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AN ECONOMIC ANALYSIS OF THE PUBLIC EDUCATION
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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

AN ECONOMIC ANALYSIS OF THE PUBLIC EDUCATION SECTOR OF
THE STATE OF MICHIGAN FOR THE PERIOD 1965 to 1969

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

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BY

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Norman, Oklahoma

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AN ECONOMIC ANALYSIS OF THE PUBLIC EDUCATION SECTOR OF
THE STATE OF MICHIGAN FOR THE PERIOD 1965 TO 1969

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ABSTRACT

Collective bargaining has a long history in the private sector of the economy. However, only in recent years has labor unionism become a factor in the public sector. This study is concerned with the effects of collective bargaining in the public sector; in particular, with the impact of teachers' unions in the state of Michigan. Michigan was used for the study because of its compulsory collective bargaining law which requires all teachers to bargain with their school boards.

The main point of interest of this study was the economic effect of collective bargaining on teachers' salaries. However, it was also important to ascertain the effects of collective bargaining on such things as the sources of education revenue, and on changes in the pattern of expenditures. Furthermore, this study was concerned not only with the direct pecuniary results of collective bargaining, but also with the effect of this bargaining on tax incidence, wealth distribution, income distribution, and increased equality of educational opportunity as manifested by expenditures for education.

Because all teachers in Michigan are members of either the Michigan Education Association or the American Federation of Teachers, AFL-CIO, this study compared the effectiveness of the two bargaining agents in raising wages. Considerable attention was also paid to the attitudes of teacher members of the Michigan Education Association, because initially these members were not convinced of the desirability of collective bargaining. Their attitudes were important because of the bargaining

power theory of wages, a theory held to be valid in the private sector, but an untested theory in the public sector. As a measure of the relative bargaining strength between the two unions, teacher strikes were analyzed by union.

In order to measure the effects of collective bargaining on teacher salaries and education costs, two control groups were established. These two control groups were the Great Lakes Region (Illinois, Indiana, Ohio, and Wisconsin), and the average for the rest of the nation. It was found that teachers' unions did raise wages more in Michigan than in either control group, while costs did not increase as much in Michigan as in either control group.

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AN ECONOMIC ANALYSIS OF THE PUBLIC EDUCATION SECTOR
OF THE STATE OF MICHIGAN FOR THE PERIOD 1965 TO 1969

CHAPTER I

INTRODUCTION

This study is an economic analysis of the public education sector of the state of Michigan for the 1965 to 1969 period. Michigan was selected because of the writer's interest in and familiarity with the area and because in 1965 the State Legislature passed a law requiring teachers to bargain collectively.¹

The main point of interest of this study is the economic effect of collective bargaining on teachers' salaries. However, it is also important to ascertain the effects of collective bargaining on such things as the sources of education revenue, and on changes in the pattern of expenditures. Furthermore, this study is concerned not only with the direct pecuniary results of collective bargaining, but also with the effect of bargaining on tax incidence, wealth distribution, income distribution, and increased equality of educational opportunity as manifest by expenditures for education.

The collective bargaining law was passed in Michigan in 1965, but it did not take effect until the fall of 1967. In order to measure

¹*Michigan Labor Mediation Act*: Act Number 176 of the Public Acts of 1939, as amended by Public Act 282 of 1965.

any economic repercussions precipitated by collective bargaining, the school years 1965-66, 1966-67, 1967-68, and 1968-69 were used. The data cover two years before and two years after collective bargaining.

Chapter II is a statistical examination of all the school districts in Michigan with respect to local sources of revenue. Chapter III is a statistical examination of state and federal revenues in Michigan. Statistically, in both these chapters, school revenues were analyzed by using regression analysis, multiple regression analysis, step-wise regression analysis, simple correlation, partial and multiple correlation, zero-order correlation, and variance analysis. These statistical tools were used to determine if any variable relationships existed.

Chapters II and III discuss the impact of collective bargaining on the sources of revenue. That is, does collective bargaining make revenue collection more equal across the state? Does collective bargaining shift revenue collections from the local school districts to the state or federal governments? In other words, what variables determine the level of school revenues, and does collective bargaining affect them?

Chapter IV is designed to illustrate the statistical analysis presented in Chapters II and III. Chapter IV analyzes the top ten districts and the bottom ten districts classed on the basis of revenues per pupil. Chapter IV illustrates the disparity between the top and bottom districts in Michigan. The use of the top ten and bottom ten districts was arbitrary. The top five and bottom five districts could have been used, but they appeared to be too few to present a clear indication of

the magnitude of differences within the state. Likewise, the top fifteen districts were more than was thought necessary to indicate disparities. The years 1965-66 and 1968-69 were analyzed by district because of the amount of repetition involved in using all four years. However, the tables for the interim two years can be found in Appendix C at the end.

Chapters V and VI analyzes school expenditures in detail. With the exception of zero-order correlation analysis, the same statistical techniques were used as were used in Chapters II and III. The analysis of Chapter V concerns teachers' salaries, while Chapter VI deals with other school expenditures. Chapter V is concerned with the effect of collective bargaining on teachers' salaries. Chapter VI considers the affect of teacher bargaining on expenditures in other areas of education. If collective bargaining does affect other sectors of education expenditure, which areas are most affected and which are least affected? Or does collective bargaining force more expenditures on education in general, thus channeling more resources into education?

Chapter VII is intended to illustrate the statistical analysis presented in Chapters V and VI. Just as in Chapter IV, this chapter analyzes the top ten districts and the bottom ten districts. For example, the top and bottom ten districts by average annual teachers' salaries are analyzed for the years 1965-66 and 1968-69. The interim two year tables are found in Appendix D. Chapter VII is merely used to clarify and add meaning to the statistical presentation of Chapters V and VI.

Chapter VIII makes comparisons between Michigan and data for the nation and Great Lakes region. Because it would be impossible to

determine whether or not collective bargaining had any impact in Michigan without a control group, the national average and the Great Lakes regional averages were used as control groups. The reason both were used is because it was felt that the U.S. average might be too distorted by the low extremes of the South. Therefore, the Great Lakes region was added as a control group to check on the national average as a control group. The Great Lakes region covers the states of Michigan, Ohio, Indiana, Illinois, and Wisconsin. Consequently, the average of these four states (the control group excludes Michigan) should be a representative control against which to measure Michigan and the nation.

Since it is impossible to discuss collective bargaining without also considering the ultimate weapon possessed by organized labor, the strike, Chapter IX analyzes teacher strikes in Michigan. John R. Commons concluded that wages were mostly determined by relative bargaining power, and therefore, the strike was a tool used by workers to determine wages.² Chapter IX also covers teacher attitudes toward unionism. Attitudes are especially important for teachers' unions in Michigan, because many of the teachers were forced by law to join a union, and duress might affect their bargaining power. That is, if the union member is a member because of duress this might be reflected in the wage structure. Michigan provides an excellent case study for relative bargaining strength, because the American Federation of Teachers represents mostly those workers who

²The reader is directed to John R. Commons and Associates; *History of Labor in the United States*, The Macmillan Company, New York (1918). One of the major contributions of this four volume history was the development of the institutional determinants of relative bargaining power. Of particular interest here is the "Prices and Wages" section of Volume I, pp. 49-56.

believe in the collective bargaining process, whereas the Michigan Education Association represents many teachers who participate in the collective bargaining process because they must. Consequently, an attitude survey should help shed light on the bargaining power theory of wages.

Chapter X is the summary and conclusions chapter. Because so much data were analyzed in this study, the summary and conclusions were kept rather general.

The following hypotheses will be analyzed; first, unions have raised wages of teachers. This hypothesis in other areas has not been clear-cut historically. According to E. J. Burt:

It has long been considered a basic fact of national wage and price level policy that three long-run possibilities are open to any economy: if labor productivity is increasing, the level of wages can rise as rapidly while the price level remains stationary; if wages rise more rapidly than productivity, the price level will rise; if wages remain constant or rise more slowly than productivity increases, labor costs and hence the price level will fall.³

Another labor authority, Lloyd Reynolds, states that:

The evidence assembled to date suggests that some unions at some times have been able to raise their relative wages, while other unions at other times have not.

Even for successful unions during successful periods, the estimates of union influence (on wages) are mostly of the order of 10 to 20 per cent. This seems surprisingly low. Considering that elasticity of demand for labor varies widely among industries, and that some industries are much more expansive and profitable than others, one might expect some unions to have done substantially better than this. Why haven't they? One reason may be that many union officials function as 'lazy monopolists' rather than aggressive monopolists. The politics of unionism compels them to keep up with the wage procession, but not necessarily to forge much

³Everett J. Burt, Jr., *Labor Markets, Unions, and Government Policies*, St. Martin's Press, New York (1963) p. 330.

ahead of it. They would prefer to keep out of trouble both with employers and with their members, and this dictates a certain conservation in wage demands.⁴

B. M. Fleisher in *Labor Economics* feels that:

...the most interesting kind of union wage effect is the impact on real hourly wage rates relative to what they might have been in the absence of unions. Unfortunately, this is the aspect of union wage effects that is most difficult to measure. The reason is that when union membership accounts for a significant proportion of the labor force, the general real wage level may be changed in such a way as to eliminate any benchmark against which the effects of unions on the absolute real wage rates of their members can be measured. That is to say, in order to conclude that unionism, or any other force, has changed the wage rates of union members, we have to be able to discover what such wage rates would have been in the absence of unions. However, the very presence of unions in the economy is likely to make this kind of comparison very difficult by changing the wage rates of many workers besides those who are union members.⁵

The second hypothesis is that, labor unions have narrowed wage differentials in public education within Michigan. According to a Brookings study:

...labor efficiency has also become of greater relative importance in determining labor and total cost. Wage standardization over the area of product competition has spread considerably during the past twenty years. While wage-rate competition is still very important in particular industries, the growth of wage standardization has increased the relative importance of labor efficiency and labor cost is a consideration separate from capital cost....⁶

⁴Lloyd G. Reynolds, *Labor Economics and Labor Relations*, 4th Edition, Prentice-Hall, Inc., Englewood Cliffs, N.J. (1964), pp.

⁵Belton M. Fleisher, *Labor Economics Theory and Evidence*, Prentice-Hall, Inc., Englewood Cliffs, N.J. (1970), p. 182.

⁶Slichter, Healy, and Livernash, *The Impact of Collective Bargaining on Management*, Washington, D.C., The Brookings Institution (1970), p. 551.

Also on the ability of unions to narrow wage differentials, Sanford

Cohen wrote that:

...it was noted that occupational wage differentials measured in percentage terms have shrunk measurably in the past several decades. Immigration restrictions, the influence of cyclical variations in business, and the fact that unskilled were suggested as factors that might be responsible for the relatively large gains made by those holding the less skilled jobs. Since 1930 the bargaining strength of labor unions has increased considerably. Can any part of the wage differential shrinkage be attributed to the exercise of this strength?

A popular practice in recent years has been for unions to seek across-the-board increases on a uniform cents-per-hour basis. (When all workers in a firm are given the same cents-per-hour increase, the percentage differential, of course, will diminish.⁷

In his book, *Labor Economics*, C. G. Williams said that:

...when describing the narrowing of interoccupational (wage) differentials, we referred to the spread of industrial unions as a possible causal factor. Again, when describing the structure of collective bargaining, we spoke of the strong motivation of unions to organize sources of labor and product competition to the union members.⁸

R. A. Lester observed that:

...such factors as skill dilution and compression of wage differentials seem to have made the skilled workers relatively restless and discontented.⁹

The primary sources of data for this study are: *Michigan Public Schools; Ranking of Michigan School Districts by Selected Financial Data*, for the years 1965-66, 1966-67, 1967-68, and 1968-69, published by the Michigan State Board of Education; *Estimates of School Statistics*, for the same years as above, published by the National Education Association; *A Survey of Teacher Attitudes Concerning Negotiations in*

⁷Sanford Cohen, *Labor in the United States*, 3rd Edition, C. E. Merrill Publishing Company, Columbus, Ohio (1970), p. 389.

⁸C. G. Williams, *Labor Economics*, John Wiley & Sons, Inc., New York (1970), pp. 308-309.

⁹Richard A. Lester, *As Unions Mature*, Princeton University Press, Princeton, N.J. (1958), p. 78.

Michigan, published by the Michigan Education Association; and the *Michigan Statistical Abstract*, 1966 and 1968, published by the Michigan State University Bureau of Business and Economic Research.

CHAPTER II

LOCAL SCHOOL REVENUE

School revenues come from five sources; (1) local revenue, (2) intermediate revenue, (3) state revenue, (4) federal direct revenue, and (5) gifts and bequests. However, of these five sources only local, state, and federal revenues will be examined, because intermediate sources and gifts and bequests are not significant in Michigan.

Local Sources

Local revenue is defined as; "Revenue produced within the school district for operating the schools and available to the district in the amount produced. The major source of local revenue in most districts is the general property tax levy."¹

The financial responsibility for the nation's public schools is shared by federal, state, and local governments. Historically, Washington's role has been limited, in large part because education was not one of the functions the Constitution delegated to the federal government. The basic division of labor -- that between states and their school districts -- is determined at the state level, where the ultimate constitutional responsibility for providing public education rests. States have usually delegated much of the administrative, and often most of the financial, responsibility for education to school districts or to municipalities, counties, and other local governments that operate schools.²

¹Michigan Department of Education; *Ranking of Michigan Public School Districts by Selected Financial Data*, 1968-69, Lansing, Michigan (December, 1969), p. 2.

²R.D. Reischauer and R. W. Hartman; *Reforming School Finance*, Washington, D. C., The Brookings Institution (1973), p. 4.

Table 1 shows that the national average of receipts from local sources is more than half of all receipts. The national average from local sources remained relatively constant from 1965 to 1968, at slightly more than 50 per cent. The larger the portion of revenue funds coming from local sources, the greater the disparity of revenue within a state's school system. The same principle holds true for the various states. That local funding results in discrimination is the contention of many law suits decided or pending against several educational systems.³

Table 1 also shows that the average per cent of Michigan revenue receipts from local and other sources was lower than the U.S. average in each year from 1965 to 1969. However, even though the Michigan per cent was less than 50 per cent for two of the four years, it still constituted the largest single source of school revenue.

Factors Affecting Local Sources of Revenue.

By using step-wise regression analysis, six variables were found to be statistically significant in their affect on local sources of revenue. These six variables, cited in Table 2, are; (1) state equalized property valuation, (2) millage rates voted, (3) 1960 median school years completed by county residents, (4) 1967 average general property tax rates by county, (5) millage rates allocated by the state, and (6) 1967 per capita personal income by county.

In 1965 and 1966, only three of the independent variables shown had any effect on local revenue. The three significant variables were

³As of 1973, court cases are now pending or have been decided in the following states; California, Minnesota, Texas, New Jersey, Wyoming, Arizona, Kansas, and Michigan. *Ibid.*, p. 2.

TABLE 1

PER CENT OF REVENUE RECEIPTS FROM LOCAL AND OTHER^a SOURCES BY THE STATE OF MICHIGAN AND THE FIFTY STATES AND THE DISTRICT OF COLUMBIA FOR THE YEARS 1965-66, 1966-67, 1967-68, and 1968-69

Years	U. S. Average	Michigan Average
1965-66	53.1	50.0
1966-67	52.1	46.8
1967-68	52.0	45.3
1968-69	51.9	51.7

^aLocal and other receipts here includes revenue receipts from local and intermediate sources, gifts, and tuition and fees from patrons.

Sources:

1965-66: *Estimates of School Statistics, 1965-66*, Research Report 1965-R17, Research Division -- National Education Association, (Washington, D.C., National Education Association, 1965), p. 32.

1966-67: *Estimates of School Statistics, 1966-67*, Research Report 1966-R20, Research Division -- National Education Association, (Washington, D. C., National Education Association, 1966), p. 32.

1967-68: *Estimates of School Statistics, 1967-68*, Research Report 1967-R19, Research Division -- National Education Association, (Washington, D. C., National Education Association, 1967), p. 33.

1968-69: *Estimates of School Statistics, 1968-69*, Research Report 1968-R16, Research Division -- National Education Association, (Washington, D. C., National Education Association, 1968), p. 33.

TABLE 2

STEP-WISE REGRESSION ANALYSIS BETWEEN REVENUE FROM LOCAL SOURCES AND STATE EQUALIZED VALUATION PER RESIDENT MEMBER, MILLAGE RATES VOTED, 1960 MEDIAN SCHOOL YEARS COMPLETED BY COUNTY, 1967 AVERAGE GENERAL PROPERTY TAX RATES, MILLAGE RATES ALLOCATED, AND 1967 PER CAPITA PERSONAL INCOME BY COUNTY FOR MICHIGAN FOR THE YEARS 1965, 1966, 1967, and 1968.

Independent Variables	1965	1966	1967	1968
Computed "T" Values				
State Equalized Valuation	46.758	53.204	44.973	59.389
Millage Rates Voted	15.017	19.600	10.570	22.231
1960 Median School Years Completed	2.437	3.582	2.356	1.888
1967 Avg. General Property Tax Rate	1.372	-0.162	2.420	2.378
Millage Rates Allocated	-1.727	0.468	-17.810	4.386
1967 Per Capita Personal Income	1.110	0.327	3.800	-1.629
Multiple Correlation Coefficients				
Step 1	.810	.806	.778	.837
Step 2	.907	.928	.841	.941
Step 3	.912	.932	.882	.944
Step 4	.913	.933	.899	.945
Step 5	.913	.933	.906	.945
Step 6	.913	.933	.907	.945

Source:

Computed from data found in:

1965: *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

1966: *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1968.

1967: *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, 1968.

1968: *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

state equalized property valuation (the most important in all four years), millage rates voted, and 1960 median school years completed. The three remaining independent variables (1967 average general property tax rates, millage rates allocated, and 1967 per capita personal income) were not statistically significant in the determination of the amount of school revenues provided by the local community in either 1965 or 1966.

However, in 1967, the first year of compulsory collective bargaining in Michigan, all six independent variables were statistically significant in determining the magnitude of local revenue. State equalized property valuation was still the most significant independent variable, but millage rates allocated by the state to the local school districts was now the second most significant independent variable. In both 1965 and 1966, allocated millage rates were not statistically significant in determining local revenues. Therefore, something happened between 1966 and 1967 to cause allocated millage rates to assume significant proportions. Since compulsory collective bargaining occurred between 1966 and 1967, it is probable that bargaining was the cause of the increased importance of allocated millage rates. This increased importance would be the result of the state taking a more dominant role in the determination of compulsory revenues at the local level.

In 1968 millage rates allocated by the state were still statistically significant in the determination of local revenues, but they were no longer the second most significant variable. Millage rates voted had once again assumed its position as the second most important independent variable. Therefore, in 1967 the state board took some of

the power away from the local school district. The movement of power from the local level to the state level in 1967 is seen in the reduced importance in millage rates voted by the local district. However, when anticipated teacher demands did not materialize in 1967 (this is covered in much greater detail in a later chapter), the state board of education decreased the allocated millage rates in 1968. This can be seen in the reduction of millage rates allocated from second to third place in importance. Once again, in 1968 millage rates voted by the local school districts was the second most important variable in determining local school revenues.

The "Computed 'T' Values" of Table 2 indicates those independent variables that were significant in determining local revenues. The section of Table 2 under the heading "Multiple Correlation Coefficients" show how significant the independent variables were. For example, in 1965, the three significant variables (state equalized valuation, millage rates voted, and 1960 median county school years completed) produced a multiple correlation coefficient of .912, a highly significant correlation. In fact, from 1965 to 1968, the significant variables explained from 80 to 90 per cent of the movement in local revenue amounts.

State Equalized Valuation and Local Sources of Revenue.

Table 3 is a further examination of the relationship between local sources of revenue and state equalized property valuation, using partial correlation analysis. In Table 3 nine variables were held constant one at a time, with the effect on the correlation between local sources of revenue and state equalized valuation being measured.

TABLE 3

PARTIAL CORRELATION BETWEEN GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES AND STATE EQUALIZED VALUATION PER RESIDENT MEMBER AMOUNT IN MICHIGAN FOR THE YEARS 1965-66, 1966-67, 1967-68, and 1968-69.

Variables Held Constant	Partial Correlation Coefficients			
	1965	1966	1967	1968
State Direct Appropriations from the General Fund Per Pupil	.49	.50	.39	.50
Total General Fund Expenditures Per Pupil	.72	.72	.73	.81
Instruction Salaries Expenditures Per Pupil	.74	.76	.71	.82
Average Annual Teachers' Salary Amount	.80	.81	.77	.83
Operation Millage Rates Voted	.89	.92	.79	.93
1960 County Population Aged 65 and Over	.80	.81	.78	.83
1960 Meidan School Years Completed by County	.82	.83	.80	.86
1967 Per Capita County Income	.82	.83	.80	.86
1967 Average General County Property Tax Rate	.86	.86	.82	.88
Simple Correlation	.80	.81	.78	.84

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

When state direct appropriations from the general fund per pupil was held constant, the correlation between general fund revenues per pupil from local sources and state equalized valuation per resident member amount declined significantly. For example, in 1965, the simple correlation between local sources and equalized valuation was .80. However, when state direct appropriations was held constant that correlation fell to .49. In 1966, the correlation fell from .81 to .50 when state direct appropriations were held constant, and in 1967 the correlation declined by half, from .78 to .39. In 1968, the correlation fell from .84 to .50. Therefore, the greatest impact was felt in 1967 (as was pointed out in Table 2), but in all four years state direct appropriations had a significant effect on the relationship between general fund revenues from local sources and state equalized valuation. State direct appropriations had a positive effect on the relationship between local sources of revenue and state equalized valuation, because when direct appropriations were held constant the correlation between local sources and state equalized valuation declined significantly. Therefore, this indicates that state direct appropriations in 1967 were as important in determining local sources of revenue as was state equalized property valuation.

Those variables in Table 3 that had a positive effect on the correlation between local sources of revenue and state equalized valuation were: total general fund expenditures per pupil, instruction salaries expenditures per pupil, and state direct appropriations from the general fund per pupil. The following variables had a negative effect on the relationship between local sources of revenue and state

equalized valuation: operation millage rates voted, 1967 average general county property tax rates, and to a much lesser extent, 1960 median school years completed by county, and 1967 per capita county income. The following variables had little or no effect; average annual teachers' salary amount, and 1960 county population aged 65 and over.

In 1965, 1966, and 1968, operation millage rates voted had the most significant negative impact on the correlation between local sources of revenue and state equalized valuation. However, in 1967, millage rates voted had practically no effect on the correlated variables. This finding is consistent with the findings in Table 2. That is, millage rates voted was the second most important variable in determining local revenues in 1965, 1966, and 1968. However, in 1967, millage rates allocated was the second most important variable in determining local sources of revenue, and millage rates voted was third.

Variance of Local Sources of Funds: Between and Within Counties

Table 4 represents an analysis of local sources of revenue in Michigan by county and school district. By using variance analysis the between county variance is compared to the within county variance. The resulting "F" value is between county variance divided by within county variance. When the "F" value is larger than 1.47, the between county variance is significantly larger than the within county variance, at the 99 per cent confidence level.

Table 4 shows that between county variance is significantly larger than within county variance in all four years. This means that local sources of revenue have more variation between the counties in

TABLE 4

VARIANCE ANALYSIS OF GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES IN MICHIGAN: 1965-66, 1966-67, 1967-68, and 1968-69.

Variance Source	1965-66	1966-67	1967-68	1968-69
Between County	21,293.0	26,283.0	31,789.0	42,063.0
Within County	7,995.0	9,155.0	12,543.0	16,639.0
F Value	2.663	2.858	2.534	2.528

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

Michigan than within Michigan counties. However, during the four years under study, both between and within county variance increased substantially (both more than doubling). The doubling of the variation could be caused by either greater dispersion in property values or greater variation in the tax structure. But whatever the cause, the fact remains that the basic source of school revenues (local sources) became more unequal over time, in spite of (or because of) compulsory collective bargaining. *Ceteris paribus*, the increased inequality in local revenues should affect equality of school expenditures negatively. The poor districts within Michigan would fall further behind the affluent districts in terms of available revenue.

Variations in State Equalized Property Valuation.

State equalized property valuation is the most important determinant of local revenues. The distribution of property within Michigan, and how it relates to local sources of revenue are significant questions. Table 5 shows state equalized property valuation per resident member in Michigan for the top and bottom ten districts by variation amount for the school year 1965-66. Table 6 shows the same thing for 1968-69.

For the year 1965-66, state equalized property valuation per resident member ranged from a high of \$53,156 to a low of \$1,319. Consequently, Forsyth (the bottom district in Table 5) had only 2.48 per cent as much property valuation per resident member as River Rouge City (the top district). By 1968-69, the bottom district (Rudyard Township) had a property valuation of 3.48 per cent of the top district (River Rouge City). Therefore, even though the difference between the top and bottom districts in Michigan were less (as a per cent) in 1968-69 than

TABLE 5

STATE EQUALIZED PROPERTY VALUATION PER RESIDENT MEMBER IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS BY VALUATION AMOUNT FOR THE YEAR
1965-66:

Rank	School District	County	Valuation Amount
1.	River Rouge City	Wayne	\$53,156
2.	Riverview Community	Wayne	48,391
3.	Mastadon	Iron	41,909
4.	Caseville	Huron	37,946
5.	Burt Township	Alger	37,569
6.	White Pine	Ontonagon	36,686
7.	Leland	Leelanau	35,379
8.	Frankenmuth	Saginaw	34,137
9.	East China Township	St. Clair	33,295
10.	Ecorse	Wayne	32,889
524.	Bath Community	Clinton	5,073
525.	Birch Run Area	Saginaw	5,015
526.	Adams Township	Houghton	4,946
527.	Holton	Muskegon	4,829
528.	Inkster City	Wayne	4,810
529.	Rock River Township	Alger	4,722
530.	Trout Creek	Ontonagon	4,685
531.	Memphis Community	St. Clair	3,829
532.	Rudyard Township	Chippewa	1,395
533.	Forsyth	Marquette	1,319

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

TABLE 6

STATE EQUALIZED PROPERTY VALUATION PER RESIDENT MEMBER IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS BY VALUATION AMOUNT FOR 1968-69.

