupil among the school districts within the state.(2)

Fiscal Neutrality--Fiscal or wealth neutrality calls for the reduction of dependence of school revenue as a function of local wealth as determined by the assessed valuation

per weighted student.

Index of Urbanism--Queen and Carpenter developed a method by which to measure the degree any population is ecologically urban, i.e., the degree to which any given population lives in large population aggregates of density, size, and occupational diversification. The index is a simultaneous measurement of the percentage of urban residence and size of urban places based upon the use of county data. There is a distinct point concerning the difference between urbanism and urbanization. Urbanism indicates the state of city residence. Urbanization indicates the distinctive way of life typically associated with city residence.(3)

School Districts--School districts were analyzed by district type. Unit refers to a K-12, high school refers to a 9-12, and elementary refers to a K-8 administrative organization.

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[1]Illinois, Office of Education, The School Code of Illinois 1977, (Springfield, Illinois: Office of Education, 1977), Section 18-8, p. 147.

[2]G. Alan Hickrod, Ben C. Hubbard, and Thomas Wei-Chi Yang, The 1973 Reform of the Illinois General Purpose Grant-in-Aid: A Description and an Evaluation (Normal, Illinois: The Center for the Study of Educational Finance, Department of Educational Administration, Illinois State University, 1975), p. 21.

[3]Stuart A. Queen and David Carpenter, The American City (New York: McGraw-Hill Book Company, Inc., 1953), p. 28.