Rank	School District	County	Valuation Amount
1.	River Rouge City	Wayne	\$57,284
2.	Leland	Leelanau	52,034
3.	Essexville Hampton	Bay	48,039
4.	Caseville	Huron	44,673
5.	Riverview Community	Wayne	40,838
6.	Ecorse	Wayne	40,107
7.	Dearborn City	Wayne	38,438
8.	East China Township	St. Clair	36,091
9.	Johannesburg-Central	Otsego	35,946
10.	Gerrish Higgins	Roscommon	35,009
516.	Hesperia Community	Newaygo	5,988
517.	Bark River Harris	Delta	5,673
518.	Holton	Muskegon	5,433
519.	Rock River Township	Alger	5,375
520.	Fruitport Community	Muskegon	5,137
521.	Mathias Township	Alger	4,912
522.	Adams Township	Houghton	4,751
523.	Oakridge	Muskegon	3,879
524.	Forsyth	Marquette	2,442
525.	Rudyard Township	Chippewa	1,993

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

in 1965-66, the absolute dollar differences were greater. Consequently, the very basis of local sources of school revenues are extremely unevenly distributed. Thus, if equality in expenditures on education in Michigan is desired, most of the money in the poorer districts must come from other than local sources.

Millage Rates Voted.

By using step-wise regression analysis (Table 2), we saw that millage rates voted by the local school district was the second most significant variable in determining the magnitude of local school revenues. Table 7 shows zero-order correlation between general fund revenues per pupil from local sources, operation millage rates voted, and 1960 population 65 years of age and over as a per cent of total 1960 population in Michigan for 1965, 1966, 1967, and 1968.

In order to make the age variable meaningful, it was necessary to work with an age percentage rather than with the actual number of people over 65 in the county. That is, a county could have 10,000 older citizens living in it, but this number might be 50 per cent of the county population or it could be 1 per cent of the county population. Therefore, merely by running correlations between the actual number of elderly would have little meaning because their voting strength would have been unaccounted for.

The reason that age of county residents is important is because older people (especially those over 65 years of age) do not have children in school, and consequently they may not be as interested in education as younger members of the community. Also, because of penurious social security payments, older citizens are usually the more impecunious members of the community. Therefore, they would be expected to oppose

TABLE 7

ZERO ORDER CORRELATION BETWEEN GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES, OPERATION MILLAGE RATES VOTED, AND 1960 POPULATION SIXTY -FIVE YEARS OF AGE AND OVER AS A PER CENT OF TOTAL 1960 POPULATION IN MICHIGAN FOR THE YEARS 1965, 1966, 1967, AND 1968.

	<u>x₁</u>	<u>x₂</u>	<u>x₃</u>
--1965--			
x ₁	1.0	.34	-.14
x ₂		1.0	-.23
x ₃			1.0
--1966--			
x ₁	1.0	.37	-.14
x ₂		1.0	-.27
x ₃			1.0
--1967--			
x ₁	1.0	.27	-.15
x ₂		1.0	-.18
x ₃			1.0
--1968--			
x ₁	1.0	.37	-.18
x ₂		1.0	-.32
x ₃			1.0

x₁ = General fund revenues per pupil from local sources

x₂ = Operation millage rates voted

x₃ = 1960 population sixty-five and over as a per cent of total 1960 population

Sources: Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

school millage rates voted due to their income and the fact that they no longer have children in school.

Table 7 shows the negative effect of the elderly on local sources of revenue and on millage rates voted. The correlation between general fund revenues and operating millage rates voted is positive. In fact, as Table 2 indicated, the correlation was significant because of the computed "T" value. Thus, for 1965, operation millage rates voted was positively correlated with general fund revenues per pupil from local sources. However, 1960 population 65 and over as a per cent of total 1960 population was negatively correlated with general fund revenues per pupil from local sources. This means the two variables move in opposite directions, i.e., as the per cent elderly increases, the amount of revenue from local sources decreases. Although the magnitude of the negative correlation is not great, being only $-.14$, it still indicates that as a determinant of local revenues the per cent of population 65 and over is a negative factor. The same is true for 1966, 1967, and 1968.

Thus, the elderly had a negative effect on local sources of revenue in all four years. However, they had a much greater negative effect on operation millage rates voted. In 1965, the correlation between millage rates voted and per cent of population over 65 was $-.23$. In 1966 the correlation was $-.27$, in 1967 it was $-.18$, and in 1968 it was $-.32$. Therefore, the effect the elderly exercised on local revenue was in direct proportion to their voting strength.

In 1967 the correlation declined between general fund revenues per pupil from local sources and operation millage rates voted. In

1966 the correlation was .37, in 1967 it fell to .27, and in 1968 it increased to .37. Therefore, in the first year of compulsory collective bargaining, millage rates voted declined in importance in determining local school revenues. This decline indicates that local revenues were determined more by compulsory allocations than by the more democratic voting method, an indication that where confrontation between teachers' union demands and the population is eminent, the state usurps the authority of the local population.

To lend further credence to the previous analysis, an analysis of variance (Table 8) of the three classifications of operating millage rates is presented. They are operating millage rates allocated by the state, operating millage rates voted, and the total operating millage rates.

Looking at operation voted in Table 8, it is seen that between county variance increased significantly from 1966-67 to 1967-68. However, at the same time, within county variance increased more. Collective bargaining may have caused the greater disparities within districts and between counties.

At the same time, operation millage rates allocated by the state showed an even greater variation. In fact, the within county variance in allocated millage rates increased to such an extent that the "F" value indicates there was no difference between within county and between county variance. The state more than compensated for the negative effect of voted millage rates, by allocating millage rates based on local school district needs. As local school districts voted against increased millage rates in the poorer districts, the state more than compensated for this by increasing the allocated millage rates.

TABLE 8

ANALYSIS OF VARIANCE FOR OPERATING MILLAGE RATES ALLOCATED, VOTED, AND TOTAL MILLAGE RATES FOR DEBT RETIREMENT BY MICHIGAN COUNTY FOR THE YEARS 1965-66, 1966-67, 1967-68, and 1968-69.

Millage Rates	1965-66	1966-67	1967-68	1968-69
Operation Allocated				
Between County	56,772.0	61,835	186,769.0	59,168.0
Within County	8,335.0	3,425.0	128,464.0	1,795.0
F Value	6.811	18.054	1.454	32.964
Operation Voted				
Between Counties	714,989.0	769,441.0	1,172,685.0	771,808.0
Within Counties	98,022.0	93,200.0	238,668.0	134,527.0
F Value	7.294	8.256	4.913	5.737
Operation Total				
Between Counties	609,811.0	700,501.0	734,688.0	774,852.0
Within Counties	107,173.0	98,242.0	136,921.0	136,601.0
F Value	5.690	7.130	5.366	5.672
Millage Rates for Debt Retirement				
Between Counties	222,861.0	173,620.0	167,212.0	199,450.0
Within Counties	71,278.0	70,937.0	64,587.0	64,280.0
F Value	3.127	2.448	2.589	3.103

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

Evidence for that last statement is to be found in total operation millage rates. Between county variation increased only slightly from 1966-67 to 1967-68. When compared to the allocated millage rates and operation voted millage rates, it remained nearly constant. The same is true of the total within county millage rates. Although there was an increase in the variance within counties, relative to allocated and voted, it remained relatively constant. It is obvious that the state compensated for changes in the voted millage rates by increasing the allocated millage rates.

The fourth part of Table 8 indicates that while the local voters did not decrease their millage rates for school operation, they could vote against millage rates for school debt retirement. In 1967-68, both the between county and within county variance declined from the 1966-67 variance. This decline would indicate that the local voters voted against school bond issues in 1966-67 and 1967-68, over the previous year. Consequently, capital expenditures may have declined as a result of collective bargaining demands by teachers' unions.

SUMMARY

Michigan obtains about half of its education receipts from local sources, a slightly smaller amount than is true for the nation as a whole. State equalized valuation is the most significant single determinant of local sources of revenue. Because the valuation of property per resident varies radically within the state, some counties are able to finance education much more adequately than others. In all four school years under study the general fund revenues per pupil from local sources increased in disparity both between and within counties.

The disparity is greater between counties than within counties. Part of the widening disparity of general fund revenues per pupil is due to widening millage rates voted by local citizens. The state has attempted to equalize this disparity partially through increasing allocated millage rates.

CHAPTER III

STATE AND FEDERAL REVENUE

Revenue from state sources is divided into two major categories; (1) state direct appropriations, "all funds received from the state which are appropriated by the state out of state funds. The major source of state revenue in most districts is the State School Aid Membership Allowance," and (2) redistribution of federal funds, "amounts received or to be received from the federal government but allocated to the state for redistribution to school districts. The major source of such revenue in most districts is Title 1 of the Elementary and Secondary Education Act of 1965.¹

State Direct Appropriations.

Table 9 shows the partial correlation between general fund revenues per pupil from local sources and state direct appropriations per pupil from the general fund for 1965-66, 1966-67, 1967-68, and 1968-69. The most apparent and obvious characteristic of Table 9 is that all correlation coefficients are negative. The simple correlation between the two variables is in the negative seventies. Thus, as one variable increases, the other variable decreases. In other words, as local revenues decrease, the amount of state direct revenues increase. Thus,

¹Michigan Department of Education; *Ranking of Michigan Public School Districts by Selected Financial Data, 1968-69*, Lansing, Michigan (December, 1969), pp. 2-3.

TABLE 9

PARTIAL CORRELATION BETWEEN GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES AND STATE DIRECT APPROPRIATIONS PER PUPIL FROM THE GENERAL FUND IN MICHIGAN FOR THE YEARS 1965-66, 1966-67, 1967-68, AND 1968-69.

Variables Held Constant	Partial Correlation Coefficients			
	1965	1966	1967	1968
Total General Fund Expenditures Per Pupil	-.79	-.73	-.75	-.77
Instruction Salaries Expenditures Per Pupil	-.63	-.68	-.77	-.78
Average Annual Teachers' Salary Amount	-.71	-.71	-.76	-.76
State Equalized Valuation Per Resident Member	-.03	-.06	-.38	-.18
Operation Millage Rates Voted	-.82	-.83	-.82	-.85
1960 County Population Aged 65 and Over	-.72	-.73	-.78	-.78
1960 Median School Years Completed by County	-.79	-.79	-.79	-.79
1967 Per Capita County Income	-.73	-.73	-.78	-.78
1967 Average General County Property Tax Rate	-.76	-.78	-.82	-.81
Simple Correlation	-.73	-.73	-.78	-.78

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

state money is used to make up for a lack of local revenues.

From an analysis of the variables that affect the relationship between local sources of revenue and state direct appropriations per pupil, state equalized valuation per resident member amount has a very significant impact. When state equalized valuation was held constant, the correlation between local sources and state direct sources nearly disappeared in 1965-66 and 1966-67. However, in 1967-68 the correlation between local sources of revenue and state direct appropriations was much greater when state equalized property valuation was held constant, although the correlation was still less than half the simple correlation. Since the correlation coefficients were all negative, the fact that holding state equalized property valuation constant caused a decrease in the correlation between local sources of revenue and state direct appropriations means that the state used equalized property values as the major criterion in determining the magnitude of state contributions. However, in 1967-68 equalized valuation was not as important in determining the allocative process for state contributions. Therefore, since 1967 was the first year of compulsory collective bargaining, it is assumed that bargaining demands affected the relationship between local revenues and state direct appropriations.

The only other variable in Table 9 that had much influence on local sources of revenue and state direct appropriations was operation millage rates voted, and here the effect was minimal.

Table 10 shows the variance analysis for state direct appropriations in Michigan for 1965-66, 1966-67, 1967-68, and 1968-69. Both the between county variance and the within county variance are relatively

TABLE 10

VARIANCE ANALYSIS FOR STATE DIRECT APPROPRIATIONS, BETWEEN AND WITHIN COUNTIES IN MICHIGAN FOR THE YEARS 1965-66, 1966-67, 1967-68, 1968-69.

Variance Source	1965-66	1966-67	1967-68	1968-69
Between County	2,525.0	4,036.0	4,689.0	7,575.0
Within County	1,571.0	2,364.0	2,704.0	3,770.0
F Value	1.607	1.707	1,734	2.009

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

small when compared to the variance in local sources of revenue (Table 4). Also, the "F" value is such that there is a statistical difference between the within county and between county variance for the years 1965-66, 1966-67, 1967-68, and 1968-69. However, the between county variance is increasing more rapidly than the within county variance. This increase in variance in state direct appropriations does not appear to be tied to collective bargaining or union activities, because the change in variance (both within and between counties) was the least from 1966-67 to 1967-68, the first year of compulsory collective bargaining. However, the fact that the variance is increasing over the period does indicate the state is discriminating more in its appropriations, presumably in favor of the poorer districts rather than the more affluent districts.

State Redistribution of Federal Funds.

These funds represent amounts received or to be received from the federal government but allocated to the state for distribution to school districts. The major source of such revenue in most districts is Title 1 of the Elementary and Secondary Education Act of 1965.

The Elementary and Secondary Education Act (ESEA) was the largest federal program in 1971 that was directed at improving the educational opportunities of children from disadvantaged homes through compensatory payments. Although compensatory services, ranging from remedial specialists to medical treatment, are supposed to be provided for eligible children, there is so far not much evidence that the Title 1 program has significantly upgraded the academic performance of disadvantaged children. Many reasons have been offered for the disappointing results. Among these is the fact that in some areas -- especially rural districts -- school expenditures, including Title 1 funds, are so low that they are not

sufficient for a good education. There is also evidence that Title 1 funds have in many instances been substituted for local funds. If the target group does not actually get any special care or compensatory treatment, it is not surprising that its performance lags. In some cases, disadvantaged children are so highly concentrated in particular schools that recent Title 1 funding, even without slippage of funds, cannot be expected to make any significant difference. In such cases, either massive compensatory funds or some system of breaking up the concentration of low income children would seem to offer the only hope of success.²

Table 11 presents an analysis of variance of state Redistribution of Federal funds for the period 1965 to 1969. It is important to note that in 1965-66, the between county variation was about the same as in 1968-69. Although the variation did increase quite significantly in 1966-67, it declined in 1967-68. However, none of the change in the between county variation for state redistribution of federal funds was as great as the change in between county variation in local sources of revenue (Table 4) or in state direct appropriations (Table 10). Labor union lobbying for increased Elementary and Secondary School Act funds has not significantly increased the funds for poorer school districts.

Federal Direct Appropriations

Direct Federal Appropriations are those "amounts received or to be received directly from the federal government."³ These funds include such things as impacted area aid which is money received by districts with a disproportionate number of federal employees living in them.

²R. D. Reischauer and R. W. Hartman; *Reforming School Finance*, *loc cit.*, pp. 149-151.

³*Michigan Public Schools*, *loc cit.*, (1969), p. 3.

TABLE 11

VARIANCE ANALYSIS FOR STATE REDISTRIBUTION OF FEDERAL FUNDS, BETWEEN AND WITHIN COUNTIES IN MICHIGAN: 1965-66, 1966-67, 1967-68, AND 1968-69.

Variance Source	1965-66	1966-67	1967-68	1968-69
Between County	300.0	882.0	511.0	382.0
Within County	104.0	234.0	185.0	141.0
F Value	2.881	3.776	2.758	2.707

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

Table 12 shows the between county and within county variance in direct federal revenues. In 1965-66, the within county variance explained most of the variation in Michigan, because the variation within counties was larger than variation between counties. Theoretically federal impacted funds are allocated on the basis of need since the federal government pays no taxes to the local school districts. Insufficient data are available to determine whether the increased variance in funds in 1968-69 was due to a demonstration of greater need in the areas receiving the money.

SUMMARY

State direct appropriations vary indirectly with general fund revenues from local sources. They tend to go to low income counties and districts. Not only does the state attempt to make school expenditures more equal by the state equalized valuation but also by state direct appropriations. State direct appropriations increased in importance in 1967-68, and the increase was influenced by collective bargaining in the state. Over the entire four school years studied, the variance in state direct appropriations increased both between counties and within counties. However, the impact of union lobbying was negligible in providing larger payments to poorer districts since the least increase came in 1967-68, the first year of bargaining.

Federal aid to education is such a small part of total education expenditures that it does not have a major impact on teachers' salaries. Both the two major programs, the Elementary and Secondary School Act and federal aid to impacted areas, have attempted to channel money to poor children and areas disadvantaged because of need and because federal facilities pay no property taxes.

TABLE 12

ANALYSIS OF VARIANCE FOR FEDERAL DIRECT APPROPRIATIONS, BETWEEN AND WITHIN COUNTIES IN MICHIGAN FOR THE YEARS 1965-66, 1966-67, 1967-68 and 1968-69.

Variance Source	1965-66	1966-67	1967-68	1968-69
Between County	346.0	524.0	455.0	1,145.0
Within County	585.0	249.0	175.0	468.0
F Value	0.591	2.103	2.600	2.447

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

CHAPTER IV

SCHOOL REVENUES: TOP AND BOTTOM TEN DISTRICTS

This chapter is designed to clarify the statistical analysis of Chapters II and III. Chapters II and III analyzed data for all school districts in Michigan, while this chapter will only include the top ten school districts and the bottom ten school districts. Therefore, the statistics of Chapters II and III will be given added meaning by analyzing the range extremes in school revenues within Michigan.

The data in this chapter will deal with revenues per pupil, thus obviating the necessity of considering changes in the number of students within a school district from one year to the next. If aggregate data were being used in dealing with general fund revenues, there might be a significant increase in general fund revenues from one year to the next that would be offset by an increase in the total number of students (precipitated, for example, by the consolidation of two or more school districts); consequently, the per pupil revenue might remain constant or actually decline. Thus, by working with per pupil data the total number of students are, in effect, being held constant over time.

Local Sources

As in Chapter II, the first of three sources of school revenue to be examined is local revenue. Once again, local revenue is the money produced within the school district used for operating the schools.

The major source of local revenue in most districts is the general property tax levy.

1965-66 Comparisons.

Table 13 shows the 1965-66 general fund revenues per pupil from local sources for the ten districts raising the most revenue per pupil, and the ten districts raising the least revenue per pupil. In Mastadon Township of Iron County local revenues amounted to \$808.72 per pupil. On the other hand, Forsyth in Marquette County (the county next to Iron County) local revenues amounted to only \$44.72 per pupil. These amounts indicate the substantial difference in local monies available for education within the borders of one fairly affluent state. In fact, Forsyth only provided 6 per cent as much local revenue as did Mastadon Township. Or looking at it another way, Mastadon Township provided 18 times more in local revenues per pupil than did Forsyth.

The 1965-66 average of the top ten districts was \$631.50, whereas the bottom ten districts had an average of \$76.69. Consequently, the top ten districts averaged eight times more revenue than the bottom ten districts.

The fact that Wayne County dominated the top ten school districts in Table 13 was due in large measure to the wealthy suburbs of Detroit. On the other hand, the bottom ten districts were rather well spread over the state. In fact, no single county accounted for two of the poorest districts.

1968-69 Comparisons

Looking at 1968-69 data (Table 14), Dearborn City had the most revenue per pupil (\$959.67). On the other hand, Rudyard Township, now

TABLE 13

1965-66 GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES: THE TOP TEN AND BOTTOM TEN DISTRICTS BY AMOUNT OF REVENUES.

	County	Amount Per Pupil
1. Mastadon Township	Iron	\$808.72
2. Riverview Community	Wayne	679.92
3. White Pine	Ontonagon	676.22
4. River Rouge City	Wayne	664.89
5. Republic Central	Marquette	652.39
6. Grosse Pointe	Wayne	605.94
7. Ecorse	Wayne	563.65
8. Dearborn City	Wayne	559.77
9. Highland Park City	Wayne	553.19
10. Burt Township	Alger	550.31
524. Calumet	Houghton	99.39
525. Summerfield	Monroe	96.18
526. Maple Valley	Eaton	93.67
527. Birch Run Area	Saginaw	88.99
528. Holton	Muskegon	78.00
529. Freesoil Community	Mason	75.44
530. Grant	Newaygo	72.92
531. Shelby	Oceana	69.80
532. Rudyard Township	Chippewa	47.81
533. Forsyth	Marquette	44.72

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

TABLE 14

GENERAL FUND REVENUE PER PUPIL FROM LOCAL SOURCES FOR 1968-69: THE TOP AND BOTTOM TEN DISTRICTS BY AMOUNT OF REVENUE.

Rank	School District	County	Amount Per Pupil
1.	Dearborn City	Wayne	\$959.67
2.	Grosse Pointe	Wayne	883.15
3.	River Rouge City	Wayne	870.12
4.	Oak Park	Oakland	836.74
5.	White Pine	Ontonagon	819.97
6.	Caseville	Huron	795.18
7.	Riverview Community	Wayne	788.59
8.	Republic Michigamme	Marquette	778.02
9.	Leland	Leelanau	775.06
10.	Ecorse	Wayne	761.93
516.	Rock River Township	Alger	124.18
517.	Fruitport Community	Muskegon	121.08
518.	Millington Community	Tuscola	118.42
519.	Maple Valley	Eaton	114.25
520.	Oakridge	Muskegon	114.12
521.	Calumet	Houghton	98.72
522.	Shelby	Oceana	96.71
523.	Holton	Muskegon	90.32
524.	Forsyth	Marquette	65.66
525.	Rudyard Township	Chippewa	62.30

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

in last place, provided \$62.30 per pupil. Thus, Rudyard Township raised only six per cent as much revenue locally as Dearborn City.

In 1968-69 Wayne County continued to dominate the top ten districts with five out of the ten districts. At the other end of the revenue spectrum, Muskegon County accounted for three of the poorest districts.

The 1968-69 average of the top ten districts was \$826.84, whereas the bottom ten had an average of \$76.69. Thus, the top ten districts averaged eleven times more revenue than the bottom ten districts.

Comparing 1965-66 with 1968-69, the top district increased its revenues per pupil by \$150.95, while the bottom district increased its revenues by only \$17.58 per pupil. These amounts represent increases of nineteen per cent and thirty-nine per cent, respectively. Examining the top ten districts over time, River Rouge City, Republic Central (changed in 1966 to Republic Michigamme by consolidation), Grosse Pointe and Dearborn City were all in the top ten in each of the four years.¹ The following districts on each list were in the bottom ten; Calumet, Maple Valley, Holton, Shelby, Rudyard Township, and Forsyth. Thus, four districts started in the top ten and stayed in the top ten, while six districts started in the bottom ten and remained there.

State Direct Appropriations

State Direct appropriations are the state funds received by the local school districts which are appropriated out of state funds. The

¹Tables covering the years 1966-67 and 1967-68 can be found in Appendix C.

major source of state revenue in most districts is the State School Aid Membership Allowance.

1965-66 Comparisons

Table 15, State Direct Appropriations per Pupil, shows that in 1965-66, Buckley Community received the most in state direct appropriations with receipts of \$348.39 per pupil. However, comparing Table 15 with Table 13, 1965-66 General Fund Revenues from Local Sources, it is seen that Buckley Community was not one of the bottom ten districts in Table 13. Nor, for that matter, was the second recipient of state direct appropriations, North Dickenson. However, both Rudyard Township and Forsyth were. Out of the ten lowest districts in local revenues in 1965-66 (Table 13), only two were in the top ten in state direct appropriations. This is rather surprising, because it would be expected that the state would compensate for the lack of local funds.

Comparing the ten bottom districts in state direct appropriations with the top ten districts in local revenues for 1965-66, Leland, Frank-enmuth, East China Township, and Caseville were in the bottom ten in state direct aid and not in the top ten of local sources. Thus, the bottom ten in state direct aid more nearly corresponded to the top ten in local funds than did the top ten in state direct aid with the bottom ten in local sources. This would indicate, at least in 1965-66, that the affluent were penalized more by the state than the poor were helped. An analysis of the three years from 1966 through 1969 confirmed the 1965-66 experience.²

²Appendix A is a matrix of correlation coefficients between twenty-six variables.

TABLE 15

STATE DIRECT APPROPRIATIONS OF GENERAL FUND REVENUES PER PUPIL FOR 1965-66: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY APPROPRIATIONS AMOUNT.

Rank	School District	County	Amount Per Pupil
1.	Buckley Community	Grand Traverse	\$348.39
2.	North Dickenson	Dickenson	345.22
3.	Rudyard Township	Chippewa	337.00
4.	Forsyth	Marquette	334.65
5.	Rock River Township	Alger	325.16
6.	Hesperia Community	Newaygo	323.28
7.	Brimley	Chippewa	319.13
8.	Trout Creek	Ontonagon	318.65
9.	Meridian	Midland	318.20
10.	Inkster City	Wayne	317.49
524.	Mastadon	Iron	143.47
525.	Dearborn City	Wayne	136.75
526.	Leland	Leelanau	133.68
527.	White Pine	Ontonagon	133.26
528.	Ecorse	Wayne	127.00
529.	Frankenmuth	Saginaw	124.61
530.	East China Township	St. Clair	120.42
531.	Caseville	Huron	97.71
532.	Riverview Community	Wayne	47.89
533.	River Rouge City	Wayne	16.43

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

The difference between the top district, Buckley Community and the bottom district, River Rouge City, in direct state aid was \$331.96 per pupil. This compares with the spread of \$964.00 per pupil in local revenues. The bottom district in state direct aid received five per cent as much as the top district. In local funds, the lowest amount was six per cent of that provided in the top district. Thus, the state had a slightly wider dispersal of its funds than was found in locally derived revenues. This was true in 1967-68 and 1968-69 but not in 1966-67.

In 1965-66, state direct appropriations for the top ten districts averaged \$328.72 per pupil. The average for the bottom ten districts was only \$108.12 per pupil. Thus, the top ten districts averaged three times more than the bottom ten districts.

Later Year Comparisons.

State direct appropriations for the top district in receipts increased from \$348.39 in 1965-66 to \$479.59 in 1966-67.³ This represents an absolute increase of \$131.20, or thirty-eight per cent. From 1966-67 to 1967-68, the top district fell from \$479.59 to \$427.55, or \$52.04. This represents a reduction of eleven per cent. From 1967-68 to 1968-69, the revenue of the top district increased from \$427.55 to \$529.99, or \$165.44, which represents an increase of thirty-nine per cent. In three out of the four years under study the state direct appropriations for the top district increased, and in one year they decreased, the first

³The tables showing state direct appropriations for these three years are in Appendix C.

year of compulsory collective bargaining.

Examining the condition of the bottom district receiving state direct appropriations, the amount per pupil increased from \$16.43 in 1965-66 to \$33.31 in 1966-67, an increase of \$16.88, or more than double. Thus, while the top district was increasing thirty-eight per cent, the bottom district was increasing more, a rather substantial closing of the gap between the top and the bottom districts.

From 1966-67 to 1967-68 the top district declined from \$479.59 to \$427.55, and the bottom district declined from \$33.31 to \$14.20. Thus, the top declined eleven per cent, and the bottom declined fifty-seven per cent.

Comparing 1967-68 to 1968-69, the district in receipt of the smallest state direct revenue declined from \$14.20 to \$11.40, or nineteen per cent. During this same period the top district increased thirty-nine per cent. All ten districts in the top ten in 1968-69 received in excess of \$400.00 per pupil in state aid, and three districts received in excess of \$500.00 per pupil. However, in spite of gains made by the state in its direct funding of education, local sources still account for nearly twice the amount provided by the state. Therefore, education funding is still based largely upon local revenues rather than upon state revenues.

In 1966-67, the top ten districts averaged \$397.39 per pupil in direct state aid, while the bottom ten districts averaged only \$116.84 per pupil. These amounts represent an increase of \$68.67 per pupil and \$8.72 per pupil, respectively, over the previous year.

The 1967-68 average of the top ten districts in state aid was

\$404.51 per pupil, while the bottom ten districts averaged \$103.09 per pupil. Thus, the average of the top ten districts increased by \$7.12 per pupil from 1966-67 to 1967-68. During the same time period the bottom ten districts average decreased by \$13.75 per pupil. Consequently, the difference between the top and bottom ten districts increased during the first year of collective bargaining.

In 1968-69, just as in 1967-68, the average for the top ten districts increased, while the average for the bottom ten districts decreased. The top ten districts average increased by \$80.30 per pupil to \$484.81, and the bottom ten districts averaged decreased by \$1.37 per pupil to \$101.72.

State Redistribution of Federal Funds

These funds represent amounts received from the federal government but allocated to the state for distribution to school districts. The major source of such revenue in most districts is Title 1 of the Elementary and Secondary Education Act of 1965.

1965-66 Comparisons.

Michigan's redistribution of federal revenues was not a significant amount per pupil in 1965-66. The top district in receipt of these funds was Rock, Delta County, which received only \$106.12 per pupil. This compares with Mastadon Township, Iron County which raised \$808.72 per pupil locally that year, and Buckley Community, Grand Traverse County which received \$348.39 per pupil from state direct appropriations in 1965-66. Also, there were thirty-five school districts in the state that received no redistribution of federal funds in 1965-66. Obviously, there was not much federal revenue to begin with; the top district only

TABLE 16

STATE REDISTRIBUTION OF FEDERAL REVENUE PER PUPIL, 1965-66: THE TOP^a TEN DISTRICTS IN MICHIGAN BY REDISTRIBUTION AMOUNT.

Rank	School District	County	Amount Per Pupil
1.	Rock	Delta	\$106.12
2.	Onaway Area Community	Presque Isle	62.21
3.	Stephenson Consolidated	Menominee	61.75
4.	Beal City	Isabella	57.84
5.	Vanderbilt Area	Otsego	52.41
6.	Hamtramck City	Wayne	50.63
7.	Inland Lakes	Cheboygan	48.57
8.	Northport	Leelanau	47.42
9.	Weidman Community	Isabella	47.24
10.	Breitung Township	Dickenson	47.00

^aThere were thirty-five school districts that received no state redistribution of federal funds in 1965-66.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

received \$106.12 per pupil, and thirty-five districts received nothing.

Comparing the top ten districts receiving state redistribution of federal funds in 1965-66, with the bottom ten districts in local sources of revenue in 1965-66, none of the districts appear in both tables. Therefore, it would seem that the state did not redistribute federal funds on a compensatory consistent with Title 1 of ESEA. However, before passing final judgement, the state direct appropriations table should be examined. Here the same situation prevails. That is, there are no districts that appear in both the state direct appropriations table and in the state redistribution of federal funds table. Consequently, had the state used federal funds to equalize revenues, the redistribution of federal funds would have correlated with the bottom ten districts from local sources and the top ten districts from state direct appropriations. As it is there was little relationship between the redistribution of federal revenue and local sources of revenue and state direct appropriations.⁴

Later Year Comparisons.

The data for the later year (Appendix C) show about the same pattern, although several townships were in the top ten in both state direct

⁴As a matter of fact, the correlation coefficient for state redistribution of federal revenue and local revenue was -.03 in 1965-66, .04 in 1966-67, .06 in 1967-68, and .02 in 1968-69. The correlation between state redistribution of federal funds and state direct appropriations was .01 in 1965-66, -.07 in 1966-67, -.04 in 1967-68, and .07 in 1968-69. Going one step further, the correlation between state redistribution of federal funds and state equalized property valuation per resident member was .09 in 1965-66, .16 in 1966-67, .14 in 1967-68, and .06 in 1968-69. These correlation coefficients can all be found in Appendix A.

aid and state allocated federal money.

The general conclusions reached by Reischauer and Hartman in *Reforming School Finance* with respect to Title 1 funds⁵ were substantiated in Michigan. That is, in Michigan the amount of Title 1 revenues available were too small (a maximum of \$106.12 per pupil in 1965-66, \$157.24 per pupil in 1966-67, \$94.10 per pupil in 1967-68, and \$120.23 per pupil in 1968-69) to have much educational impact. Also, as the coefficients of correlation indicate, the state did not allocate the funds according to any discernible compensatory plan.

Federal Direct Revenues

Federal direct revenues are those amounts received directly from the federal government.

1965-66 Comparisons.

It can be seen from Table 17 that in 1965-66, Forsyth received \$164.55 per pupil in direct federal aid, while at the same time there were seventy-five school districts that received no direct federal aid. Also, it will be noted that Forsyth and Rudyard Township, the two big recipients of federal monies were the poorest two districts in revenues from local sources (Table 13). Thus the federal government seems to be helping the poorest districts more than the state was helping them, because Table 15 shows that Forsyth and Rudyard Township were fourth and third respectively in the receipt of direct state aid. Of course, the

⁵See Chapter VI, "The Federal Role in School Finance Reform," in Reischauer and Hartman: *Reforming School Finance*, *loc cit.*, pp. 147-174.

TABLE 17

FEDERAL DIRECT GENERAL FUND REVENUES PER PUPIL, 1965-66: THE TOP^a
TEN DISTRICTS IN MICHIGAN BY REVENUE AMOUNTS.

Rank	School District	County	Amount Per Pupil
1.	Forsyth	Marquette	\$165.65
2.	Rudyard Township	Chippewa	149.95
3.	Oscoda Area	Iosco	127.78
4.	Anchor Bay	Macomb	63.74
5.	Springfield, City	Calhoun	61.20
6.	Brimley	Chippewa	52.71
7.	Mt. Clemons Community	Macomb	49.90
8.	Bellaire	Antrim	41.87
9.	Marenisco	Gogebic	40.07
10.	Highland Park City	Wayne	39.30

^aThere were seventy-five school districts that received no direct federal funds in 1965-66.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

state might have made its decisions based upon knowledge that the federal government was going to provide aid to these two districts.⁶

Examining the data more closely, the districts received the most direct state aid in 1965-66, Buckley, North Dickenson, Rudyard Township, and Forsyth had total revenues per pupil of \$509.72, \$609.35, \$544.75, and \$540.43, respectively. Even though two of these districts received relatively large amounts of federal direct aid, the total revenues per pupil were far below the total of \$952.19 provided by Mastadon Township. Thus, state and federal revenues did not equalize per pupil revenues in all school districts.

Later Year Comparisons.

The maximum amount of federal direct revenues received per pupil increased from \$164.65 in 1965-66 to \$211.49 in 1966-67. Also, the number of districts receiving no federal direct aid decreased from seventy-five districts in 1965-66 to sixty districts in 1966-67. The decline is consistent with Table 1 which shows that the per cent of revenue receipts from local sources decreased from fifty per cent in 1965-66 to forty-seven per cent in 1966-67.

It should also be noted that the two poorest districts in local revenues, Rudyard Township and Forsyth, increased their amounts of direct federal help; Rudyard Township by \$33.51 and Forsyth by \$1.48. Thus, the two poorest districts in the state did not make significant gains in direct federal help from 1965-66 to 1966-67.

For the year 1967-68, the top district received \$160.40 per

⁶This would constitute "slippage" of funds and would defeat the purpose of Title 1.

pupil in direct federal aid. This represents a decrease of \$51.09 from the previous year. Also, Rudyard Township and Forsyth showed decreases in the amount of direct federal assistance received. Further, the number of districts receiving no federal aid increased from sixty districts in 1966-67 to sixty-nine districts in 1967-68. Consequently, the federal government in 1967-68 seems to be backing away from its commitment to Michigan education. This is further emphasized by the fact that state redistribution of federal funds showed a marked decrease during the same period of time.

Of the top ten districts in receipt of direct federal funds in 1967-68, only Rudyard Township and Forsyth appear in the bottom ten districts in providing local funds. These same two districts are the only ones found in the top ten of state direct appropriations. Consequently, federal funds are not being used exclusively to counteract maldistribution of revenues within the state.

Table 18 shows federal direct funds for the year 1968-69. Watersmeet Township is highest with receipts per pupil of \$348.01. This represents an increase over the previous year of \$187.61. Thus, Watersmeet Township had a rather dramatic increase in its federal aid. But there were some other districts that did not fare so well, because the number of districts receiving no federal help increased from sixty-nine in 1967-68 to 252 in 1968-69. Consequently, 1968-69 indicates an increased concentration of federal funds in fewer districts. Of the ten districts receiving the most federal funds per pupil, only Forsyth and Rudyard Township are in the bottom ten districts of local source funds, and in state direct appropriations only Forsyth is in the top ten districts.

TABLE 18

FEDERAL DIRECT GENERAL FUND REVENUES PER PUPIL, 1968-69: THE TOP^a
TEN DISTRICTS IN MICHIGAN BY REVENUE AMOUNT.

Rank	School District	County	Amount Per Pupil
1.	Watersmeet Township	Gogebic	\$348.01
2.	Forsyth	Marquette	215.90
3.	Oscoda Area	Iosco	184.42
4.	Marenisco	Gogebic	181.17
5.	Rudyard Township	Chippewa	136.42
6.	Alcona Community	Alcona	83.65
7.	Springfield City	Calhoun	79.97
8.	Burn Township	Alger	76.08
9.	Anchor Bay	Macomb	75.69
10.	Elkton-Pigeon-Bayport	Huron	75.83

^aThere were 252 school districts that received no direct federal funds in 1968-69.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

Local Revenues and Local Taxes

One objective of state educational assistance has been to compensate local school districts for the differences in their abilities to raise educational revenues from local tax sources.⁷ In Michigan the state board of education allocates a minimum millage rate to each district, and this amount coupled with the millage rate voted by the district provides the total millage rate for the district.

1965-66 Comparisons.

Table 19 shows the amount of local revenue per pupil and the millage rates of 1965-66, for the top and bottom ten districts. The range in local revenue was from \$808.72 per pupil to \$44.72 per pupil. The total millage rates ranged from \$22.81 per \$1,000 of assessed property valuation in Grosse Pointe (one of the most affluent suburbs of Detroit), down to \$8.00 per \$1,000 of assessed valuation in Rudyard Township. In general, the districts with the lowest local school revenue have lower millage rates. The amount of property they have is so small that the property tax generates little revenue for these districts. The wide disparity in property values makes for large differences in school revenues per pupil.

The effective rate column of Table 19 was derived to provide a measure of tax efficiency. The effective tax rate ranged for a low of 1.65 in River Rouge City to a high of 27.28 in Forsyth. This means that Mastadon Township provided \$808.72 per pupil in local funds from a total millage rate of \$22.50 per \$1,000 of assessed property valuation.

⁵Reischauer and Hartman, *loc cit.*, p. 8.

TABLE 19

1965-66 GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES AND OPERATING MILLAGE RATES VOTED AND TOTAL AND EFFECTIVE TAX RATES: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY AMOUNT OF REVENUE.

Rank	School District	Local Revenue Amount Per Pupil	Operating Millage Rates		Effective Tax Rate ^b Per Cent
			Voted ^a	Total ^a	
1.	Matstadon Township	\$808.72	16.00	22.50	2.78
2.	Riverview Community	679.92	4.00	12.90	1.89
3.	White Pine	676.22	11.00	17.47	2.58
4.	River Rouge City	664.89	2.10	11.00	1.65
5.	Republic Central	652.39	11.20	18.00	2.75
6.	Grosse Pointe	605.94	14.00	22.81	3.76
7.	Ecorse	563.65	7.50	16.40	2.90
8.	Dearborn City	559.77	9.50	18.40	3.28
9.	Highland Park City	553.19	10.40	19.30	3.48
10.	Burt Township	550.31	8.00	13.86	2.51
524.	Calumet	99.39	4.00	10.25	10.31
525.	Summerfield	96.18	-	9.05	9.40
526.	Maple Valley	93.67	5.00	13.00	13.87
527.	Birch Run Area	88.99	-	9.53	10.70
528.	Holton	78.00	7.00	15.53	19.91
529.	Freesoil Community	75.44	2.00	10.00	13.25
530.	Grant	72.92	6.00	14.00	19.19
531.	Shelby	69.80	5.27	13.87	19.87
532.	Rudyard Township	47.81	-	8.00	16.73
533.	Forsyth	44.72	5.00	12.20	27.28

^aThe difference between operating millage voted and total is operating millage rates allocated by the state to the local district.

^bEffective tax rate is computed by dividing total operating millage rates by local revenue amount per pupil.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

On the other hand, Forsyth only provided \$44.72 per pupil from an assessed valuation of \$12.20 per \$1,000. Consequently, the effective school tax structure was regressive. That is, as the base (assessed property valuation) goes up the effective rate goes down. The 1965-66 coefficient of correlation between operation millage rate totals and state equalized valuation per resident member was $-.09$. Thus, the correlation was small, but since it was negative there was regressivity.

As already seen, local revenues are not the only sources available to the school districts. Thus, Table 20 shows the amount of total revenues per pupil available to the twenty districts of Table 19 for 1965-66. When all forms of revenue were computed and divided into total operating millage, the adjusted tax rate measured the effect of outside agencies in compensating for the regressive local tax structure. This is the reason for the name change to Adjusted Tax Rate in Table 20.

The total of local, state, and federal revenues ranged from a high of \$952.19 per pupil in Mastadon Township to a low of \$358.83 per pupil in Summerfield. Thus, Summerfield only had 38 per cent as much revenue per pupil as Mastadon Township. On the other hand, the district that provided the least in local revenue (Forsyth) only had 6 per cent as much local revenue as the top district (Mastadon). Consequently, revenue from sources outside the local district closed the dollar gap between the top and bottom school districts in Michigan.

As further evidence of the effect of state and federal monies on total revenue, Table 20 shows the adjusted tax rate. This column relates total revenue to total operating millage rates, and appears to be relatively constant between the top and bottom ten districts. This

TABLE 20

1965-66 TOTAL REVENUE PER PUPIL, TOTAL OPERATING MILLAGE RATES, AND ADJUSTED TAX RATES: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY AMOUNT OF LOCAL REVENUES.

Rank	School District	Total Revenue	Total Operating Millage Rates	Adjusted Tax Rate ^a Per Cent
1.	Mastadon Township	\$952.19	22.50	2.36
2.	Riverview Community	728.98	12.90	1.76
3.	White Pine	818.56	17.47	2.13
4.	River Rouge City	725.50	11.00	1.52
5.	Republic Central	943.79	18.00	1.91
6.	Grosse Pointe	766.82	22.81	2.97
7.	Ecorse	705.50	16.40	2.32
8.	Dearborne City	707.38	18.40	2.60
9.	Highland Park City	813.83	19.30	2.37
10.	Burt Township	730.25	13.86	1.90
524.	Calumet	383.91	10.25	2.67
525.	Summerfield	358.83	9.05	2.52
526.	Maple Valley	390.64	13.00	3.33
527.	Birch Run Area	371.82	9.53	2.56
528.	Holton	400.52	15.53	3.88
529.	Freescil Community	382.48	10.00	2.61
530.	Grant	375.51	14.00	3.73
531.	Shelby	371.49	13.87	3.73
532.	Rudyard Township	540.53	8.00	1.48
533.	Forsyth	544.75	12.20	2.24

^aAdjusted Tax Rate is computed by dividing Total Operating Millage Rates by Total Revenue per pupil.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

would indicate that non-local revenue compensates somewhat for the lack of local property values and/or total operating millage rates.

1968-69 Comparisons.

Table 21 deals with local revenues, operating millage rates and the effective tax rate for 1968-69. Just as in 1965-66 (Table 19), the effective tax rate is regressive. In absolute dollar amounts, the 1968-69 local revenue per pupil ranged from a high of \$959.67 in Dearborn City to a low of \$62.30 in Rudyard Township. Thus, Rudyard Township only provided 6 per cent as much local revenue as Dearborn City. On the other hand, operating millage rates ranged from a low of 10.00 mills to a high of 30.70 mills.

Comparing local revenue between 1965-66 (Table 19) and 1968-69 (Table 21), the top district in the state increased its revenues per pupil from \$808.72 to \$959.67. At the other extreme, the poorest district in the state in 1965-66 provided only \$44.72 per pupil. By 1968-69 this amount had increased to \$62.30 per pupil.

The 1968-69 total revenue (Table 22) indicates greater equality between the top and bottom districts than local funding does. In absolute amounts, the range of total revenue was from \$1,124.37 per pupil in Oak Park to \$517.23 per pupil in Shelby. Thus, Shelby provided less than half as much revenue per pupil as Oak Park. In 1965-66, the bottom district in total revenue provided 38 per cent as much as the top district.

Comparing the Adjusted Tax Rates of Table 22 to the Effective Tax Rates of Table 21, it is seen that the high degree of regressivity of the local tax structure disappears with the addition of state and

TABLE 21

1968-69 GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES AND OPERATING MILLAGE RATES VOTED AND TOTAL AND EFFECTIVE TAX RATES: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY AMOUNT OF REVENUE.

Rank	School District	Local Revenue Amount Per Pupil	Operating Millage Rates		Effective Tax Rate ^b Per Cent
			Voted ^a	Total ^a	
1.	Dearborn City	\$ 959.67	14.00	22.90	2.38
2.	Grosse Pointe	883.15	18.50	27.40	3.10
3.	River Rouge City	870.12	6.00	14.90	1.71
4.	Oak Park	836.74	21.00	30.70	3.66
5.	White Pine	819.97	19.50	25.97	3.16
6.	Caseville	795.18	6.00	15.25	1.91
7.	Riverview Community	788.59	10.00	18.90	2.39
8.	Republic Michigamme	778.02	9.88	17.00	2.18
9.	Leland	775.06	7.00	14.00	1.80
10.	Ecorse	761.93	9.50	18.40	2.41
516.	Rock River Township	124.18	10.00	15.86	12.77
517.	Fruitport Community	121.08	14.00	22.35	18.45
518.	Millington Community	118.42	1.00	10.00	8.44
519.	Maple Valley	114.25	8.00	16.00	14.00
520.	Oakridge	114.12	11.65	20.00	17.52
521.	Calumet	98.72	5.00	11.55	11.69
522.	Shelby	96.71	5.00	13.00	13.49
523.	Holton	90.32	7.00	15.35	16.99
524.	Forsyth	65.66	2.63	10.00	15.22
525.	Rudyard Township	62.30	4.50	12.00	19.26

^aThe difference between operating millage voted and total is operating millage rates allocated by the state to the local district.

^bEffective tax rate is computed by dividing total operating millage rates by local revenue amount per pupil.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin No. 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

TABLE 22

1968-69 TOTAL REVENUE, TOTAL OPERATING MILLAGE RATES, AND ADJUSTED TAX RATES: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY AMOUNT OF LOCAL REVENUES.

Rank	School District	Total Revenue	Total Operating Millage Rates	Adjusted Tax Rate ^a Per Cent
1.	Dearborn City	\$1,121.06	22.90	2.04
2.	Grosse Pointe	1,052.57	27.40	2.60
3.	River Route City	948.12	14.90	1.57
4.	Oak Park	1,124.37	30.70	2.73
5.	White Pine	1,003.14	25.97	2.59
6.	Caseville	871.36	15.25	1.75
7.	Riverview Community	880.00	18.90	2.15
8.	Republic Michigan	1,088.33	17.00	1.56
9.	Leland	842.75	14.00	1.66
10.	Ecorse	964.68	18.40	1.91
516.	Rock River Township	635.03	15.86	2.50
517.	Fruitport Community	550.13	22.35	4.06
518.	Millington Community	537.32	10.00	1.86
519.	Maple Valley	524.90	16.00	3.05
520.	Oakridge	599.26	20.00	3.34
521.	Calumet	526.05	11.55	2.20
522.	Shelby	517.23	13.00	2.51
523.	Holton	532.61	15.35	2.88
524.	Forsyth	773.07	10.00	1.29
525.	Rudyard Township	721.17	12.00	1.66

^aAdjusted Tax Rate is computed by dividing Total Operating Millage Rates by Total Revenue.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Numbr 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

federal funds. The adjusted tax rate in 1968-69, just as in 1965-66, was proportional. However, even though there is tax proportionality between the districts, there is still large absolute dollar differences between the districts. Therefore, Title 1 of the ESEA has not equalized revenues per pupil. In absolute dollar amounts the poorer districts are still poor even with the addition of the outside revenue. This means that students in poorer districts do not have sufficient money provided for their education to compensate for their economic disadvantages.

SUMMARY

In Chapter II it was found that the disparity in general fund revenues per pupil from local sources between and within counties was increasing. In the present chapter, it was found that in 1965-66 the top ten districts averaged eight times as much local revenue as the bottom ten districts compared with eleven times as much in 1968-69. Thus the data from the top and bottom ten districts show the same trends of wider disparity as shown in Chapter II.

In Chapter II it was found that state direct appropriations channeled more money into poor districts and thus narrowed the school revenues between and within counties. The present chapter found that the amount of state direct appropriations given the top ten districts widened each year in relation to the amount given the bottom ten districts. However, the fact that few of the districts receiving the most aid were those with the least local funds indicates that there was some question of whether the state funds were really going to the neediest districts.

The conclusion on federal funds was that they were too small to have a major impact on local revenues.

Total operating millage rates are much higher for the wealthier districts in the state than the poorer districts. However, if an effective local rate is computed by dividing total operating millage rates by local revenue amount per pupil, then the poorer counties pay a higher tax rate. State funds tend to aid the poorer districts so that an adjusted tax rate is about the same for all districts. The adjusted tax rate is computed by dividing total operating millage rates by total revenue.

CHAPTER V

SCHOOL EXPENDITURES: TEACHERS' SALARIES

Unlike Chapters II, III, and IV which dealt with school revenues, this chapter presents a statistical analysis of average annual teachers' salaries. Average annual teachers' salaries is "a descriptive heading under which are gathered the full time and prorated portions of regular teachers for all teaching services provided to pupils. The average salary is computed by dividing the total salaries of regular teachers in elementary, secondary and special education by the related number of teaching positions."¹ As in Chapters II and III, the data in this chapter are for all the school districts in Michigan, and not just the top and bottom ten districts.

Average Annual Teachers' Salaries

Table 23 uses step-wise regression analysis to show the effect on average annual teachers' salaries of eight independent variables. The eight independent variables are; 1967 average general property tax rates by county, state direct appropriations, 1967 per capita personal income, millage rates allocated, state redistribution of federal funds, 1960 county median school years completed, millage rates voted locally, and local sources of revenue. These particular variables were chosen

¹*Michigan Public Schools, loc cit.*, p. 3.

TABLE 23

STEP-WISE REGRESSION ANALYSIS BETWEEN THE DEPENDENT VARIABLE, AVERAGE ANNUAL TEACHERS' SALARY AND EIGHT INDEPENDENT VARIABLES, FOR MICHIGAN: 1965-66, 1966-67, 1967-68, AND 1968-69.

Variables	1965	1966	1967	1968
<u>Computed T Values</u>				
1967 Average General Property Tax Rate by County	5.340	2.297	1.523	3.723
State Direct Appropriations	-3.514	-2.912	-1.729	-2.173
1967 Per Capita Personal Income	3.417	4.754	5.560	4.301
Millage Rates Allocated	2.347	1.421	-0.548	1.071
State Redistribution of Federal Funds	2.393	1.868	2.613	2.582
1960 County Median School Years Completed	-1.966	-2.557	-2.343	-3.326
Millage Rates Voted Locally	0.998	2.626	1.212	1.471
Local Sources of Revenue	-0.580	0.493	1.933	1.384
<u>Multiple Correlation Coefficients</u>				
Step 1	.457	.456	.364	.438
Step 2	.520	.526	.463	.526
Step 3	.542	.535	.474	.543
Step 4	.548	.547	.483	.559
Step 5	.554	.554	.487	.565
Step 6	.559	.558	.490	.568
Step 7	.560	.562	.492	.571
Step 8	.560	.565	.492	.572

Sources:

School district data are computed from *Michigan Public Schools, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69*, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

County data are computed from the Bureau of Business and Economic Research, *Michigan Statistical Abstract*, 1966 and 1968, Michigan State University Graduate School of Business Administration, East Lansing, Michigan.

because it was felt they would have some relationship in determining teachers' salaries.

Analyzing Table 23 on a year by year basis, it is seen that in 1965-66, the most important independent variable in determining average annual teachers' salaries was 1967 average general property tax rates, by county. With a critical "T" value of 1.960, this variable is significantly different from zero, although the computed "T" value of 5.340 is not particularly large. It can also be seen that the coefficient of multiple correlation *vis-a-vis* this variable was .457, which means that only 21 per cent of the dependent variable was explained by this independent variable in 1965-66. With the addition of the second most important variable in 1965-66, state direct appropriations, and its computed "T" value of -3.514, the coefficient of multiple correlation increased to .520. Thus, 27 per cent of the dependent variable was explained.

The third most important variable in 1965-66 was 1967 per capita personal income, with a computed "T" of 3.417 or above the critical limit of acceptance. Also, with the addition of step 3, the coefficient of multiple correlation increased to .542 which means that now 29 per cent of the dependent variable is explained. With the addition of the fourth variable, millage rates allocated and its computed "T" value of 2.347, the coefficient of multiple correlation increased to .548. Thus, 30 per cent of the dependent variable was explained by the four independent variables.

The fifth independent variable, state redistribution of federal funds, had a computed "T" value of 2.393, and a multiple correlation

coefficient of .554. Thus, the explanation increased to 31 per cent. The sixth variable, 1960 county median school years completed, was barely significant, as it had a computed "T" value of -.1966, just barely above the critical 1.960 at the 95 per cent confidence level. With the addition of the variable, step 6, the coefficient of multiple correlation increased to .559, which means that still only 31 per cent of the dependent variable was explained. Consequently, the amount of knowledge of the dependent variable added by this independent variable was minimal.

The two remaining variables, millage rates voted locally and local sources of revenue, were below the critical acceptance level, which means they were not significant in explaining the movement of the dependent variable. Therefore, at least for 1965-66, they can be disregarded in the equation.

Even though in 1965-66, eight independent variables were used, they explained less than one-third of the dependent variable, average annual teachers' salaries.

In 1966-67, only 1967 county property tax rates, state direct appropriations, 1967 per capita personal income, 1960 median school years completed, and millage rates voted were significant. Their total multiple correlation was .565, which means that 32 per cent of the dependent variable was explained. In 1967-68, the significant variables were 1967 per capita personal income, state redistribution of federal funds, 1960 median school years completed, and local sources of revenue. However, their multiple correlation fell to .492, which means that 24 per cent of the dependent variable was explained. In 1968-69, the significant

variables were 1967 property tax rates, state direct appropriations, 1967 per capita income, state redistribution of federal funds, and 1960 median school years completed. The combined correlation of these five variables was .572, which explained 33 per cent of the dependent variable.

Table 23 also shows that overall the most significant independent variable was 1967 per capita personal income. This would be important for two reasons; first, a high per capita income would indicate an ability to adequately pay teachers, and second it indicates a community living standard (based on income) at which the teachers would be expected to live. In other words, the district had the income to pay teachers a living wage, and as a community it did not expect teachers to subsidize the community through low wages.

The 1967 average general property tax rates by county and state direct appropriations were tied as the second variable in importance. Where property tax rates were concerned, this variable was important in 1965 and 1968, when it was first and second respectively. Property tax rates are reflective of the revenue raising ability of the county, rather than the district. However, the county tax rate is for all county expenditures and not just for schools. Therefore, it is somewhat surprising that it would rank as high in the determination of teachers' salaries, except as property tax rates in general are reflective of county incomes. Looking at the table of simple correlation coefficients in Appendix A, the correlation between county property tax rates and per capita county income for the four years was around .66. Thus, there was good correlation between county property tax rates and per capita county income.

The other second place independent variable, state direct appropriations, ranked quite high in 1965-66 and 1966-67, when it was the second most significant variable both years. However, in 1967-68 and 1968-69, it was fifth in importance, and in fact, in 1967-68, it was not statistically significant. Its relationship declined in importance as collective bargaining became more of a factor.

The third most significant independent variable was state redistribution of federal funds. In 1965-66, it ranked fifth, in 1966-67 it fell to sixth, but in 1967-68 it rose to second,, while in 1968-69 it fell to fourth. The year collective bargaining first became compulsory, 1967-68, state redistribution of federal funds was second only to 1967 per capita county personal income in importance.

The fourth most significant variable was 1960 county median school years completed. Prior to 1967-68, it ranked sixth and fourth, but in 1967-68, it moved to third in importance, and it retained this position in 1968-69. Because this variable was statistically significant in all four years, it indicates that the educational level of the county is important in determining teachers' salaries, although the variable was not of primary importance in any one year.

The remaining variables were of marginal importance in determining teachers' salaries. The fifth variable in importance, local millage rates voted was only statistically significant in 1966-67, when it was ranked third in importance. The two remaining variables were of equal insignificance in determining the magnitude of average annual teachers' salaries. These two variables were millage rates allocated by the state and local sources of revenue. It is somewhat surprising that

these two sources of revenue should play so little part in the determination of the dependent variable, but millage rates allocated was only statistically significant in 1965-66, while local sources of revenue was not statistically significant in any year. Consequently, teachers' salaries seem to be little effected by the amount of revenue raised from local sources. It is much more influenced by revenues from outside the district, social criteria such as county education, and unknown factors.

Table 24 shows the average salary for teachers increased from \$6,027.33 in 1965-66 to \$8,382.57 in 1968-69, an increase of \$2,355.24 per teacher within the state, on the average. Teachers' salaries thus increased by 39 per cent during the four year period. However, on an annual basis, salaries increased by 12 per cent from 1965-66 to 1966-67, by 11 per cent from 1966-67 to 1967-68, and by 12 per cent from 1967-68 to 1968-69. Thus, in four years the least percentage increase was the first year of collective bargaining, when salaries only increased by 11 per cent over the previous year. This would certainly lead one to question the assumption that collective bargaining increased wages. However, since averages are used in this table, perhaps collective bargaining raised the bottom wages while lowering the top wages, thus leaving the average relatively unchanged. An examination of the standard deviation column in Table 24 shows that in 1965-66 the standard deviation was \$916.47. In 1967-68, the standard deviation increased to \$942.62, which represents a more uneven distribution of teachers' salaries than in 1965-66. In 1968-69, the standard deviation was \$970.44, the highest in the table. Therefore, collective bargaining does not seem to be

TABLE 24

AVERAGE ANNUAL TEACHERS' SALARIES FOR MICHIGAN, STANDARD DEVIATIONS AND PER CENT CHANGE IN TEACHERS' SALARIES FOR THE YEARS 1965-66, 1966-67, 1967-68, and 1968-69.

Year	Average	Per Cent Change	Standard Deviation
1965-66	\$6,027.33	12	\$916.47
1966-67	6,739.81	11	838.11
1967-68	7,510.20	12	942.62
1968-69	8,382.57		970.44

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

equalizing wages among teachers in absolute terms. In fact, it would appear collective bargaining made salaries more unequal than they were prior to collective bargaining.

However, when the standard deviation is divided by its average, it is seen that the resulting percentage was 15.2 in 1965-66, 12.43 in 1966-67, 12.55 in 1967-68, and 11.75 in 1968-69. Therefore, even though the standard deviation increased in absolute terms in 1967-68 and 1968-69, relative to their averages (means) they actually decreased. Consequently, unions may have decreased relative wage disparities across the state as a result of collective bargaining.

Variance Analysis of Teachers' Salaries

Table 25 shows an analysis of variance for average annual teachers' salaries. From this table it can be seen that in 1965-66 the between county variation was 2,324,353.0, while the within county variation was 571,605.4. This means that the "F" value was computed to be 4.066, which is significant. Consequently, a null-hypothesis that there is no difference in teachers' average annual salaries between the counties is rejected. But perhaps more important is the fact that the between county variation was four times as large as the within county variation.

In 1966-67, on the other hand, the "F" value increased, while at the same time the between county variation decreased and the within county variation decreased even more. This would be consistent with the standard deviations from the previous table. That is, a reduction in variation, both between and within counties, would show up as a reduction in the standard deviation. Consequently, the computed "F" value

TABLE 25

VARIANCE ANALYSIS OF AVERAGE ANNUAL TEACHERS' SALARIES IN MICHIGAN: 1965-66, 1966-67, 1967-68,
AND 1968-69.

Variance Source	1965-66	1966-67	1967-68	1968-69
Between County	2,324,353.0	2,089,819.0	2,176,745.0	2,646,167.0
Within County	571,605.0	450,313.0	651,485.0	628,176.0
F Value	4.066	4.641	3.341	4.212

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

here could be somewhat misleading in that an increase in the "F" value would normally be interpreted as movement in the "wrong" direction. However, in this instance the reduction in variation happened to be greater within the counties than between the counties.

In 1967-68 the "F" value decreased rather significantly from 4.641 in 1966-67 to 3.341 in 1967-68. However, an examination of the variation in the two classifications indicates that the total variation actually increased. This is compatible with the previous table's standard deviation figure. The within county variance increased more than the between county variance, and this resulted in a reduction in the "F" value. Had teachers' unions been able to reduce salary differentials, the variance within counties would have decreased with the advent of compulsory collective bargaining. However, this did not happen; it actually increased.

In 1968-69, the "F" value increased. However, this time it was because the within county variance went down, while the between county variance increased. The fact still remains that the null-hypothesis was rejected in all four years. In fact, the "F" value in 1968-69 was larger than the "F" value in 1965-66. The difference in teachers' salaries between counties is significantly greater than the difference in teachers' salaries within counties and widened after collective bargaining.

Total General Fund Expenditures and Teachers' Salaries.

Table 26 shows the relationship between the independent variable, total general fund expenditures per pupil, and the dependent variable, average annual teachers' salaries. Here, by use of regression

TABLE 26

REGRESSION ANALYSIS BETWEEN THE INDEPENDENT VARIABLE, TOTAL GENERAL FUND EXPENDITURES PER PUPIL AND THE DEPENDENT VARIABLE AVERAGE ANNUAL TEACHERS' SALARIES IN MICHIGAN: 1965-66, 1966-67, 1967-68, AND 1968-69.

Relationship	1965	1966	1967	1968
Multiple Correlation Coefficient	.32	.37	.29	.24
"F" Value	60.80	81.69	48.41	33.31
Computed "T" Value	7.80	9.04	6.96	5.77

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

analysis, it can be seen that the coefficient of multiple correlation in 1965-66 was .32. However, even so low a coefficient of correlation is significant, as the computed "T" value of 7.80 indicates. Any "T" value of 1.960 is acceptable at the .05 level of confidence. Consequently, even though only 10 per cent of the dependent variable is explained by the independent variable, this is significantly greater than zero, according to the "T" value. In fact, couching the relationship in terms of a null-hypotehsis; "there is no relationship between total general fund expenditures per pupil and average annual teachers' salaries," the null-hypothesis would be rejected for each of the four years. Therefore, average teachers' salaries are dependent upon total general fund expenditures per pupil, although the latter only explains about 10 per cent of the former.

Conclusions

After all the statistical relationships have been analyzed, all the variables that determine teachers' salaries still are not known. There are obviously many variables that go to make up the explanation of teachers' salaries, and many of the variables are institutional in nature and cannot be quantified. The variables that were expected to be important did not explain very much about teachers' salaries (county income, county tax structures, county wealth, county education, county revenues, etc.). None of these variables indicated why teachers' salaries are what they are. These variables affected the demand for teachers. On the supply side, the correlation of the number of teachers with teachers' salaries was statistically insignificant. That is, it had a "T" value in 1965-66 of .03, in 1966-67 of .01, in 1967-68 of .09, and in 1968-69 of .02.

However, there is one variable that might explain the change in teachers' salaries, and that variable is collective bargaining. For example, in 1967-68, the multiple correlation between eight variables and teachers' salaries declined from the previous year (Table 23). This correlation decline may have been due to the increased importance of collective bargaining, a non-correlated, non-quantifiable variable. Therefore, while it was not proven that collective bargaining affected teachers' salaries, something decreased the importance of other variables in the first year of collective bargaining, and that something may well have been collective bargaining. However, the fact that in 1968-69, the eight variables explained more than they had before collective bargaining possibly indicates only a minor influence by collective bargaining.

Summary

Overall the most significant independent variable on teachers' salaries was 1967 per capita personal income. The increase in teachers' salaries in 1967-68 over the previous year showed only an 11 per cent increase compared with 12 per cent the year before. Therefore, no immediate impact of collective bargaining is obvious. There was wider disparity in salaries after collective bargaining than before. However, when the standard deviation is divided by the average salary, there is less disparity in salaries after collective bargaining than before.

Although eight independent variables were chosen to explain teachers' salaries, these eight explained less than a third of such salaries. The fact that the eight explained a smaller percentage of salaries in 1967-68, the first year of bargaining, may mean that collective bargaining, a nonquantifiable item, may have been of importance.

However, by 1968-69, the eight items explained more than they had before collective bargaining originated.

Variance analysis indicated that both between and within county salary differentials widened after the advent of collective bargaining. Union lobbying obviously had little or no impact in narrowing these differentials.

CHAPTER VI

OTHER SCHOOL EXPENDITURES

Current Operating Expenditures

Current operating expenditures is a "descriptive heading under which the basic expenses of a school are grouped. The activities include; instruction, administration, attendance, health, transportation, fixed charges, operation of plant and maintenance of plant."¹ From this description it is seen that current operating expenditures includes not only instruction salary expenditures, but also several other expenditures including administrative expenditures, attendance costs, health (the school nurse, etc.) costs, transportation costs (bussing expenses), and building maintenance costs.

In 1965-66, the between county variation in current operating expenditures was 14,506.86, while within county variation was 3,681.95. This resulted in an "F" value of 3.940. In 1966-67, the between county variance increased to 19,403.45 (or an increase of 34 per cent), and the within county variance increased to 4,158.25 (an increase of 13 per cent), with a resulting "F" value of 4.666. Consequently, the amount of money spent on current operating expenditures increased both between and within counties, but it increased more between counties than within counties.

¹*Michigan Public Schools, loc cit.*, p. 3.

TABLE 27

VARIANCE ANALYSIS OF CURRENT OPERATING EXPENDITURES IN MICHIGAN: 1965-66, 1966-67, 1967-1968,
AND 1968-69

Variance Source	1965-66	1966-67	1967-68	1968-69
Between County	14,506.86	19,403.45	24,509.43	22,235.26
Within County	3,681.95	4,158.25	5,292.25	7,443.03
F Value	3.940	4.666	4.631	2.987

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

In 1967-68, the between and within county variance increased, although the rate of increase was not so great between counties as it was the previous year. On the other hand, the amount spent within the counties actually increased more than it did from 1965-66 to 1966-67.

Using the same analysis for 1968-69, it is seen that the amount spent on current operating expenditures decreased its between county variation by 9 per cent. At the same time the variation within counties increased by 41 per cent. This resulted in a much smaller "F" value, but one still large enough to reject a null-hypothesis. Thus, the variation in spending on current operating expenditures decreased absolutely between the counties. At the same time the variation in spending within counties increased. These changes indicate that the state was trying to correct spending differences more than the districts themselves. Consequently, unions, which are established on a district-wide basis, were not able to close the gap within the scope of their own bargaining area. However, the state-wide between county reduction in variation (almost back to what it was in 1966-67) may be the result of union activity within the districts. That is, where the union bargains for and wins district-wide or county-wide wage increases (see the 1967-68 instruction salary between/within county variation), some of the local districts may not have been willing to meet these increased demands for money while at the same time maintaining peripheral educational functions. Consequently, the state may have stepped in to provide money for expenditure on these items.

Total General Fund Expenditures

Total general fund expenditures is "a descriptive heading under

which are grouped all accounts for operating the school districts. These activities include current operating expenditures plus capital outlay, community services, and student services."⁴

In ascertaining those variables that were significant in determining the level of total general fund expenditures, step-wise regression analysis was used. Table 28 is the result of this statistical technique. In all, six variables were selected to measure their effects on total general fund expenditures. The six variables selected were: (1) state equalized property valuation, (2) operation millage rates voted, (3) 1967 county property tax rates, (4) 1967 county per capita income, (5) operation millage rates allocated by the state, and (6) 1960 median county school years completed. These six variables were chosen as the independent variables because it was thought that they would be the most likely to have some effect on total expenditures.

For example, variable 1, state equalized valuation per \$1,000 assessed property values, is important in the determination of school revenues. Therefore, it was felt that property values would represent both a level of community wealth, as well as a potential source of revenue, both of which should be important in the level of total expenditures. Variable 2, operation millage rates voted, was selected because this variable should reflect community attitudes toward education, as well as the general level of affluence of the community. This variable should measure the willingness of a community to support its education institutions.

⁴*Ibid.*

TABLE 28

STEP-WISE REGRESSION ANALYSIS BETWEEN THE DEPENDENT VARIABLE, TOTAL GENERAL FUND EXPENDITURES AND THE FOLLOWING INDEPENDENT VARIABLES: STATE EQUALIZED PROPERTY VALUATION, OPERATION MILLAGE RATES VOTED, 1967 COUNTY PROPERTY TAX RATES, 1967 COUNTY PER CAPITA PERSONAL INCOME, OPERATION MILLAGE RATES ALLOCATED, AND 1960 MEDIAN COUNTY SCHOOL YEARS COMPLETED IN MICHIGAN: 1965-66, 1966-67, 1967-68, AND 1968-69.

Variables	1965-66	1966-67	1967-68	1968-69
<u>Computed T Values</u>				
State Equalized Valuation	22.449	19.799	18.260	19.280
Operation Millage Rates Voted	10.754	10.742	5.981	11.665
1967 County Property Tax Rates	4.543	2.946	6.577	6.868
1967 County Per Capita Income	2.804	1.677	3.351	-1.240
Operation Millage Rates Allocated	0.226	1.092	-7.092	4.847
1960 Median County School Years Completed	0.135	-0.043	0.645	0.342
<u>Multiple Correlation Coefficients</u>				
Step 1	.543	.509	.531	.536
Step 2	.767	.754	.725	.727
Step 3	.806	.776	.737	.786
Step 4	.813	.780	.752	.800
Step 5	.813	.780	.762	.801
Step 6	.813	.780	.762	.801

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

County data are computed from Bureau of Business and Economic Research, *Michigan Statistical Abstract*, 1966 and 1968, Michigan State University Graduate School of Business Administration, East Lansing, Michigan, 1967 and 1969.

Variable 3, 1967 county property tax rate was selected for the same reason variable 2 was selected. That is, the level of the county property tax rate should affect the millage rate voted, although the property tax rate is not just for school operation. It was expected that if the county had a large property tax rate, the millage rates voted would be lower. Consequently, it was anticipated that by including the 1967 county property tax rate any residual from the voted millage rates would be picked up. The reason the year 1967 was used is because, first, it was in the middle of the study period and should be reflective of the four-year period, and second, it was the best year for which data were available.

The fourth variable, 1967 county per capita income was used because it should be reflective of community standards of living which should have an effect on total instruction expenditures. For example, an impecunious district *vis-a-vis* per capita income could hardly be expected to spend much on total expenditures, and vice-versa, an affluent district would be expected to spend more on total expenditures. Also, per capita county income should be reflective of the availability of revenue within the district. In addition it was felt that income might be reflective of life style, which might be reflective of attitudes toward education in general, and should influence the total amount spent on instruction.

Variable number 5, operation millage rates allocated was used because it should affect revenues directly while also reflecting property relationships within the districts. Also, this is nondiscretionary revenue, and it was felt that allocated millage rates might have a

negative effect on voted millage rates, so allocated millage rates were used to measure (or pick up) any negative effect on the voted rates.

The last variable, 1960 median county school years completed might be significant in the determination of school revenues, and so it was used to measure any residual effect on expenditures. In other words, this might be an attitude measuring variable. Presumably, people with more education value education more for their community and consequently they would be expected to hold educators in higher esteem than those with little education. If the standing of the teacher in the community is important, it should be translatable into the dollar and cents of total general fund expenditures (obviously from looking at Table 28, this was not so, because this variable was spurious for all four years).

From Table 28 it can be seen from the section headed "Computed T Values" that in 1965-66, state equalized valuation had a "T" value of 22.449. According to the "T" table, when "T" is 3.291 it is significantly different from zero at .001 confidence levels. A "T" value of 2.807 is significant at the .005 level, and a "T" value of 1.960 is significant at the .05 level. Consequently, the computed "T" value of 22.449 was significant at the highest level. At the same time, the coefficient of multiple correlation was .543. By squaring the coefficient of multiple correlation, a coefficient of determination of .29 is derived. Therefore, state equalized valuation, a significant variable, explains 29 per cent of the determination of movement in total general fund expenditures. This 29 per cent explained was not particularly impressive, but of the six variables under consideration it was the most significant.

When the second most important variable was added, operation

millage rates voted, the total correlation increased to .767, while a computed "T" value of 10.754 was derived. This means that the second variable was significant at the .001 level of confidence. By squaring the coefficient of multiple correlation, 59 per cent of the dependent variable was explained. Consequently, the second variable interacting with the first variable increased knowledge of the dependent variable from 29 per cent to 59 per cent. However, by looking at the computed "T" values, it is seen that the second variable was not as important as the first since it had a smaller "T" value.

The third most important variable, 1967 county property tax rates, had a "T" value large enough to be significant at the highest level, because the computed "T" value was 4.543. It is seen that the coefficient of multiple correlation increased to .806. By squaring this, 65 per cent of the dependent variable is explained. Thus, the third independent variable added 6 percentage points to total knowledge, a rather marginal amount, but based on the "T" value, still a significant amount.

Moving on to the fourth variable, 1967 county per capita income, the computed "T" value was 2.804. This variable was not significant at the .001 or .005 levels, but was at the .05 level of confidence, because the value of "T" at the .05 level need only be 1.960. Therefore, any computed value for "T" greater than 1.960 will be acceptable at the 95 per cent confidence limits. With the addition of the fourth variable, the multiple correlation coefficient increased to .813. This means that 66 per cent of the dependent variable was explained. Or conversely, that 34 per cent of the dependent variable was left unexplained.

Moving along to the fifth variable, operation millage rates allocated, the computed "T" value shows that this variable was not important in the equation for the year 1965-66. It was rejected because the computed "T" of 0.226 was less than 1.960. Also, the coefficient of multiple correlation remained constant at .813 with the addition of the fifth variable. Thus, the fifth variable added nothing to knowledge of the dependent variable.

Variable 6, 1960 median county school years completed was not significant. Here the computed "T" value was 0.135, less than the minimum for significance, and the coefficient of multiple correlation remained at .813.

Therefore, for 1965-66, of the six variables measured against total general fund expenditures, only four were significant. In 1966-67, only three of the variables were significant. They were, state equalized valuation (most significant), operation millage rates voted (second most significant), and 1967 county property tax rates. The other three variables were statistically insignificant. The significant three variables explained 60 per cent of the dependent variable, less than was explained in 1965-66. In 1967-68, only 1960 median county school years completed was not statistically significant. Also, the 1967-68 order of significance was different from the two preceding years, because state equalized valuation was following in importance by operation millage rates allocated. The third most significant variable was 1967 county property tax rates, the fourth most significant was operation millage rates voted, while the least significant was 1967 county per capita income. Only 58 per cent of the dependent variable was explained. In 1968-69, per capita county

income and median school years completed were not statistically significant. Also, in 1968-69, 64 per cent of the dependent variable was explained by the four significant independent variables.

Examining Table 28 from a historical perspective, it is seen that in all four years state equalized valuation was the most significant variable in determining total general fund expenditures, although it did decrease somewhat in importance over time. In general, the second most important variable was operation millage rates voted, although in 1967-68 this variable decreased in importance. But in every year of the study it was statistically significant.

The third most important variable in determining the magnitude of total general fund expenditures was 1967 county property tax rates. Although this variable was markedly less important than the previously mentioned two variables, it was still statistically significant. The fourth most important variable was operation millage rates allocated, and it was only statistically significant in 1967-68 and 1968-69. Consequently, prior to collective bargaining it was not important. Thus, collective bargaining possibly forced operation millage rates allocated into importance.

The fifth variable in importance was 1967 county per capita income, and it was only important in 1965-66 and 1967-68. This variable might be interpreted as being a spurious correlation variable. No other explanation comes to mind as to why 1967 county per capita income was important in 1965-66 but not important in 1966-67, important again in 1967-68 and unimportant in 1968-69. The variable that was of no importance in any year was 1960 median county school years completed.

Table 29 lists the simple and partial correlations between the variable general fund revenues per pupil from local sources and the variable total general fund expenditures per pupil. The simple correlation between local sources of revenue and total expenditures in 1965-66 was .88, in 1966-67 it was .83. However, with the advent of collective bargaining by teachers, local sources of revenue and total expenditures were no longer very closely related, because the coefficient of correlation declined to .57 in 1967-68 and .44 in 1968-69.

Between these two variables, revenue and expenditures, it can be assumed that the revenue variable is the independent variable while expenditures are the dependent variables. Thus, in 1965-66, 77 per cent of the total general fund expenditures were explained by local sources of revenue. By 1966-67, this had fallen to 69 per cent, and 1967-68 to 32 per cent, and in 1968-69 to 19 per cent. Thus, the amount of total expenditures explained by (or dependent upon) local revenues declined from 77 per cent before collective bargaining to 19 per cent after collective bargaining.

This raises the question, "how or why did the local community lose control over expenditures for education?" In order to answer this question the coefficients of partial correlation must be analyzed. When instruction salaries expenditures per pupil were held constant, the coefficients of correlation between the two main variables, local sources of revenue and total expenditures, showed a marked decline. In 1965-66, the partial correlation was .67 (down from the simple correlation of .88) which means that the relationship between revenues and expenditures in the local district is related in large measure through

TABLE 29

PARTIAL CORRELATION BETWEEN GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES AND TOTAL GENERAL FUND EXPENDITURES PER PUPIL IN MICHIGAN: 1965-66, 1966-67, 1967-68, and 1968-69.

Variables Held Constant	Partial Correlation			
	1965	1966	1967	1968
State Direct Appropriations from the General Fund per Pupil	.91	.86	.50	.38
Instruction Salaries Expenditures per Pupil	.67	.56	.15	.12
Average Annual Teachers' Salary Amount	.87	.81	.52	.38
State Equalized Valuation per Resident Member Amount	.84	.76	.45	.27
Operation Millage Rates Voted	.87	.80	.54	.36
1960 County Population Aged 65 and Over	.87	.81	.53	.42
1960 Median School Years Completed by County	.88	.83	.57	.42
1967 Per Capita County Income	.88	.83	.55	.41
1967 Average General County Property Tax Rate	.87	.81	.57	.39
Simple Correlation	.88	.83	.57	.44

Sources:

School district data are computed from *Michigan Public Schools, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69*, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

County data are from Bureau of Business and Economic Research, *Michigan Statistical Abstract*, 1966 and 1968, Michigan State University Graduate School of Business Administration, East Lansing, Michigan, 1967 and 1969.

instruction salaries. Or, put another way, when disregarding instruction salaries, there is much less correlation between local revenue and total expenditures. Therefore, this would mean that instruction salaries weigh heavily in the expenditures stream of the local school district. By 1966-67, instruction salaries expenditures had increased slightly in importance, *vis-a-vis* local revenues and expenditures, as the coefficient of partial correlation declined to .56.

However, the most pronounced effect occurred in 1967-68, when the partial correlation coefficient declined to .15 while holding instruction salaries expenditures constant, the correlation between local revenues and expenditures was slight. Therefore, the local community lost control of the expenditures side of the equation because of the effect of instruction salaries. This is even more obvious in 1968-69, where the partial coefficient is only .12, or little correlation between local revenues and total expenditures when instruction salaries are held constant.

Therefore, it can be concluded that as teachers' salaries became larger, and represented more of local expenditures, the local school districts has to go outside their boundaries to find funding to meet these increased wage demands.

Table 30 shows the between county and within county variance for total general fund expenditures in Michigan. The main point of significance in this table is the fact that both variances increased in every year. However, the between county variance increased more than did the within county variance, and this resulted in a slightly smaller "F" value for each of the four years. Although, the "F" value was

TABLE 30

VARIANCE ANALYSIS OF TOTAL GENERAL FUND EXPENDITURES IN MICHIGAN: 1965-66, 1966-67, 1967-68,
AND 1968-69.

Variance Source	1965-66	1966-67	1967-68	1968-69
Between County	10,021.73	11,515.65	14,220.25	17,465.28
Within County	2,061.76	2,434.10	3,308.40	4,185.72
F Value	4.861	4.731	4.298	4.173

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan.

still large enough to indicate a statistically significant difference between the two sources.

The fact that the variance increased over time would indicate that total general fund expenditures variation was not narrowed by collective bargaining. Teachers' unions did not decrease the magnitude of total expenditures differences between counties or within counties. Consequently, unions cannot take any credit for obtaining greater equality in total education expenditures in Michigan. In fact, if anything, they contributed to greater inequality in total educational expenditures.

Summary

The differentials in current operating expenditures both between counties and within counties widened after the advent of collective bargaining.

In analyzing six variables affecting general fund expenditures, it was found that operation millage rates allocated increased in importance after collective bargaining. There is a possibility that unions had sufficient political power in 1967 and 1968 to increase the operation millage rates allocated by the state.

Local sources of funds became less important after 1967-68 in affecting total general fund expenditures per pupil. Thus, political bargaining at the state level on the part of labor unions may have been effective in causing a shift toward more state financing of education.

Variance analysis indicates that total general fund expenditures widened throughout all four years studied, both between and within counties. Thus, it is obvious that although more state aid was

forthcoming after 1967, the increased state influence was not able to narrow expenditures either within or between counties.

CHAPTER VII

SCHOOL EXPENDITURES: TOP AND BOTTOM TEN DISTRICTS

Chapters V and VI examined school expenditures for every district in Michigan. It is the purpose of this chapter to examine the various expenditure categories of the top and bottom ten school districts in Michigan. The expenditures examined are: average annual teachers' salaries, all salaries of the general fund, total general fund instruction expenditures, current operating expenditures, and total general fund expenditures. All of these categories with the exception of average annual teachers' salaries will be dealt with on a per pupil basis.

Average Annual Teachers' Salaries

This classification is a descriptive heading under which are gathered the fulltime and prorated portions of regular teachers of all teaching services provided to pupils. The average salary is computed by dividing the total salaries of regular teachers in elementary, secondary, and special education by the number of teachers.

1965-66 Comparisons.

Table 31 covers average annual teachers' salary for 1965-66. It can be seen that in 1965-66, teachers' salaries ranged from a highest average per school district of \$9,892 in Dearborn City to a low of \$2,650 in Beaver Island Community. Teachers working in Beaver Island

TABLE 31

AVERAGE ANNUAL TEACHERS' SALARIES IN MICHIGAN: THE TOP AND BOTTOM TEN DISTRICTS, 1965-66.

Rank	School District	County	Average Annual Salary
1.	Dearborn City	Wayne	\$9,892
2.	Powers Spalding	Menominee	9,337
3.	Southgate Community	Wayne	8,664
4.	Fitzgerald	Macomb	8,432
5.	Pinconning Area	Bay	9,337
6.	Riverview Community	Wayne	8,308
7.	Grosse Pointe	Wayne	8,234
8.	Jackson Union	Jackson	8,227
9.	East Detroit City	Macomb	8,220
10.	Redford Union	Wayne	8,184
524.	Nahma Township	Delta	4,232
525.	Walkerville Rural Community	Oceana	4,147
526.	Lincoln Consolidated	Washtenaw	4,107
527.	Cooks	Schoolcraft	3,727
528.	Freesoil Community	Mason	3,655
529.	Evart	Osceola	3,155
530.	Owendale Gagetown Area	Huron	3,063
531.	Mackinaw City	Cheboygan	3,047
532.	Saranac Community	Ionia	2,873
533.	Beaver Island Community	Charlevoix	2,650

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

Community's school system made, on the average, only 27 per cent as much as teachers in Dearborn City. Consequently, even assuming cost of living differences between the two localities, teachers in Beaver Island Community earned considerably less than teachers in Dearborn City.

On the ten districts that paid the highest average salary in 1965-66, only three districts were not located in Wayne County or in counties contiguous to it. These three districts were Powers Spalding, Pinconning Area, and Jackson Union. The other seven districts were located in the Detroit Standard Metropolitan Statistical Area. Among the poorest paying ten districts, only one, Lincoln Consolidated, is located within the Detroit SMSA. However, the correlation coefficient of teachers' salaries and 1960 county population is only .48. Therefore, while it is possible to relate county population with salary when using only the top and bottom ten districts, the overall relationship is at best tenuous. By squaring the correlation coefficient of .48, it is seen that 23 per cent of the variable teachers' salaries is explained by population.

The average teachers' salary paid in 1965-66 by the top ten districts was \$8,582. The average salary paid teachers in the bottom ten districts was only \$3,466. Therefore, the bottom ten districts paid on the average only 40 per cent as much as the top ten districts. Thus, it can be concluded, at least where the top and bottom ten districts are concerned, there is unequal distribution of teachers' salaries.

Later Year Comparisons.

In 1968-69, all ten districts in the top ten paid in excess of

\$10,000 per year on the average (Table 32). River Rouge City paid the most in teachers' salaries. In fact, from 1967-68 to 1968-69, River Rouge City increased its average annual teachers' salaries by \$488, an increase of 4 per cent. At the other end of the pay scale, Beaver Island Community paid its teachers an average salary of \$3,025, the same average amount they paid the year before. Beaver Island Community teachers earned 25 per cent as much as River Rouge teachers in 1968-69. In 1967-68, they averaged 26 per cent as much as River Rouge teachers. Therefore, Beaver Island Community teachers are falling further behind in the salary scale.

The average salary paid by the top ten districts in 1968-69 was \$11,048. This compares with the previous year's average of \$10,232. Thus, there was an increase in the average of the top ten of \$816 or 8 per cent. On the other hand, the bottom ten in 1968-69 paid an average salary of \$5,292. The previous year's bottom ten average was \$4,195. Consequently, the bottom ten districts average salary increased by \$1,097 or 26 per cent. Therefore, the bottom ten districts gained on the top ten districts.

However, when comparing 1965-66 with 1968-69, the bottom district received relatively more in 1965-66 than in 1968-69. That is, in 1965-66, the bottom district received 27 per cent as much as the top district, but in 1968-69 the bottom district received 25 per cent as much. Comparing the averages of the top ten and bottom ten districts in 1965-66 with 1968-69, the bottom ten districts in 1965-66 received 40 per cent as much as the top ten districts. In 1968-69, the bottom ten districts received 48 per cent as much as the top ten districts. Therefore, while

TABLE 32

AVERAGE ANNUAL TEACHERS' SALARIES IN MICHIGAN: THE TOP AND BOTTOM TEN DISTRICTS, 1968-69.

Rank	School District	County	Average Annual Salary
1.	River Route City	Wayne	\$12,009
2.	Lansing	Ingham	11,214
3.	Grosse Pointe	Wayne	11,073
4.	Trenton	Wayne	11,054
5.	Dearborn City	Wayne	11,035
6.	Jackson Union	Jackson	11,003
7.	Bay City	Bay	10,828
8.	Dearborn Township	Wayne	10,806
9.	Ecorse	Wayne	10,791
10.	Van Dyke Community	Macomb	10,670
516.	Walkerville Rural Community	Oceana	6,396
517.	Johannesburg Central	Otsego	6,287
518.	Vanderbilt Area	Otsego	6,287
519.	Burt Township	Alger	6,081
520.	Rock	Delta	5,767
521.	Alba	Antrim	5,742
522.	Lincoln Consolidated	Washtenaw	5,161
523.	Delta County School	Delta	4,213
524.	Howell	Livingston	3,961
525.	Beaver Island Community	Charlevoix	3,025

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

the bottom district was worse off in 1968-69 than in 1965-66, relative to the top district, the average of the bottom ten districts was relatively higher in 1968-69 than in 1965-66. Thus, the gap closed with respect to the top and bottom ten districts, when taken as a whole.

All Salaries of the General Fund

All salaries of the general fund is a descriptive heading under which are gathered the salaries of all employess in instruction activities.

1965-66 Comparisons.

The range of salary expenditures runs from a high of \$509.56 per pupil for Dearborn City to a low of \$172.67 per pupil for Freesoil Community (Table 33). Thus, the bottom district spent 34 per cent as much on salaries as the top district. This represents an absolute difference of \$336.89 per pupil.

There is a correlation between all salary expenditures of the general fund per pupil for 1965-66 and local sources of general fund revenues per pupil for 1965-66 of .79. This correlation is also representative of the nesr three years.¹ The correlation is high enough to indicate a relationship between all salary expenditures of the general fund and local sources of revenue.

Of the top ten districts six of the districts are listed in both Tables 32 and 33. However, of the bottom ten districts only one district appears on both lists, Freesoil Community. Local sources of revenue are important where they provide significant amounts of revenue, *vis-a-vis*

¹See Appendix A.

TABLE 33

ALL SALARY EXPENDITURES OF THE GENERAL FUND PER PUPIL IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS FOR 1965-66.

Rank	School District	County	Amount Per Pupil
1.	Dearborn City	Wayne	\$ 509.56
2.	Oak Park City	Oakland	498.26
3.	Highland Park City	Wayne	497.83
4.	Whitefish	Chippewa	484.90
5.	Riverview Community	Wayne	465.18
6.	River Rouge City	Wayne	464.36
7.	White Pine	Ontonagon	456.11
8.	Birmingham City	Oakland	444.76
9.	Grosse Pointe	Wayne	442.00
10.	Ann Arbor	Washtenaw	441.66
524.	Pewamo-Westphalia	Clinton	206.18
525.	Lincoln Consolidated	Washtenaw	204.95
526.	De Witt	Clinton	202.73
527.	Carney Nadeau	Menominee	201.49
528.	Manton Consolidated	Wexford	201.34
529.	Walkerville Rural Community	Oceana	190.45
530.	Cooks	Schoolcraf	187.13
531.	Bear Lake	Manistee	186.88
532.	Littlefield	Emmet	177.43
533.	Freesoil Community	Mason	172.67

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

all salary expenditures. However, for the bottom ten districts other sources of revenue than local sources would appear to be significant in determining salary expenditures. In fact, many of the bottom ten districts received significant aid from outside the local district.

From Table 34 it can be seen that the top ten districts in all salary expenditures per pupil spent from 56 to 72 per cent of their total revenue on salaries. One of the reasons these districts were in the top ten of salary expenditures was because they spent rather substantial portions of their total revenue on salaries. Of course they had rather substantial amounts of revenue to begin with.

Comparing the top ten districts with the bottom ten districts in per cent used for salary expenditures, it is obvious that the top ten districts spent a considerably larger proportion of their revenue on salaries than did the bottom ten districts.

An examination of the bottom ten districts in all salary expenditures per pupil from the general fund shows that all except Lincoln Consolidated spent in the range of 40 to 50 per cent of their total revenues on salaries.

1968-69 Comparisons.

Table 35 on all salary expenditures of the general fund per pupil for 1968-69 shows that the range of expenditure was from \$867.55 in Oak Park City to \$214.10 for Beaver Island Community. Thus, Beaver Island spent 25 per cent as much as Oak Park on salaries. This compares to the 1965-66 ratio of bottom to top of 34 per cent. Therefore, the range between the top and bottom districts in the state widened over four years. During these four years the top district increased its

TABLE 34

SALARY EXPENDITURES AS A PER CENT OF TOTAL REVENUE: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1965-66.

School District	Salary Expenditures as a Per Cent of Total Revenue
Dearborn City	72
Oak Park City	68
Highland Park City	61
Whitefish	61
Riverview Community	64
River Route City	64
White Pine	56
Birmingham City	63
Grosse Pointe	58
Ann Arbor	68
Pewamo-Westphalia	48
Lincoln Consolidated	39
De Witt	44
Carney Nadeau	47
Manton Consolidated	49
Walkerville Rural Community	45
Cooks	44
Bear Lake	43
Littlefield	44
Freesoil	45

Source:

Computed from Table 33 by dividing salary expenditures by total revenues collected.

TABLE 35

ALL SALARY EXPENDITURES OF THE GENERAL FUND PER PUPIL IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS FOR 1968-69.

Rank	School District	County	Amount Per Pupil
1.	Oak Park City	Oakland	\$867.55
2.	Ann Arbor City	Washtenaw	701.56
3.	Highland Park City	Wayne	691.71
4.	Dearborn City	Wayne	671.48
5.	Grosse Pointe	Wayne	660.75
6.	Birmingham City	Oakland	655.15
7.	Ecorse	Wayne	652.43
8.	Lemphere	Oakland	628.33
9.	East Lansing	Ingham	620.63
10.	River Rouge City	Wayne	617.53
516.	Onawa Area Community	Presque Isle	308.96
517.	Airport Community	Monroe	306.84
518.	Vanderbilt Area	Otsego	306.64
519.	Wolverine Community	Cheboygan	305.59
520.	Reese	Tuscola	304.66
521.	Lincoln Consolidated	Washtenaw	300.74
522.	Walkerville Rural Community	Oceana	296.13
523.	Hopkins	Allegan	289.76
524.	Genesee	Genesee	265.21
525.	Beaver Island Community	Charlevoix	214.10

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

salary expenditures \$357.99 per cent pupil, or 70 per cent. On the other hand, the bottom district in the state increased its per pupil expenditure by \$41.43 or 24 per cent. Therefore, with the passage of time the range of salary expenditures became greater. It should also be noted that 7 out of the top ten districts in 1965-66 were still in the top ten in 1968-69. On the other hand, only 2 of the 1965-66 bottom ten districts were still in the bottom ten in 1968-69.

Looking at salary expenditures as a per cent of total revenue (Table 36), it is seen that the range is from 77 per cent of total revenue in Oak Park City down to 41 per cent in Lincoln Consolidated. The top ten districts in salary expenditures spent a larger portion of their total revenue on salaries than did the bottom ten districts, both in 1965-66 and 1968-69. In fact, in 1965-66 the top ten districts averaged 63.5 per cent of total revenue going to salaries, while the bottom ten averaged 44.8 per cent. In 1968-69, the top ten averaged 68.2 per cent going for salaries, and the bottom ten districts averaged 52.1 per cent. Thus, the top ten districts increased their average by 7.4 per cent from 1965-66 to 1968-69, and the bottom ten districts increased their average by 16.3 per cent.

Total General Fund Instruction Expenditures

Total general fund instruction expenditure is the cost of activities dealing directly with or aiding in the teaching of students or improving the quality of teaching. Consequently, these data deal with more than just salaries, they include such things as teachers' aids, supplies, band expenses, athletic supplies, etc.

TABLE 36

SALARY EXPENDITURES AS A PER CENT OF TOTAL REVENUE: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1968-69.

School District	Salary Expenditures as a Per Cent of Total Revenue
Oak Park City	77
Ann Arbor City	73
Highland Park City	63
Dearborn City	60
Grosse Pointe	63
Birmingham City	72
Ecorse	68
Lamphere	74
East Langsing	67
River Rouge City	65
Onaway Area Community	55
Airport Community	60
Vanderbilt Area	50
Wolverine Community	54
Reese	57
Lincoln Consolidated	41
Walkerville Rural Community	54
Hopkins	51
Genesee	54
Beaver Island Community	45

Source:

Computed from Table 35 by dividing salary expenditures by total revenues collected.

1965-66 Comparisons.

An examination of Table 37 reveals that the range of total general fund instruction expenditures per pupil for 1965-66 was from a high of \$553.70 to a low of \$183.94 per pupil. Thus, the low district spent 33 per cent as much on total instruction expenditures as did the top district. This 33 per cent compares with the 1965-66 salary expenditure (Table 33) low to high ratio of 34 per cent. Therefore, the difference between the top district and bottom district is almost the same for both classifications.

Comparing total general fund instruction expenditures with all salary expenditures, of the top ten districts only the last two, Hamtramck City and Mastadon Township were not found in Table 33. Among the bottom ten districts, only Onaway Area Community, McBain Rural, and Birch Run Area were not found in Table 33. Consequently, there is great similarity between salary expenditures and general fund spending. The next table (Table 38) was derived by subtracting all salary expenditures from total general fund instruction expenditures, thus showing the amount of revenues actually spent on such things as teaching aids, supplies, band and athletics, etc.

From Table 38 it is seen that the amount spent per pupil ranged from a high of \$55.87 in Highland Park City to a low of \$6.51 in Littlefield, a rather substantial range, since Littlefield only spent 12 per cent as much on these items as did Highland Park.

On the other hand, the differences in other spending as a per cent of total instruction expenditures is relatively small. The range here is from 4 per cent for Littlefield and Dearborn City up to 10 per

TABLE 37

TOTAL GENERAL FUND INSTRUCTION EXPENDITURE PER PUPIL IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS FOR 1965-66.

Rank	School District	County	Amount Per Pupil
1.	Highland Park City	Wayne	\$553.70
2.	Oak Park City	Oakland	546.21
3.	Dearborn City	Wayne	530.05
4.	Whitefish	Chippewa	523.94
5.	Riverview Community	Wayne	507.75
6.	River Rouge City	Wayne	499.92
7.	White Pine	Ontonagon	492.14
8.	Birmingham City	Oakland	478.98
9.	Hamtramck City	Wayne	477.31
10.	Mastadon Township	Iron	473.49
524.	Onaway Area Community	Presque Isle	223.54
525.	McBain Rural	Missaukee	220.97
526.	Birch Run Area	Saginaw	220.78
527.	Carney Nadeau	Menominee	218.81
528.	Manton Consolidated	Wexford	215.58
529.	Bear Lake Community	Manistee	207.92
530.	Walkerville Rural Community	Oceana	207.55
531.	Cooks	Schoolcraft	200.97
532.	Freesoil Community	Mason	187.23
533.	Littlefield	Emmet	183.94

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

TABLE 38

OTHER INSTRUCTION EXPENDITURES AND OTHER INSTRUCTION EXPENDITURES AS A PER CENT OF INSTRUCTION EXPENDITURES: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1965-66.

School District	Other Instruction Expenditures	Per Cent Instruction Expenditures
Highland Park City	\$55.87	10
Oak Park City	47.95	9
Dearborn City	20.49	4
Whitefish	39.04	7
Riverview Community	42.57	8
River Rouge City	35.56	7
White Pine	36.03	7
Birmingham City	34.22	7
Hamtramck City	41.20	9
Mastadon Township	43.56	9
Onaway Area Community	14.68	7
McBain Rural	13.00	6
Birch Run Area	13.41	6
Carney Nadeau	17.32	8
Manton Consolidated	14.24	7
Bear Lake Community	21.04	10
Walkerville Rural Community	17.10	8
Cooks	13.84	7
Freesoil Community	14.56	8
Littlefield	6.51	4

Source:

Computed from Tables 33 and 37.

cent for Highland Park and Bear Lakes Community. In per cent of other instruction expenditures the top ten districts are indistinguishable from the bottom ten districts. Thus, the more affluent districts do not seem to spend disproportionately more on other instruction expenditures than do the less affluent districts.

1968-69 Comparisons.

Table 39, total general fund instruction expenditures per pupil for 1968-69, shows Oak Park City spent the most in Michigan with expenditures of \$916.75 per pupil. At the other end of the spectrum is Beaver Island Community, which spent only 28 per cent as much, or \$255.37 per pupil.

Comparing total general fund instruction expenditures per pupil in 1968-69 (Table 39) with 1965-66 (Table 37), it is seen that the top ten districts in expenditures increased expenditures from \$553.70 in 1965-66 to \$916.75 in 1968-69, or \$363.05, an increase of 66 per cent. This compares with the all salary expenditure increase of \$357.99 per pupil or 70 per cent (Tables 33 and 35). Thus, the top district increased salary expenditures slightly more than instruction expenditures. However, the opposite was true of the bottom district. That is, instruction expenditures increased by 39 per cent from 1965-66 to 1968-69, while salary expenditures increased by 24 per cent.

Table 40 shows how much of total instruction expenditures in 1968-69 went for something other than salaries. This "something other" has been titled "other instruction expenditures." Its range is from a high of \$56.84 per pupil in Lamphere down to Memphis Community's low of \$9.72 per pupil. The column showing other instruction expenditure as a

TABLE 39

TOTAL GENERAL FUND INSTRUCTION EXPENDITURE PER PUPIL IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS, 1968-69.

Rank	School District	County	Amount Per Pupil
1.	Oak Park City	Oakland	\$916.75
2.	Highland Park City	Wayne	734.52
3.	Ann Arbor City	Washtenaw	728.99
4.	Dearborn City	Wayne	700.02
5.	Birmingham City	Oakland	691.51
6.	Grosse Pointe	Wayne	690.46
7.	Ecorse	Wayne	688.61
8.	Lamphere	Oakland	685.17
9.	East Lansing	Ingham	673.87
10.	Hamtramck City	Wayne	651.81
516.	Vanderbilt Area	Otsego	325.29
517.	Wolverine Community	Cheboygan	323.81
518.	Onaway Area Community	Presque Isle	323.71
519.	Reese	Tuscola	322.29
520.	Airport Community	Monroe	321.62
521.	Memphis Community	St. Clair	320.49
522.	Walkerville Rural Community	Oceana	316.90
523.	Hopkins	Allegan	306.93
524.	Genesee	Genesee	282.42
525.	Beaver Island Community	Charlevoix	255.37

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

TABLE 40

OTHER INSTRUCTION EXPENDITURES AND OTHER INSTRUCTION EXPENDITURES
AS A PER CENT OF INSTRUCTION EXPENDITURES: THE TOP AND BOTTOM TEN
DISTRICTS IN MICHIGAN, 1968-69.

School District	Other Instruction Expenditures	Per Cent Instruction Expenditures
Oak Park City	\$49.20	5
Highland Park City	42.81	6
Ann Arbor City	27.43	4
Dearborn City	28.54	4
Birmingham City	36.36	5
Grosse Pointe	29.71	4
Ecorse	36.18	5
Lamphere	56.84	8
East Lansing	53.24	8
Hamtramck City	48.97	8
Vanderbilt Area	18.65	6
Wolverine Community	18.22	6
Onaway Area Community	14.75	5
Reese	17.63	5
Airport Community	14.78	5
Memphis Community	9.72	3
Walkerville Rural Community	20.77	7
Hopkins	17.17	6
Genesee	17.21	6
Beaver Island Community	41.27	16

Source:

Computed from Tables 35 and 39.

per cent of total instruction expenditure has a range of from 3 per cent for Memphis Community to 16 per cent for Beaver Island Community. However, in general the per cent column is fairly constant at around 5 to 8 per cent.

In comparing Table 40 with Table 38, it is seen that while the absolute dollar amounts going to other instruction expenditures increased, the per cent going to other instruction expenditures decreased. Therefore, salary expenditures increased more than other instruction expenditures. The larger increases in salaries may be the result of bargaining.

Current Operating Expenditures

Current operating expenditures is a descriptive heading under which the basic expenses of a school are grouped. The activities include: instruction, administration, attendance, health, transportation, fixed charges, operation of plant and maintenance of plant. Obviously, current operating expenditures is a classification which includes both earlier classifications plus additional expenditures not included in either of the previous two classifications.

1965-66 Comparisons.

Looking at Table 41, general fund current operating expenditures per pupil for 1965-66, Mastadon Township spent a total of \$788.15 per pupil on this category. At the other end of the expenditure column, Littlefield spent only \$295.68 per pupil. This represents an expenditure of 38 per cent as much as the maximum. The absolute difference between the top and bottom districts is \$492.47 per pupil. Consequently, there is a substantial difference per pupil in spending in this category.

TABLE 41

GENERAL FUND CURRENT OPERATING EXPENDITURES PER PUPIL: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN: 1965-66.

Rank	School District	County	Amount Per Pupil
1.	Mastadon Township	Iron	\$788.15
2.	Riverview Community	Wayne	763.71
3.	Whitefish	Chippewa	746.81
4.	Highland Park City	Wayne	745.81
5.	Dearborn City	Wayne	733.79
6.	Burt Township	Alger	728.78
7.	White Pine	Ontonagon	721.72
8.	Republic Central	Marquette	708.75
9.	Oak Park City	Oakland	685.19
10.	River Rouge City	Wayne	677.61
524.	Hartford	Vanburen	327.28
525.	Bear Lake	Manistee	326.46
526.	Millington Community	Tuscola	326.31
527.	Mt. Morris Consolidated	Genesee	325.08
528.	Lakeville Community	Genesee	323.19
529.	Ionia City	Ionia	317.61
530.	Birch Run Area	Saginaw	316.52
531.	Freesoil Community	Mason	316.52
532.	Flushing Community	Genesee	314.51
533.	Littlefield	Emmet	295.68

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

An examination of the twenty districts listed in Table 41 shows that Wayne County has four districts in the top ten for general fund current operating expenditures per pupil. The second most represented county is Genesee, with three districts listed in the bottom ten. The major city in Genesee County is Flint, but the three districts representing Genesee County are all small farming communities. Although there were five rural areas in the top ten districts, all ten of the bottom districts were rural or small town in location.

1968-69 Comparisons.

Table 42 cites current operating expenditures per pupil for the final year of the study, 1968-69. For this year the range of expenditures was from Oak Park's \$1,142.59 to Beaver Island's \$368.69. Beaver Island thus spent 32 per cent as much on current operating expenditures per pupil as did Oak Park. This is the greatest difference in any of the years. Consequently, the lowest district lost ground to the top district from 1965-66 to 1968-69. Therefore, collective bargaining did not diminish the disparity in current operating expenditures per pupil between the top and bottom ten districts. As a further example, the top district increased by \$354.44 or 45 per cent from 1965-66 to 1968-69, while the bottom district increased by \$73.01 per pupil or 25 per cent.

Other Operating Expenditures

Other operating expenditures are derived by subtracting total instruction expenditures (Table 37) from current operating expenditures (Table 41). Other operating expenditures are then divided by current operating expenditures to give a per cent relationship between the two variables.

TABLE 42

GENERAL FUND CURRENT OPERATING EXPENDITURES PER PUPIL: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1968-69.

Rank	School District	County	Amount Per Pupil
1.	Oak Park City	Oakland	\$1,142.59
2.	Dearborn City	Wayne	1,003.07
3.	Highland Park City	Wayne	970.42
4.	Watersmeet Township	Gogebic	955.93
5.	Republic Michigamme	Marquette	930.97
6.	Ecorse	Wayne	927.32
7.	Birmingham City	Oakland	919.08
8.	Grosse Pointe	Wayne	918.06
9.	Ann Arbor City	Washtenaw	888.98
10.	East Lansing	Ingham	888.95
516.	Flushing Community	Genesee	471.51
517.	Breckenridge Community	Gratiot	469.69
518.	Millington Community	Tuscola	469.65
519.	Gladstone	Delta	465.55
520.	Reese	Tuscola	462.76
521.	Hartford	Van Buren	461.35
522.	Hopkins	Allegan	440.14
523.	Lakeview Community	Montcalm	437.86
524.	Genesee	Genesee	420.07
525.	Beaver Island Community	Charlevoix	368.69

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

1965-66 Comparisons.

Basically Table 43 deals with what might be called overhead expenses. These expenses are not directly attributable to the educational process. The range of expense was from a high of \$340.63 per pupil in Burt Township to a low of \$74.52 per pupil in Flushing Community. Even with the extreme disparity in the absolute dollar amounts shown in Table 43, percentage-wise, the poor districts spent as much as the districts at the top.

Later Year Comparisons.

The range of other operating expenditures in 1968-69 varied from a high of \$325.82 for Watersmeet Township to a low of \$90.25 for Gladstone (Table 44). The overall average of other operating expenditures was \$184.00, while the top ten average was \$246.20 and the bottom ten average was \$121.80. This compares with the 1967-68 overall average of \$176.38, top ten average of \$247.47, and bottom ten average of \$105.28. Consequently, the overall average showed a slight increase that was caused by the increase in the bottom ten districts. The top ten districts remained about the same.

The degree to which other operating expenditures were increasing can be seen even more clearly by an examination of the per cent column. Here the overall average per cent in 1968-69 was 26.55, while the top ten was 25.8 per cent and the bottom ten was 27.3 per cent. This compares to the previous year's overall 26.5 per cent, top ten 27.8 per cent, and bottom ten 25.2 per cent. Therefore, while the overall per cent remained constant between 1967-68 and 1968-69, a reversal of the relative positions between the top and bottom ten districts is seen.

TABLE 43

OTHER OPERATING EXPENDITURES AND OTHER OPERATING EXPENDITURES AS A PER CENT OF CURRENT OPERATING EXPENDITURES: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1965-66.

School District	Other Operating Expenditures	Per Cent of Operating Expenditures
Mastadon Township	\$314.66	40
Riverview Community	255.96	34
Whitefish	222.87	30
Highland Park City	192.11	26
Dearborn City	203.74	28
Burt Township	340.63	47
White Pine	229.58	32
Republic Central	240.72	34
Oak Park City	138.98	20
River Rouge City	177.69	26
Hartford	82.16	25
Bear Lake	118.54	36
Millington Community	97.18	30
Mt. Morris Consolidated	86.05	26
Lakeville Community	94.57	29
Ionia City	84.08	26
Birch Run Area	95.74	30
Freesoil Community	129.29	41
Flushing Community	74.52	24
Littlefield	111.74	38

Source:

Computed from Tables 37 and 41.

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OTHER OPERATING EXPENDITURES AND OTHER OPERATING EXPENDITURES AS A PER CENT OF CURRENT OPERATING EXPENDITURES: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1968-69.

School District	Other Operating Expenditures	Per Cent of Operating Expenditures
Oak Park City	\$225.84	20
Dearborn City	303.05	30
Highland Park City	235.90	24
Watersmeet Township	325.82	34
Republic Michigamme	302.49	32
Ecorse	238.71	26
Birmingham City	227.57	25
Grosse Pointe	227.60	25
Ann Arbor City	159.99	18
East Lansing	215.08	24
Flushing Community	114.72	24
Breakenridge Community	133.35	28
Millington Community	127.41	27
Gladstone	90.25	19
Reese	140.47	30
Hartford	115.21	25
Hopkins	133.21	30
Lakeview Community	112.44	26
Genesee	137.65	33
Beaver Island Community	113.32	31

Source:

Computed from Tables 39 and 42.

The top ten now spend a lower per cent of their current operating budget on other operating expenses than the bottom ten districts. This would seem to indicate that the more impecunious districts were channeling their increased expenditures into areas other than instruction.

Total General Fund Expenditures

Total general fund expenditures is a descriptive heading under which are grouped all accounts for operating the school districts. These activities include current operating expenditures plus capital outlay, community services, and student services. In other words, this heading covers all expenditures made by the school districts out of the general fund. This would exclude those bonded debts for capital improvement which would require a special debt retirement fund from earmarked revenue. Thus, total general fund expenditures cover all operating expenses incurred by the school districts.

1965-66 Comparisons.

Table 45 lists the top ten districts and the bottom ten districts by amount of total general fund expenditures for 1965-66. The range of expenditures in this table is from a high of \$869.89 per pupil in Mastadon Township to a low of \$319.01 per pupil in Freesoil Community. Thus, Freesoil Community only spent 37 per cent as much per pupil on general fund expenditures as Mastadon Township. This per cent represents a difference of nearly \$550.00 per pupil in total expenditures, a not inconsequential amount.

Later Year Comparisons.

Table 46 shows that six out of the top ten districts spent more than \$1,000 per pupil on general fund expenditures in 1968-69. This is

TABLE 45

TOTAL GENERAL FUND EXPENDITURES PER PUPIL: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1965-66.

Rank	School District	County	Amount Per Pupil
1.	Mastadon Township	Iron	\$869.89
2.	Riverview Community	Wayne	835.54
3.	Highland Park City	Wayne	823.43
4.	Republic Central	Marquette	813.90
5.	White Pine	Ontonagon	813.49
6.	Whitefish	Chippewa	799.27
7.	Burt Township	Alger	764.70
8.	Grosse Ile Township	Wayne	759.94
9.	River Rouge City	Wayne	741.16
10.	Dearborn City	Wayne	739.62
524.	Burr Oak Community	St. Joseph	369.24
525.	Flushing Community	Genesee	364.05
526.	Mt. Morris Consolidated	Genesee	363.45
527.	Ionia City	Ionia	360.72
528.	Birch Run Area	Saginaw	352.78
529.	Shelby	Oceana	353.65
530.	Summerfield	Monroe	349.31
531.	Littlefield	Emmet	344.67
532.	Cooks	Schoolcraft	342.85
533.	Freesoil Community	Mason	319.01

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1967.

TABLE 46

TOTAL GENERAL FUND EXPENDITURES PER PUPIL: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1968-69.

Rank	School District	County	Amount Per Pupil
1.	Oak Park City	Oakland	\$1,178.79
2.	Dearborn City	Wayne	1,079.63
3.	Highland Park City	Wayne	1,071.63
4.	White Pine	Ontonagon	1,065.65
5.	Grosse Pointe	Wayne	1,042.43
6.	Republic Michigamme	Marquette	1,010.36
7.	Whitefish School	Chippewa	988.46
8.	Watersmeet Township	Gogebic	986.33
9.	Birmingham City	Oakland	969.12
10.	Ann Arbor City	Washtenaw	958.73
516.	Grand Ledge	Eaton	516.89
517.	Otsego	Allegan	516.82
518.	Birch Run Area	Saginaw	514.38
519.	Quincy Community	Branch	513.69
520.	Flushing Community	Genesee	507.96
521.	Lakeview Community	Montcalm	500.22
522.	Hopkins	Allegan	489.19
523.	Summerfield	Monroe	482.57
524.	Genesee	Genesee	476.99
525.	Beaver Island Community	Charlevoix	444.64

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

twice the number of districts that spent in excess of \$1,000 the previous year. However, the range of per pupil spending is from \$1,178.79 for Oak Park down to \$444.64 per pupil in Beaver Island Community. Thus, Beaver Island Community only spent 38 per cent as much per pupil as did Oak Park City. This compares with the 1967-68 ratio of 40 per cent, while the 1966-67 ratio was 43 per cent, and the 1965-66 ratio was 37 per cent. Consequently, the spread between the top district and the bottom district is just about the same in 1965-66. Therefore, the gap in total spending between the bottom district and the top district in the state was not closed in four years.

Other Expenditures: 1965-66 Comparisons.

By subtracting current operating expenditures (Table 41) from total expenditures (Table 45), the remainder is that amount of "other expenditures" that went for capital outlay, community services, and some student services (Table 47). The range was from a low of \$2.49 per pupil for Freesoil Community to a high of \$157.83 per pupil for Grosse Ile Township. Thus, Freesoil only spent 2 per cent as much on other general fund expenditures as did Grosse Ile Township. It is noteworthy that the per cent of total other general fund expenditures has the greatest variation of any of the per cents computed.

Other Expenditures: 1968-69 Comparisons.

Table 48 was constructed to show other general fund expenditures, and the per cent of other general fund expenditures to total general fund expenditures for the year 1968-69. It can be seen that the range of other general fund expenditures is from a high of \$211.49 per pupil for White Pine to a low of \$2.92 per pupil for Summerfield. Thus, Summerfield

TABLE 47

OTHER GENERAL FUND EXPENDITURES AND OTHER GENERAL FUND EXPENDITURES
AS A PER CENT OF TOTAL GENERAL FUND EXPENDITURES PER PUPIL: THE TOP
AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1965-66

School District	Other General Fund Expenditures	Per Cent of Total Expenditures
Mastadon Township	\$81.74	9
Riverview Community	71.83	9
Highland Park City	77.62	9
Republic Central	105.15	13
White Pine	91.77	11
Whitefish	52.46	7
Burt Township	35.92	5
Grosse Ile Township	157.83	21
River Rouge City	63.55	9
Dearborn City	5.83	1
Burr Oak Community	9.53	3
Flushing Community	49.54	14
Mt. Morris Consolidated	38.37	11
Ionia City	43.11	12
Birch Run Area	36.26	10
Shelby	10.48	3
Summerfield	13.53	4
Littlefield	48.99	14
Cooks	5.03	1
Freesoil Community	2.49	1

Source:

Computed from Tables 41 and 45.

TABLE 48

OTHER GENERAL FUND EXPENDITURES AND OTHER GENERAL FUND EXPENDITURES
AS A PER CENT OF TOTAL GENERAL FUND EXPENDITURES PER PUPIL: THE
TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1968-69.

School District	Other General Fund Expenditures	Per Cent of Total Expenditures
Oak Park City	\$ 36.20	3
Dearborn City	76.56	7
Highland Park City	101.21	9
White Pine	211.49	20
Grosse Pointe	124.37	12
Republic Michigamme	79.39	8
Whitefish	102.55	10
Watersmeet Township	30.40	3
Birmingham City	50.05	5
Ann Arbor City	69.75	7
Grand Ledge	44.59	8
Otsego	6.15	1
Birch Run Area	35.57	7
Quincy Community	6.12	1
Flushing Community	36.45	7
Lakeview Community	62.36	12
Hopkins	49.05	10
Summerfield	2.92	1
Genesee	56.92	12
Beaver Island Community	75.95	17

Source:

Computed from Tables 42 and 46.

only spent 1 per cent as much as White Pine. The ratio between the low district and the high district was the same in 1968-69 as it was in 1967-68, e.g., 1 per cent. On the other hand, the 1966-67 ratio was 9 per cent, and the 1965-66 ratio was 2 per cent. In the area of other general fund expenditures, the spread between the top and bottom districts in absolute amounts had increased slightly over time.

An analysis of other general fund expenditures shows that the overall average of the top and bottom ten districts for 1968-69 was \$62.90 per pupil. This compares with the 1967-68 average of \$49.52, \$54.89 in 1966-67, and \$50.05 in 1965-66. Consequently, the average has increased since 1965-66. The average is not particularly significant because the standard deviation is quite large. But the average can be used to indicate direction of movement, and it is toward greater expenditures.

An analysis of the top ten districts in 1968-69 showed that the average of the other general fund expenditures was \$88.20 per pupil. This compared with the 1967-68 average of \$78.83, the 1966-67 average of \$79.18, and the 1965-66 average of \$74.37. Thus, the top ten districts spent more, on the average, in 1968-69 than for any previous year.

Looking at the bottom ten districts for 1968-69, their average was \$37.61 per pupil spent on other general fund expenditures. This compares with the 1967-68 average of \$20.20, a 1966-67 average of \$30.59, and a 1965-66 average of \$25.73 per pupil. Thus, it can be seen that the bottom ten districts also increased the average amount they spent on other general fund expenditures. The top ten increased their spending from 1967-68 to 1968-69 by 12 per cent, on the average. At the same

time, the bottom ten districts increased their average spending 86 per cent. While both the bottom ten and top ten districts increased their spending, the bottom ten districts increased their average spending more than the top ten districts.

Looking at other general fund expenditures as a per cent of total general fund expenditures, the 1968-69 overall average was 8.0 per cent. Here again, the standard deviation is so large as to devalue the importance of the average. But using these averages to indicate direction of movement (thus implicitly assuming a rather constant standard deviation over time), the 1967-68 overall average was 6.25 per cent, the 1966-67 average was 8.3 per cent, and the 1965-66 average was 8.35 per cent. Consequently, with the exception of 1967-68, the per cent has remained relatively constant at about 8 per cent. The decrease in the 1967-68 per cent might be attributable to the initial impact of collective bargaining, with the shifting of expenditures from the "other" category to instruction salaries.

An analysis of other general fund expenditures as a per cent of total general fund expenditures shows the top ten districts had an average of 8.4 per cent in 1968-69, 8.1 per cent in 1967-68, 9.1 per cent in 1966-67, and 9.4 per cent in 1965-66. Thus, the overall trend among the top ten districts is down, although not significantly.

Looking at the per cent spent on other general fund expenditures in 1968-69, by the bottom ten districts, the average was 7.6 per cent. This compares with the 1967-68 average of 4.4 per cent, the 1966-67 average of 7.5 per cent, and the 1965-66 average of 7.3 per cent. Consequently, with the exception of 1967-68, the average per cent spent by the

bottom ten districts has remained relatively constant. Only in 1967-68 was there a drop of rather substantial proportions in the per cent spent on other general fund expenditures, possibly caused by collective bargaining.

Summary

Measured by percentage increases, the bottom ten school districts raised salaries faster than the top ten schools from 1965-66 to 1968-69. However, in the latter school year the top ten averaged paying \$5,756 more annually than the bottom ten Michigan districts, whereas they had only been paying \$5,118 more in 1965-66.

Analyzing all salaries of the general fund per pupil, it was found that the top ten schools increased their expenditures by larger percentages than did the bottom ten schools.

Statistics on the total general fund instruction expenditures showed a slightly larger percentage increase in the bottom ten schools from 1965-66 to 1968-69. However, when absolute increases are used, the top ten increased such expenditures slightly more than the bottom ten schools. When total instructional salaries are broken down between salary and "other" expenditures, salaries increased faster than other instructional expenditures. The emphasis on salaries may have been due to labor unions.

Analysis on overhead costs indicated that the ten bottom districts increased amounts spent on these items faster than the ten top districts from the first year of the study to the last year. Both in per cent and in absolute amounts the increases were larger for the ten bottom districts than for the ten top districts.

When total general fund expenditures are analyzed, it was found that the bottom ten schools increased expenditures when measured in per cent faster than the top ten schools from the first year of the study to the last. However, if absolute increases are measured, the top ten districts increased general fund expenditures on the average by \$239.02 whereas the bottom ten schools increased their expenditures by \$144.46.

In percentages, the ten bottom school districts increased capital and "other" outlays more than the top ten school districts in the four school years studied. However, in absolute amounts, the top ten districts increased such expenditures slightly faster than the bottom ten districts.

CHAPTER VIII

CONTROL GROUP COMPARISONS

Chapters II through VII dealt with revenue and the determinants of revenue within Michigan, and expenditures including teachers' salaries within Michigan. This chapter compares Michigan data with the U.S. and Great Lakes region averages. In this way the nation and the region will be used as control groups against which Michigan is measured. Michigan data are excluded from both the Great Lakes and U.S. averages.

The primary data source for this chapter is *Estimates of School Statistics* for the years 1965-66, 1966-67, 1967-68, and 1968-69, published by the Research Division of the National Education Association.¹ In those areas where the statistics published in the N.E.A. reports differ from the State of Michigan publications, the N.E.A. data will be used to maintain comparability of data. The analysis of this chapter will follow the format of the previous chapters. That is, revenue is dealt with first, then expenditures, and last teachers' salaries.

Revenues

Table 49 shows the per pupil revenue receipts for Michigan, the Great Lakes region, and for the nation for all four years. Table 49

¹*Estimates of School Statistics*, 1965-66; Research Report 1965-R17, Research Division -- National Education Association, Washington, D.C. (1965), for 1966-67 it is Research Report 1966-R20, for 1967-68 it is Research Report 1967-R19, and for 1968-69 it is Research Report 1968-R16.

TABLE 49

PER PUPIL REVENUE RECEIPTS FOR MICHIGAN, THE GREAT LAKES REGION,^a
AND FOR THE NATION^b: 1965-66, 1966-67, 1967-68, AND 1968-69.

Year, State and Region	Per Pupil Revenue Receipts by Source			Total Per Pupil Revenue Receipts	Total All Receipts Per Pupil
	Fed.	State	Local		
1965-66					
Michigan	\$30	\$258	\$284	\$572	\$674
Great Lakes	34	176	364	574	672
U.S. and D.C.	43	223	302	570	642
1966-67					
Michigan	34	295	289	619	726
Great Lakes	33	192	379	604	674
U.S. and D.C.	48	239	324	611	676
1967-68					
Michigan	31	318	388	736	850
Great Lakes	35	229	433	698	775
U.S. and D.C.	54	269	360	683	755
1968-69					
Michigan	31	347	405	783	894
Great Lakes	35	250	452	738	814
U.S. and D.C.	53	297	377	726	800

^aGreat Lakes region includes Illinois, Indiana, Ohio and Wisconsin -- excluding Michigan.

^bU.S. and D. C. excludes the Great Lakes region and Michigan.

Source:

Estimates of School Statistics, 1965-66; Research Report 1965-R17, Research Division-National Education Association, Washington, D.C. (1965); for 1966-67, Research Report 1966-R20; 1967-68 Research Report 1967-R19; 1968-69, Research Report 1968-R16.

holds student population constant, making the data between geographic regions comparable on an individual pupil basis.

In 1965-66, Michigan received \$30 per pupil from the federal government, the Great Lakes region averaged \$34 per pupil, and the nation averaged \$43 per pupil. Thus, of the three geographic regions, Michigan received the least federal revenue assistance. In the three remaining years Michigan received a \$4 per pupil increase in federal monies in 1966-67, but in 1967-68 Michigan lost most of the increase as federal aid declined to \$31 per pupil, the same amount as was received in 1968-69. Thus, Michigan remained relatively constant in federal funds for the four years.

The Great Lakes region also remained relatively constant during the four years. On the other hand, the U.S. average increased by \$10 per pupil from 1965-66 to 1968-69, an increase of 23 per cent. Consequently, Michigan and the Great Lakes region fared worse than the rest of the nation in receipt of federal aid to education.

Looking at state aid to education, in 1965-66 Michigan provided \$258 per pupil, in 1966-67 state aid increased to \$295, an increase of \$37 per pupil or 14 per cent. In 1967-68, Michigan contributed \$318 per pupil in state aid, an increase of \$23 per pupil, or 8 per cent. In 1968-69, Michigan provided \$347 per pupil in state aid, an increase of \$29 over the previous year, or 9 per cent. For the period 1965-66 to 1968-69, state aid in Michigan increased by \$89 per pupil, or 34 per cent.

By comparison, the Great Lakes Region provided \$176 average per pupil in 1965-66. For the period 1965-66 to 1968-69, the Great Lakes region increased state aid by \$74 per pupil, or a total of 42 per cent.

Consequently, though Michigan provided considerably more in state aid than the rest of the Great Lakes region, during the four years of this study, the Great Lakes states increased their contributions to education more than did Michigan on a percentage basis.

The third per pupil comparison, the U.S. and District of Columbia fell between Michigan and the Great Lakes region in state contributions to local school districts. That is, in 1965-66, the national average was \$223 per pupil in state aid. The national average showed increases in state contributions each year, with the largest increase being \$30 per pupil in 1967-68 over 1966-67. The total increase in the nation for the period 1965-66 to 1968-69 was \$74 per pupil, or 33 per cent. Thus, both Michigan and the Great Lakes region increased state aid per pupil more than the rest of the nation, and Michigan provided more in aid than the rest of the nation including the Great Lakes region.

Looking now at local sources of revenue, in both 1965-66 and 1966-67, Michigan ranked below the Great Lakes region and the U.S. in revenue from local sources. However, in 1967-68, Michigan passed the national average in local sources of revenue, and in 1968-69, Michigan was still second in the three-way comparison. The major increase in local revenues in Michigan was the period 1966-67 to 1967-68, when the pupil revenue from local sources increased by \$99, or 34 per cent. This also was the first year of compulsory collective bargaining. Thus, collective bargaining in Michigan seems to have put pressure on the local community to increase its revenue for education. The increase for this same period in the Great Lakes region and the U.S. was 14 per cent and 11 per cent, respectively. Therefore, the rest of the school districts in the nation did not increase their share proportionately with Michigan.

During the period 1965-66 to 1968-69, Michigan local districts increased revenue by \$121, or 43 per cent. At the same time the Great Lakes regional districts increased revenues by \$88 per pupil, or 24 per cent, and the national average increased by \$75 per pupil, or 25 per cent. Thus, over the four years of the study, local districts became more important in providing revenue for education in Michigan than in either the Great Lakes region or the nation as a whole, and most of the effect in Michigan was felt the first year of compulsory collective bargaining.

Looking at Total All Receipts per Pupil, it is seen that Michigan provided more revenue per pupil in each year of the study than either the Great Lakes region average or the national average. For the period 1965-66 to 1968-69, revenue receipts per pupil in Michigan increased by \$220, or 33 per cent. During this same period, total receipts per pupil in the Great Lakes region increased by \$142, or 21 per cent. Also, for the same time period, the U.S. average of total receipts increased by \$158 per pupil, or 25 per cent. Thus, total receipts per pupil increased more in Michigan than the other two control groups, both absolutely and as a per cent.

Expenditures

Table 50 shows total current expenditures, expenditures for other programs, and capital outlay expenditures on a per pupil basis.

In 1965-66, Michigan spent \$544 per pupil on total current expenditures, and the Great Lakes region spent \$522 per pupil, and the U.S. and D.C. spent \$525 per pupil on current expenditures. Therefore, Michigan spent more on total current expenditures per pupil than either the Great Lakes

TABLE 50

PER PUPIL EXPENDITURES FOR PUBLIC SCHOOLS FOR MICHIGAN, THE GREAT LAKES REGION, AND THE UNITED STATES AND DISTRICT OF COLUMBIA: 1965-66, 1966-67, 1967-68, AND 1968-69.

Year, State and Region	Total Current Expenditure Per Pupil	Expenditure for Other Programs	Capital Outlay
1965-66			
Michigan	\$544	\$15	\$106
Great Lakes	522	13	83
U.S. and D.C.	525	16	78
1966-67			
Michigan	585	18	110
Great Lakes	558	13	79
U.S. and D.C.	573	21	82
1967-68			
Michigan	617	18	107
Great Lakes	632	17	92
U.S. and D.C.	634	23	90
1968-69			
Michigan	665	20	111
Great Lakes	685	18	98
U.S. and D. C.	680	24	93

Source:

Computed from *Estimates of School Statistics*, 1965-66; Research Report 1965-R17, Research Division-National Education Association, Washington, D. C. (1965); for 1966-67, Research Report 1966-R20; 1967-68, Research Report 1967-R19; 1968-69, Research Report 1968-R16.

region or the nation as a whole. The same was true in 1966-67, i.e., Michigan spent the most per pupil on current expenditures. However, in 1967-68, Michigan only spent \$617 per pupil while the Great Lakes region spent \$632 per pupil and the national average was \$634 per pupil. Thus, in the first year of compulsory collective bargaining, Michigan's expenditures were less than either of the control groups. The same was true in 1968-69 as in 1967-68.

From 1965-66 to 1968-69, Michigan's total current expenditures per pupil increased by \$121 per pupil, or 22 per cent. During this same time period, the Great Lakes region's expenditures increased by \$163 per pupil, or 31 per cent, and the U.S. average total current expenditure increased by \$155 per pupil, or 30 per cent. Thus, total current expenditures per pupil increased the most in the Great Lakes region and the least in Michigan for the period 1965-66 to 1968-69.

For the crucial period, 1967-68, Michigan's total current expenditure per pupil increased by \$34 per pupil, or 6 per cent over the 1966-67 per pupil expenditure. At the same time, the Great Lakes expenditures increased by \$74 per pupil, or 13 per cent, and the U.S. average per pupil expenditure increased by \$61 per pupil, or 11 per cent. Thus, on a per pupil basis, Michigan's expenditures during the first year of collective bargaining increased less than for either of the two control groups.

In 1965-66, expenditures for other programs in Michigan were \$15 per pupil, and by 1968-69, this had increased to \$20 per pupil, an increase of \$5 per pupil, or 33 per cent. During this same four-year period per pupil expenditures for other programs in the Great Lakes

region increased from \$13 to \$18, an increase of \$5 per pupil, or 38 per cent. For the nation as a whole, other program expenditures increased from \$16 in 1965-66 to \$24 in 1968-69, an increase of \$8 per pupil, or 50 per cent. Thus, just as for total current expenditures, Michigan's expenditures for other programs increased the least among the three areas.

In the area of capital outlay expenditures, Michigan spent the most per pupil in all four years in absolute dollar amounts. However, looking at increases in capital outlay over time, Michigan only increased expenditures by \$5 from 1965-66 to 1968-69, an increase of 5 per cent. At the same time, the Great Lakes region increased per pupil capital outlay expenditures by \$15, or 18 per cent, and the U.S. increased by \$15 per pupil, or 19 per cent. Thus, in all three areas of expenditure, Michigan showed the least increase during the period 1965-66 to 1968-69.

Table 51 shows the total of all receipts per pupil and the total of all expenditures per pupil for the three geographic regions for the four years of the study. It is interesting to note that in each of the four years every geographic subdivision showed a surplus of revenue receipts over expenditures. In fact, in 1965-66 the Michigan surplus was \$37 per pupil, and in 1968-69 the surplus was \$134 per pupil, an increase in the surplus of \$97 per pupil. In 1965-66, the Great Lakes region had a surplus of \$105 per pupil, and in 1968-69 a surplus of \$49 per pupil. The U.S. and D. C. had a surplus of \$59 per pupil in 1965-66, and a surplus of \$52 per pupil in 1968-69. Thus, the Great Lakes and the U.S. showed a decline in surplus in 1968-69 over 1965-66,

TABLE 51

PER PUPIL TOTAL OF ALL RECEIPTS AND TOTAL OF ALL EXPEDITURES FOR EDUCATION IN MICHIGAN, THE GREAT LAKES REGION, AND THE U.S. AND D.C.: 1965-66, 1966-67, 1967-68, AND 1968-69.

Year, State and Region	Total of All Receipts Per Pupil	Total of All Expenditures Per Pupil
1965-66		
Michigan	\$674	\$637
Great Lakes	672	567
U.S. and D. C.	642	583
1966-67		
Michigan	726	682
Great Lakes	674	592
U.S. and D. C.	676	641
1967-68		
Michigan	850	712
Great Lakes	775	695
U.S. and D. C.	755	702
1968-69		
Michigan	894	760
Great Lakes	814	765
U.S. and D. C.	800	748

Source:

Computed from *Estimates of School Statistics*, 1965-66; Research Report 1965-R17, Research Division-National Education Association, Washington, D. C. (1965); for 1966-67, Research Report 1966-R20; 1967-68, Research Report 1967-R19; 1968-69, Research Report 1968-R16.

but Michigan showed a substantial increase in per pupil surplus over the four years, in spite of compulsory collective bargaining. Therefore, in Michigan at least, revenue receipts increased more than did expenditures from 1965-66 to 1968-69.

Examining Table 51 for the crucial year 1967-68, it is seen that Michigan's receipts increased \$124 per pupil over the 1966-67 amount. On the other hand, expenditures only increased by \$30 per pupil during this period. Thus, revenues increased four times more than expenditures during the first year of state-wide compulsory collective bargaining. In the Great Lakes region, revenue receipts increased by \$101 per pupil from 1966-67 to 1967-68, and expenditures increased by \$103 per pupil. Thus, in the Great Lakes region, unlike in Michigan, expenditures increased more than revenues during the period 1966-67 to 1967-68. For the nation as a whole, revenue receipts increased by \$79 per pupil from 1966-67 to 1967-68, and expenditures increased by \$61 per pupil during the year. Consequently, in the nation as a whole, revenues increased slightly more than did expenditures. However, the most significant difference in revenue increase over expenditure increase was in Michigan. Therefore, it can be concluded that collective bargaining did not seem to be reflected in expenditures per pupil in Michigan.

Salaries

Table 52 shows the average annual salaries of classroom teachers, with a breakdown by elementary and secondary teachers for Michigan, the Great Lakes region, and the nation. It also shows the per cent of all classroom teachers whose salaries fall within various salary levels.

TABLE 52

AVERAGE ANNUAL SALARIES OF CLASSROOM TEACHERS FOR THE STATE OF MICHIGAN, THE GREAT LAKES REGION, AND FOR THE UNITED STATES AND DISTRICT OF COLUMBIA: 1965-66, 1966-67, 1967-68, AND 1968-69.

Year, State and Region	Average Salary of Classroom Teachers			Per Cent of All Classroom Teachers Whose Salaries Fall in Each of the Following ^a						
	Elementa- ry	Second- ary	All Teachers	Below 4,500	4,500 5,499	5,500 6,499	6,500 7,499	7,500 8,499	8,500 9,499	9,500 Above
1965-66										
Michigan	\$6,800	\$6,950	\$6,850	0.2	14.0	29.6	31.2	19.5	4.0	1.5
Great Lakes	6,513	7,015	6,722	1.9	19.4	30.2	24.1	13.9	7.2	3.3
U.S. & D.C.	6,279	6,761	6,485	8.8	22.7	26.8	19.1	11.1	6.6	4.5
1966-67										
Michigan	7,350	7,550	7,406	0.0	5.0	22.0	35.0	28.0	7.0	3.0
Great Lakes	6,918	7,414	7,096	1.2	12.0	28.9	26.1	17.9	8.8	5.2
U.S. & D.C.	6,622	7,109	6,830	1.4	19.7	26.7	19.8	13.2	8.6	7.6
1967-68										
Michigan	8,113	8,485	8,293	0.0	0.5	13.5	24.0	23.0	18.5	20.5
Great Lakes	7,738	8,274	7,977	0.3	3.6	23.5	24.6	19.7	14.5	13.8
U.S. & D.C.	7,208	7,692	7,423	2.1	11.5	25.5	22.0	15.3	10.5	13.1
1968-69										
Michigan	9,087	9,499	9,288	0.0	0.0	8.0	15.0	17.0	30.0	30.0
Great Lakes	8,243	8,841	8,543	0.2	2.5	14.9	19.6	22.1	21.6	19.0
U.S. & D.C.	7,676	8,160	7,908	1.1	7.0	19.9	22.5	18.5	13.6	17.5

^aPer Cent may not add up to 100 per cent because of rounding.

Source: Compiled from *Estimates of School Statistics*, 1965-66; Research Report 1965-R17, Research Division -- National Education Association, Washington, D.C. (1965), for 1967-67, Research Report 1966-R20, 1967-68, Research Report 1967-R10, 1968-69, Research Report 1968-R16

In 1965-66, all teachers in Michigan earned an average salary of \$6,850. Elementary teachers received \$6,800 on the average, and secondary teachers earned an average of \$6,950. Thus, elementary teachers earned 98 per cent as much as secondary teachers. Teachers in the Great Lakes region earned an average of \$6,722 or 2 per cent less than Michigan teachers. Elementary teachers in the Great Lakes region received \$6,513 per year or 93 per cent of the average \$7,015 received by secondary teachers. Thus, differences in wages of elementary and secondary teachers was greater in the region than in Michigan.

The average pay of teachers in the U.S. and D.C. in 1965-66 was \$6,485 or 5 per cent less than the remuneration of Michigan educators. Also, the variation between the pay of elementary and secondary teachers in the nation was the same as for the Great Lakes region, 93 per cent.

Looking at the per cent distribution of salaries by income class in 1965-66, the Michigan modal class (that class with the largest number in it) was \$6,500 to \$7,499. The Great Lakes region and U.S. modal class was one salary class lower at \$5,500 to \$6,499. Looking at the three middle salary classes, ranging from \$5,500 to \$8,499, 80.3 per cent of all Michigan teachers in 1965-66 fell within this range. At the same time, 68.2 per cent of the teachers in the Great Lakes region were within this salary range, and 57.4 per cent of the teachers in the nation were so rewarded. Salaries in Michigan were more evenly distributed in 1965-66 than in either the Great Lakes region or in the nation as a whole. Only 14.2 per cent of Michigan's teachers received salaries below \$5,499, while 21.3 per cent of teachers in the Great Lakes region and 31.5 per cent of teachers in the nation were paid this

little. At the other extreme, 5.5 per cent of teachers in Michigan received wages above \$8,500, and 10.5 per cent of teachers in the Great Lakes region and 11.1 per cent of teachers nationally received more than \$8,500. Thus, Michigan had more in the middle income range and less at either extreme, than either the Great Lakes region or the nation as a whole.

Overall, from 1965-66 to 1968-69, Michigan increased teachers' salaries by 36 per cent. During the same time period the Great Lakes region increased teachers' pay 27 per cent, and the nation as a whole increased salaries 22 per cent. From 1966-67 to 1967-68, Michigan increased teachers' salaries 12 per cent, the Great Lakes region increased salaries 12 per cent, and across the nation salaries increased 9 per cent.

Table 53 was compiled to compare the per cent changes in revenue, expenditures, and teachers' salaries for the four years of the study. From 1965-66 to 1966-67, teachers' salaries in Michigan increased 8 per cent, per pupil revenue increased 8 per cent and per pupil expenditures increased 7 per cent. For the Great Lakes region, teachers' salaries increased 6 per cent, revenue increased zero per cent, and expenditures increased 4 per cent. In the nation as a whole, salaries increased 5 per cent, revenue increased 5 per cent, and expenditures rose 10 per cent.

The period 1966-67 to 1967-68, the first year of collective bargaining in Michigan, salaries increased 12 per cent, expenditures increased 4 per cent and revenues increased 17 per cent. In both the Great Lakes region and the nation as a whole revenue and expenditures increased more than salaries.

TABLE 53

PERCENTAGE CHANGE IN PUBLIC SCHOOL EXPENDITURES, PUBLIC SCHOOL REVENUES, AND AVERAGE ANNUAL TEACHERS' SALARIES FOR MICHIGAN, THE GREAT LAKES REGION, AND THE UNITED STATES AND DISTRICT OF COLUMBIA: 1965-66, 1966-67, 1967-68, AND 1968-69.

Year, State and Region	Per Cent Change in per Pupil Revenue	Per Cent Change in per Pupil Expenditures	Per Cent Change in Average Annual Teachers' Salaries
1965-66 to 1966-67			
Michigan	8	7	8
Great Lakes	0	4	6
U.S. and D.C.	5	10	5
1966-67 to 1967-68			
Michigan	17	4	12
Great Lakes	15	17	12
U.S. and D.C.	12	10	9
1967-68 to 1968-69			
Michigan	5	7	12
Great Lakes	5	10	7
U.S. and D.C.	6	7	7
Total Change: 1965-66 to 1968-69			
Michigan	33	19	36
Great Lakes	21	35	27
U.S. and D. C.	25	28	22

Source:

Columns 1 and 2, computed from Table 51. Column 3, computed from Table 52.

There are apparently two different kinds of costs. Revenues represent a cost factor to the community, while expenditures represent a cost factor to the school system. Salaries in Michigan did not increase as much as community costs increased, but they did increase more than school system costs.

The period 1967-68 to 1968-69, shows salaries in Michigan increased 12 per cent while revenues increased 5 per cent and expenditures increased 7 per cent. What appears to be present is a delayed reaction. That is, in the second year of bargaining, costs did not increase nearly as rapidly as salaries. Perhaps this is a reflection of more astute collective bargaining on the part of teachers, or more militance on their part. During this same period salaries in the Great Lakes region and the u.S. only increased by 7 per cent, while their costs increased 10 per cent and 7 per cent respectively. Thus, the salary change was greatest in Michigan the second year of compulsory collective bargaining.

From 1965-66 to 1968-69, average teacher salaries in Michigan increased 36 per cent, in the Great Lakes region salaries increased 27 per cent, and in the nation salaries 22 per cent. Thus, teachers in Michigan did better than either of the two control groups.

In the area of per pupil expenditures (actual costs), from 1965-66 to 1968-69, education costs in Michigan increased 19 per cent, costs increased 35 per cent in the Great Lakes region, and 28 per cent in the nation. Costs increased the least in Michigan of the three areas.

Per pupil revenues in Michigan increased 33 per cent from 1965-66 to 1968-69, they increased 21 per cent in the Great Lakes region, and 25 per cent in the nation. Thus, revenues increased more in Michigan than in the other three groups.

It can be concluded from these analyses that costs did not increase by the same magnitude as salaries in Michigan, but per pupil revenue increased substantially. Therefore, more revenue was made available to the school system in Michigan, even though it was not all spent.

Summary

This chapter compares Michigan to two control groups, the Great Lakes region (Illinois, Indiana, Ohio, and Wisconsin) and to the rest of the nation (including the District of Columbia).

With the exception of 1966-67, Michigan received less federal aid than either the Great Lakes region or the rest of the nation.

Michigan provided more in state aid per pupil than either the Great Lakes region or the rest of the nation. However, on a percentage basis, both the Great Lakes region and the nation increased state contributions more than did Michigan.

In 1965-66 and 1966-67, Michigan provided the least local revenue per pupil of the three. In 1967-68 and 1968-69, after compulsory collective bargaining, Michigan local districts provided more revenue than the national average per pupil, but less than the Great Lakes average per pupil.

In absolute amounts per pupil, Michigan provided more in total receipts than either control group. Also, total receipts per pupil increased more in Michigan than the two control groups, both absolutely and as a per cent.

In both 1965-66 and 1966-67, Michigan school districts spent more per pupil, on the average, than either control group. However, in

1967-68 and 1968-69, Michigan spent less per pupil than either control group.

When total of all receipts per pupil were compared to the total of all expenditures per pupil, Michigan had a surplus of receipts over expenditures ranging from \$37 per pupil in 1965-66 to \$134 per pupil in 1968-69. On the other hand, the Great Lakes region had a surplus of \$105 per pupil in 1965-66, and a surplus of \$49 per pupil in 1968-69. The rest of the nation had a surplus of \$59 per pupil in 1965-66, and a surplus of \$52 per pupil in 1968-69. Therefore, only Michigan showed an actual increase in surplus over the four years, although both the other two control groups still had a surplus in 1968-69.

In Michigan, the Great Lakes region, and the U.S. and the District of Columbia, secondary school teachers earn more than elementary teachers. However, the percentage difference is less in Michigan than in either control group. In each of the four years the average salary of teachers in Michigan was greater than in the control groups. From 1965-66 to 1968-69, teachers' salaries in Michigan increased by 36 per cent, salaries increased by 27 per cent in the Great Lakes region, and by 22 per cent in the rest of the nation. Therefore, both absolutely and relatively, teachers in Michigan received higher salaries. Also, based on income class, salaries varied less in Michigan than in either of the two control groups, both before and after compulsory collective bargaining in Michigan.

There are two different kinds of costs. Revenues are a cost to the community, while expenditures are a cost to the school system. During the four years, teachers' salaries in Michigan increased more than revenues

or expenditures increased. Teachers' salaries in the Great Lakes region increased more than revenue, but less than expenditures, during the four years. In the U.S. and D.C. teachers' salaries increased less than both revenue and expenditures increased. Therefore, the experience in Michigan is better than in either control group. That is, efficiency per dollar of revenue was better in Michigan than in either control group.

CHAPTER IX

TEACHER STRIKES

Up to this point teachers' unions, whether they are called unions or associations, have been treated as a passive force. The degree of militancy or lack of militancy has been disregarded, except for a reference to bargaining power as a factor in the determination of salaries. This chapter will discuss the teachers' strike as an example of teacher participation in power bargaining. Most of the source material dealing with teacher work stoppages was derived from the American Education Association's research memo number 1969-27, titled *Teacher Strikes and Work Stoppages*.

Also, some of the information in this chapter is from *A Survey of Teacher Attitudes Concerning Negotiations in Michigan Education Association Negotiation Units*, Research Report MR-1, published by the Michigan Education Association (MEA) in 1968. This source deals only with members of the Michigan Education Association, and not with all members of the education profession in Michigan or with those members belonging to the Michigan branch of the American Federation of Teachers (AFT), AFL-CIO. It may be expected that the attitudes of teachers in the MEA toward negotiations would not be as militant as the attitudes of teachers in the AFT, because for one thing, the law passed by the Michigan Legislature forced many MEA members into a negotiating position

against their will. Because of the law, many teachers found themselves forced to bargain collectively even though there was no desire on their part to do so. Their attitude, at least in the beginning, was one of hostility toward the entire process.

The author, at the time of forced negotiations, was employed by the School of Labor and Industrial Relations of Michigan State University, which had a contract with the state to visit various school districts to teach the teachers, school superintendents, and school boards how to bargain collectively in good faith. The author found animosity to the whole process on the part of many of the teachers. Many expressed the opinion that the whole concept of "unionism" was not "professional," and some even objected to the use of the term "grievance procedure" because it indicated something was wrong. It was the writer's general impression that most of the MEA teachers would not have joined in the process of negotiations if left to their own devices. They had been members of the MEA, some for many years, because it was a "professional association" and not a union.

On the other hand, the author attended an AFT meeting in Detroit, where a strong collective bargaining attitude was expressed on the part of the membership. For example, the meeting opened with the singing of *Solidarity Forever*, the traditional song of organized labor. Also, the speeches were highly militant and the audience reaction was most favorable. These members, who it is assumed, joined voluntarily, expressed the attitude and opinion that collective bargaining was a right, if not a duty, and only through collective action could they hope to achieve economic justice and equality.

The MEA's publication, *A Survey of Teacher Attitudes Concerning Negotiations*, was not a reflection or a true representation of the attitudes of all teachers in the Michigan bargaining process, but only the attitudes of many of those teachers less disposed to the concept of collective bargaining. Unfortunately, however, the AFT made no such survey of its membership to see what their attitudes were. The reason for this was that the AFT knew what the attitudes of its members were, since they mostly joined voluntarily and express a commitment to collective action for the attainment of desired, known goals.

The total number of teacher strikes and work stoppages in the U.S. by all groups for the period 1960 through June, 1969 (Table 54) indicates the degree to which teachers have become militant. The distribution of strikes is skewed to the right. Prior to 1966, for example, there were only twenty-five work stoppages by teachers in the U.S., but since 1965, there were 305. Thus, not only in Michigan but across the nation teachers have become more militant in their bargaining, if number of strikes is any indication of militance. The high point of teacher militance was the year 1967, when 105 work stoppages took place across the nation.

Table 55 shows the number of strikes called in Michigan by the AFT from 1965 through June, 1969. The table also shows the beginning date of the strike, the number of days' duration of the strike, the number of teachers involved in the strike, and the total number of man-days lost because of the strike (this is computed by multiplying the duration by the number of teachers involved).

It is seen from Table 55 that AFT strikes in Michigan followed rather closely the militancy in the rest of the nation. That is, 1967

TABLE 54

TOTAL NUMBER OF TEACHER STRIKES AND WORK STOPPAGES IN THE U.S. BY ALL GROUPS FOR THE PERIOD 1960 THROUGH JUNE, 1969, BY YEAR.

Year	Total Number of Work Stoppages
1960	2
1961	1
1962	1
1963	2
1964	12
1965	7
1966	20
1967	105
1968	87
1969 through June 30	83
TOTAL	320

Source:

American Education Association, *Teacher Strikes and Work Stoppages*, Research Memo 1969-27, American Education Association, Washington, D. C. (1968), pp. 6-11.

TABLE 55

TEACHER STRIKES AND WORK STOPPAGES IN THE STATE OF MICHIGAN CALLED
BY THE AMERICAN FEDERATION OF TEACHERS FOR THE PERIOD 1965 THROUGH
JUNE 30, 1969

Local School District	Beginning Date	Duration in Days	Number of Personnel	May-Days Lost
1965				
Hamtramck	April 26	4	120	480
1966				
Highland Park	April 28	2	310	620
Melvindale	June 2	2	120	240
North Dearborn Heights	June 2	3	60	180
Taylor Township	June 2	2	420	840
Ecorse	June 3	11	185	2,035
1967				
Gibraltar	May 18	17	116	1,972
Dearborn	Sept. 5	14	252	3,528
Detroit	Sept. 5	9	11,500	103,500
Ecorse	Sept. 5	9	199	1,791
Harper Woods	Sept. 5	2	90	180
Highland Park	Sept. 5	15	515	7,725
Imlay City	Sept. 5	4	74	296
Inkster	Sept. 5	9	240	2,160
North Dearborn Heights	Sept. 5	11	118	1,298
Oak Park	Sept. 5	11	350	3,850
Sumpter Schools (Belleville)	Sept. 5	1	33	33
Taylor Township	Sept. 5	5	700	3,500
Hamtramck	Sept. 6	16	154	2,464
1968				
Heintzen	Sept. 3	2	175	350
Inkster	Sept. 3	4	242	968
Ecorse	Sept. 4	22	190	4,018
Taylor	Sept. 5	14	700	9,800
Gibraltar	Nov. 13	30	130	3,900
1969				
None				

Table 55 to be continued

TABLE 55 (Cont'd.)

Local School District	Duration in Days	Number of Personnel	May-Days Lost
Average number for entire state for 1966	4	219	783
Average number for entire state for 1967	9.5	1,103	10,177
Average number for state less Detroit	9.5	237	2,400
Average number for entire state for 1968	14	287	3,807
Average number for state: All years	9	708	6,489

Source:

Compiled from American Education Association, *Teacher Strikes and Work Stoppages*, Research Memo 1969-27, American Education Association, Washington, D. C., 1968.

was the year in which the largest number of strikes took place, with thirteen strikes by the AFT that year. However, 1968 was the year in which the bitterest strikes took place, because the duration in days were much greater in 1968 than in 1967, although the actual number of work stoppages declined in 1968 over 1967. The major work stoppage of 1967 was Detroit, where 11,500 teachers went out for nine days. This massive strike resulted in 103,500 man-days lost, by far the largest number in Michigan including the MEA work stoppages.

All told the AFT called a total of twenty-four strikes in Michigan from 1965 to June, 1969. This number of strikes averages out to five a year, and the average duration of each strike was nine days, and involved 708 workers, with an average of 6,489 man-days lost per strike. Thus, the AFT work stoppages involved fairly large schools, but a strike of only nine days duration indicates settlement took place fairly rapidly.

Table 56 shows teacher strikes and work stoppages in Michigan called by the MEA. From 1965 through June 30, 1969, the MEA was involved in a total of fifty-two work stoppages, or more than twice the number of work stoppages the AFT was involved in. Just as in the nation as a whole, and the AFT experience in Michigan, the MEA militancy is skewed to the right. That is, the total number of strikes increased from none in 1965, to four in 1966, to twenty-nine in 1967, to sixteen in 1968, to three in 1969. Thus, the year of decision in the MEA was 1967.

From page 2 of Table 56 it is seen that the average length of strikes by the MEA was 4.6 days, the average number of personnel involved was 382, and the average man-days lost per work stoppage was 1,661. Thus, the average strike was of shorter duration than the average

TABLE 56

TEACHER STRIKES AND WORK STOPPAGES IN MICHIGAN CALLED BY THE MICHIGAN EDUCATION ASSOCIATION FOR THE PERIOD 1965 THROUGH JUNE 30, 1969.

Local School District	Beginning Date	Duration in Days	Number of Personnel	Man-Days Lost
1965				
None				
1966				
Crestwood	June 2	7	158	1,106
Flint	June 2	2.5	1,350	3,375
Wayne	June 7	4	710	2,840
Northville	June 14	1	105	105
1967				
Bay City	Sept. 5	4	543	2,172
Beecher School (Flint)	Sept. 5	7	234	1,638
Birmingham	Sept. 5	9	775	6,975
Blissfield	Sept. 5	1	93	93
Bloomfield Hills	Sept. 5	9	370	3,330
Bridgeport	Sept. 5	12	145	1,740
Carrollton Schools (Saginaw)	Sept. 5	4	81	325
Cherry Hill Schools (Inkster)	Sept. 5	3	204	612
Crestwood Schools (Dearborn Heights)	Sept. 5	14	211	2,954
Eau Claire	Sept. 5	1	53	53
Fenton	Sept. 5	3	126	378
Holland	Sept. 5	4	230	920
Jonesville	Sept. 5	4	57	228
Linden	Sept. 5	1	65	65
Marshall	Sept. 5	5	138	690
Menominee	Sept. 5	16	110	1,760
Pentwater	Sept. 5	3	19	57
Portage Township (Houghton)	Sept. 5	2	50	100
Saginaw	Sept. 5	4	1,007	4,028
Southgate	Sept. 5	6	200	1,200
Troy	Sept. 5	4	223	892
Van Buren	Sept. 5	4	287	1,148
Whitehall	Sept. 5	4	78	312
Willow Run	Sept. 5	5	200	1,000
Camden-Frontier	Sept. 6	3	30	90

Table 56 Continued

TABLE 56 (Cont'd.)

Local School District	Beginning Date	Duration in Days	Number of Personnel	Man-Days Lost
1967 (Cont'd.)				
River Rouge	Sept. 6	8	205	1,640
Saline	Sept. 6	6	95	570
Summerfield (Petersburg)	Sept. 6	3	38	114
Adams Township (Painesdale)	Dec. 20	5	30	150
1968				
Charlevoix	Sept. 3	4	63	252
Jefferson (Monroe County)	Sept. 3	2	112	224
Riverview	Sept. 3	12	140	1,680
Trenton	Sept. 3	14	287	4,018
Redford (Temperance)	Sept. 4	1	150	150
River Rouge	Sept. 4	2	175	350
Romulus	Sept. 4	2	198	396
Charlotte	Sept. 4	1	132	132
Lincoln Park	Sept. 4	14	590	8,260
Northville	Sept. 4	5	128	640
Oscoda	Sept. 4	4	180	720
Waverly (Lansing)	Sept. 6	8	215	1,720
Detour	Oct. 14	1.5	23	34.5
Mt. Clemens	Oct. 22	7	173	1,211
Chippewa (Mt. Clemens)	Oct. 23	7	101	707
Swartz Creek	Oct. 24	1	177	177
1969				
Grand Rapids	March 21	4	1,500	6,000
Clio	March 27	2	26	52
Dowagiac	April 21	5	154	770
Average number for entire state for 1966		4	581	1,856
Average number for entire state for 1967		5	203	1,215
Average number for entire state for 1968		5	184	1,298
Average number for entire state for 1969 through June 30		4	560	2,274
Average for State for all years		4.6	382	1,661

Source: Compiled from American Education Association, *Teacher Strikes and Work Stoppages*, Research Memo 1969-27, American Education Association, Washington, D.C., 1968.

strike of the AFT. Also, the schools involved were smaller where the MEA was involved than where the AFT was involved. However, Detroit distorted the AFT data in number of personnel involved in work stoppages.

The MEA called more strikes than did the AFT in absolute numbers. However, during the period 1965-69, the AFT represented about 33,000 teachers in forty-three districts¹ out of a state total of around 525 districts with about 85,000 teachers.² Thus, the AFT represented only about 8 per cent of the districts, but about 40 per cent of the teachers in Michigan. The AFT represented a membership in the larger school districts in the state, mostly in the Detroit area. Therefore, of the total of seventy-six strikes called in Michigan from 1965 through June 30, 1969, the AFT called almost one-third of them. This occurred in spite of the fact that the AFT only represented 8 per cent of the total number of school districts. Consequently, the MEA represented about 92 per cent of the school districts in the state, but only called about two-thirds of the strikes. Thus, the AFT appeared to be more militant in its bargaining, because it did call a disproportionate number of strikes. Also, AFT strikes during the period involved a total of nearly 17,000 teachers. During the period the MEA strikes involved nearly 13,000 teachers. Even though the AFT accounts for 40 per cent of the teachers,

¹American Federation of Teachers: *A.F.T. Facts and Figures*, Washington, D. C., the American Federation of Teachers, AFL-CIO (1970), pp. 27-28.

²National Education Association, *Estimates of School Statistics*, 1968-69, Research Report 1968-R16, Washington, D.C., Research Division -- National Education Association, 1968, p. 27.

it accounted for nearly 60 per cent of the strikers.

Table 57 indicates a rough approximation of the average salaries of teachers represented by the AFT, as opposed to the state averages for the four years of the study. Only rough approximations were used because of the impossibility of determining the salaries of MEA members. The AFT members earned more than the state average, which means they do earn more than MEA members. This difference cannot be attributed to AFT activities any more than it can be attributed to the fact that the teachers represented by the AFT were employed by the largest school districts in the state, where the cost of living is higher.

As was pointed out earlier in this chapter, the attitudes of teachers toward their organization could be a contributing factor in the determination of their bargaining power. Therefore, the following are the highlights of Research Report MR1, 1968-69, *A Survey of Teacher Attitudes Concerning Negotiations in Michigan Education Association Negotiation Units*.

Most respondents thought relationships with students remained unchanged. Nearly 15 per cent thought relationships had improved, in contrast with 5 per cent, who thought they were worse.

The most significant improvement was teacher-teacher relationships. While 37 per cent believed these relationships were unchanged, 40.6 per cent thought they were improved.

Significantly, more than 34 per cent thought teacher relationships with superintendents were worse and nearly 38 per cent thought teacher-school board relationships were worse.

While the study showed a clear majority of teachers believed that teacher involvement in curriculum decisions should be negotiated, 30 per cent of the respondents indicated a lack of knowledge of whether or not it should be negotiated.

TABLE 57

AVERAGE SALARY OF AFT REPRESENTED DISTRICTS AND THE STATE AVERAGE IN MICHIGAN: 1965-66, 1966-67, 1967-68, AND 1968-69.

Year	AFT Average	State Average	State as a Per Cent of AFT
1965-66	\$ 7,700	\$6,850	89
1966-67	8,300	7,400	89
1967-68	8,900	8,300	93
1968-69	10,000	9,300	93

Source:

AFT Membership compiled from: *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66, 1966-67, 1967-68, and 1968-69, Michigan State Board of Education, Bulletin Number 1012, Lansing, Michigan.

State average compiled from; National Education Association, *Estimates of School Statistics*, 1968-69, Research Report 1968-R16, Washington, D.C., Research Division -- National Education Association, 1968.

Large numbers of the respondents, between 42 per cent and 48 per cent, indicated they had no knowledge of the effectiveness or emphasis being placed upon teacher involvement in budget making.

A high percentage of teachers (82 per cent) believed that the determination of class size should be negotiated, while a large minority of the respondents felt uninvolved (48 per cent) and believed there was too little emphasis (41 per cent).

Large majorities (65 per cent or more) of teachers felt that grievance procedures were effective or slightly effective, and that this item was being given appropriate emphasis during negotiations.

Teachers seemed to be quite evenly divided concerning the negotiation of non-teaching duties. One-third seemed to be quite satisfied with the progress being made, while one third thought there was too little emphasis and that they were uninvolved. Approximately one-third had little knowledge of what was going on in this area.

High proportions (63 per cent of 91 per cent) of teachers were satisfied with their involvement, the effectiveness and the emphasis being given to improving teacher salaries and fringe benefits.

Nearly one-half of the respondents indicated no knowledge of the effectiveness or the emphasis being given to negotiations requiring adherence to the Code of Ethics.

While the majority of teachers felt that secretarial and clerical assistance should be negotiated, 39 per cent or more of the respondents indicated no knowledge of whether it was a negotiation goal, no knowledge of its effectiveness or no knowledge about its emphasis.

Three-fourths of the respondents felt that the school calendar should be negotiated and nearly three-fifths believed that negotiations were in some measure effective.

Regarding procedures for teacher evaluation, one-fourth of the teachers had no knowledge of this item or indicated it was not a negotiated item. Thirty-two per cent indicated no knowledge as to whether it should be or should not be negotiated; 41 per cent had no knowledge of its effectiveness and 35 per cent had no knowledge about the emphasis being placed upon this as a negotiable item.

While a large group (45 per cent) of respondents appear to lack knowledge concerning whether academic freedom should be an item of negotiation, equally large groups felt it should be negotiated and indicated satisfaction on involvement and effectiveness.

Teachers, on the whole, appeared to lack knowledge or to be satisfied not to negotiate in the area of personal activities outside of school.

Regarding the negotiation of student discipline procedures, one-third of the teachers indicated no knowledge of whether it should be negotiated; 44 per cent had no knowledge of the emphasis being given to it. Fifty-seven per cent of the teachers thought it should be negotiated, while 35 per cent believed there was too little emphasis on this matter in the negotiation process.

While one-third of the teachers believed that teacher selection of building principals should be negotiated, 44 per cent felt it should not be and 22 per cent had no opinion.

Sixty-three per cent of the teachers felt that the establishment of priorities for budget expenditures should be negotiated.

Regarding specific class size restrictions, one-third of the teachers indicated this item was already negotiated, and 58.5 per cent felt it should be negotiated.

Regarding optional twelve-month contracts for teachers, a majority believed it should be negotiated, while nearly 44 per cent said it should not be negotiated or had no opinion.

Nearly 60 per cent of teachers believed there should be a greater degree of teacher planning for curricular decisions negotiated in future agreements.

Teacher opinion was split concerning teacher participation in the selection and/or retention of superintendents and other central office administrators. Thirty-four per cent said this should be negotiated; 40 per cent said it should not be negotiated and 26 per cent had no opinion.

While 80.4 per cent of the respondents believed the Michigan Public Employment Relations Act of 1965 should be amended to provide for a procedure to settle an impasse without striking, 26 per cent definitely felt that the right of teachers to strike was necessary for satisfactory negotiation settlements and 32 per cent believed that was probably necessary. It is significant, also, that while 42 per cent of male respondents definitely believed the right to strike was necessary, only 17.7 per cent of the female respondents thought so. Significantly, teachers with 16 years or more experience were much more inclined to believe that the right to strike was not necessary when comparing them with teachers with less than sixteen years experience.

While 26 per cent of the respondents felt that there was some increase in the amount of distrust between their local association and the local school board, 32 per cent were of the opinion that there was no distrust between the two groups.

This sample recently experienced an impasse which resulted in a delayed opening of school. Not surprising at this time, the impasse group, when compared with the main sample, thought that relationships were worse in nearly all categories. In relationships between the respondent and community, 53 per cent of the impasse group thought they were worse as compared to 18.7 per cent of the main sample. Sixty-one per cent of the impasse group thought that relationships between teachers and superintendents were worse, compared to 34.1 per cent of the main group; 75.5 per cent thought relationships were worse between teachers and school board, compared to 37.6 per cent of the main group. 69.3 per cent believed that relationships between the local association and school board were worse, compared to 34.2 per cent of the main sample. Relationships between teacher and teacher were improved, however, as indicated by 42.9 per cent of the impasse group and 40.6 per cent of the main sample.

Options concerning involvement, what should be negotiated, effectiveness of negotiations, and the emphasis placed on items of negotiations.

Those surveyed were asked to respond to eight-teen items in four different ways, as the sub-title above indicates.

On eight of the eight-teen items, 50 per cent or more of both the main sample and the impasse sample felt negotiations were effective or slightly effective. On the eight-teen items the respondents in the impasse group tended to feel that negotiations were not as effective when compared to the main sample. The responses of the impasse group tended to show that respondents believed they had more knowledge of items for negotiation than did the main sample. With regard to the emphasis being given to various items of negotiations, both groups tended to give similar responses.

With regard to negotiation of future agreements, more members of the impasse group were able to provide opinions, although in a number of instances respondents seemed to be more sharply divided in their opinion than in the main sample. Regarding class size restrictions, 43 per cent indicated that this item had already been negotiated, compared to 33.3 per cent of the main sample.

The impasse sample was very favorable to amending the Michigan Public Employment Relations Act to provide for a procedure to settle impasses without striking (74.2 per cent); they were not quite as favorable as was the main sample (84 per cent). Forty-two per cent of the respondents of the impasse group felt "yes, definitely" the right to strike was necessary to the negotiating of satisfactory agreements, as compared to one-fourth of the respondents of the main group. Only 9.7 per cent of the impasse sample felt definitely the right to strike was not necessary, whereas 21.9 per cent of the main sample believed the right to strike definitely was not necessary.

In response to the question on distrust between the local association and the local school board, 50 per cent of the impasse group felt there was much or some increase, while only a third (33.4 per cent) of the main sample felt this way. Eight per cent of the impasse group felt there was no distrust, compared with 32.4 per cent of the main sample.³

The rather long quote from the "attitudes" of MEA members indicates that unanimity of purpose or goals was lacking. In no way can it be said the MEA members view organization with a missionary's zeal.

Herrick S. Roth, president of the Colorado Labor Council, AFL-CIO, Denver, writing in *Childhood Education*, April, 1969, attacked the NEA and its affiliated state associations on the grounds that they were too reluctant to strike, and when they did finally call a strike, in many instances it was called against the wrong group. He points specifically to the Florida strike against the Governor, rather than a strike against the school board, the other party in the bargaining process. Consequently, he concluded that NEA procedures generally wasted its strikes,

³Michigan Education Association, *A Survey of Teacher Attitudes Concerning Negotiation in Michigan Education Association Neogitation Units*, Research Report MR-1, Lansing, Michigan, Michigan Education Association (1968), pp. 8-15.

because NEA strikes were doomed to failure from the outset. He also pointed out that the other mechanism in the NEA bargaining process, sanctions, has not worked at all in two states in which it was tried, Oklahoma and Idaho. He stated that in neither state was recruitment blocked or deterred for new teachers, and in neither state were any tangible economic gains achieved. Therefore, he concluded, the whole bargaining process of the "professional association" was wrong.

On the other hand, Mr. Roth pointed to the bargaining process of the AFT, and says it has a long history of professional negotiation. In the first place, he said, the AFT knows who management is, and therefore, it knows with whom to bargain--the school board. He further stated that punitive laws never stopped a strike of blue-collar workers, and the same is true for teachers. He adds, strikes are the last resort but must be directed against the employer, not against the public-at-large. Therefore, he made a strong statement in support of strikes in specific instances, but against the general strike.⁴

Appearing in the same issue of *Childhood Education* was an article by David Selden, President of the AFT. He made his position clear by answering two rhetorical questions; it is right for teachers to "break the law?" and "do strikes hurt the children?" In essence he responded with a "yes" to both questions. In his answer to the first question, Mr. Selden, concluded that the law was archaic that denied workers the right to withhold their labor, so long as health and safety were not

⁴Herrick S. Roth; "Labor's Views on Teacher Strikes," *Childhood Education*, Washington, D.C., The Association for Childhood Education International, April, 1969, pp. 448-449.

jeopardized. Consequently, calling on Rousseau, Thoreau and Jefferson, he concluded that every worker has a right to strike, even the worker in the public sector, because merely being a public servant does not deny one's citizenship.

In response to the second question, "does a strike hurt the children," Mr. Selden agreed that a long bitter strike does probably have some harmful effect on the children involved. However, in the absence of a strike the teacher morale would be low, and the teacher would be less than effective in such a master-servant relationship. Less effectiveness might hurt the child more than any strike would. Therefore, while the strike would hurt the child, the harm would be less than if no strike were called and the teacher continued working under unsatisfactory conditions. So the strike is evil, but it is the lesser of two evils.

In the May 19, 1965 issue of the *Saturday Review*, in an article entitled "Needed: More Teacher Strikes," David Selden makes the same points he made later in "Strikes, Sanctions or Surrender?" Namely, strikes are not bad; they are good in the long run, because they call community attention to the dismal state of education in this country.

As further evidence of the AFT statements of purpose, one need only read *American Teacher*, the official publication of the AFT. In this publication they are obviously militant. They consider education just one more industry of exploited workers. It should be fairly safe to assume that any teacher who joins the AFT voluntarily, or who votes for AFT representation in a recognition election is fully aware of its position.

However, regardless of the differing degrees of militants between the two organizations, it can be argued that the approach of the Education Association is more nearly effective than that of the AFT. That is, Mr. Roth, in his article, and Mr. Selden in his article, contended that the NEA attack on the state is misdirected. This assertion is on tenuous grounds, if there is any validity to the empirical evidence presented in this study. The MEA is correct in confronting the state rather than local school boards, because as salaries go up, the state is more important in providing funds, either directly or through allocations of millage rates. Thus, state participation in the funding process may be more important than the local school board as the power center in negotiations. It would be rather like a union striking the foreman and not the firm for higher wages. The foreman is not the power center, but he is the manifestation of power in the plant, just as the school board is the manifestation of power in the state.

Summary

This chapter deals with power relationships between the school boards and the teacher organizations. The two bargaining agencies representing teacher interests are the American Federation of Teachers, AFL-CIO, and the Michigan Education Association, NEA.

Nationally, teachers are becoming more militant. The number of teacher strikes and work stoppages in the nation increased significantly in 1967. Therefore, not only in Michigan, but throughout the nation, power confrontations between teachers and school administrators increased.

In Michigan the AFT called a total of twenty-four strikes during the period 1965, through June, 1969. Most of the strikes took place in 1967. During this same time period the MEA called a total of fifty-two strikes, with the largest number being called in 1967. Therefore, the MEA called more than twice as many strikes as the AFT.

However, the AFT represented about 8 per cent of the school districts and 40 per cent of the teachers. The AFT, on the other hand, called almost one-third of the number of strikes in Michigan, and involved 40 per cent of Michigan teachers in work stoppages. Therefore, though the AFT is the smaller union, it called more strikes and involved more teachers, in relative terms, than did the MEA.

Consequently, it can be concluded that the AFT was more militant in its bargaining than was the MEA. As further evidence of the greater militance of the AFT, salaries of AFT member teachers were from 7 per cent to 11 per cent higher than the state average. These higher salaries could have been the result of harder bargaining. However, the higher salaries of AFT member teachers may only be due to the fact that most AFT members are in the Detroit area. Therefore, their higher salaries might be due to cost of living differences associated with the larger city. In any event, the state average was relatively closer to the AFT average after the 1967-68 compulsory collective bargaining period.

The philosophic differences between the two bargaining agencies are pronounced. That is, the AFT would treat education the same as any other industry, and bargain accordingly. They would base their negotiations on the power of the local school district. On the other hand, the MEA would use its bargaining power on a more general basis. They would

bring political pressures to bear against the state education administration. Thus, the Education Association would use what would be called a "general strike" to achieve its desired goals. Based on the statistics presented, the MEA would appear to be the more effective in its bargaining approach.

CHAPTER X

SUMMARY AND CONCLUSIONS

The first hypothesis set out in the introduction was, "Unions can raise wages." Using control data, it was found that Michigan was able to raise wages significantly faster than either the Great Lakes region or the rest of the nation after the introduction of collective bargaining. However, this finding is muted by the fact that in the first year prior to collective bargaining, teachers' salaries in Michigan were raised 12 per cent compared with 11 and 12 per cent for the two years after collective bargaining. Rather interestingly, smaller salary increases were obtained by the more militant AFT than the MEA.

The second hypothesis in the introduction was, "Labor unions narrow wage differentials within an industry." Data from Chapter V indicates that there were wider disparities in salaries after collective bargaining than before. However, when the standard deviation is divided by the average salary, there is less disparity in salaries after collective bargaining. Nevertheless, wide disparities in salaries remain. In 1968-69, the top school district, River Rouge City, paid an average annual salary of \$12,009 compared with \$3,025 for the lowest district, Beaver Island Community.

Salary disparities tended to increase because general fund revenues per pupil from local sources increased in disparity both between and within counties for all four school years studied. Part of the

widening disparity of general fund revenues per pupil was due to widening millage rates voted by local citizens. The state has been only partially successful in equalizing this disparity through increasing allocated millage rates. The state also attempted to make salaries more equal by direct appropriations. Over the entire four years studied, the variance in state direct appropriations increased both between counties and within counties. However, the impact of state lobbying may have been negligible in providing larger payments to poorer districts since the least increase came in 1967-68, the first year of bargaining.

Data from the top and bottom ten districts tend to confirm that general fund revenues per pupil from local sources widened revenue disparities. Although state aid tended to correct for the widening, the fact that few of the districts receiving the most aid were those with few of the districts receiving the most aid were those with the least local funds indicates that there was some question as to whether state funds were really going to the neediest districts. Variance analysis indicated that both between and within county salary differentials of the ten top and bottom school districts widened after the advent of collective bargaining. Obviously, then, union lobbying at the state level was unable to counteract the forces leading to a widening rather than a narrowing of salary differentials.

As measured by percentages, data from the top ten and bottom ten school districts indicated that the bottom ten school districts raised salaries faster than the top ten schools from 1965-66 to 1968-69. However, in the latter school year the top ten averaged paying \$5,756

more annually than the bottom ten Michigan districts whereas they had only been paying \$5,118 more in 1965-66.

After weighing all the evidence on hypothesis 2, the conclusion is that labor unions have only minimal influence in narrowing wage differentials among teachers in Michigan.

The amounts of property between districts and within districts in Michigan varies radically. If public school education were financed solely from local property taxes, disparities in salaries and appropriations would be much larger than they are now. Teacher unions might possibly narrow the differentials by collective bargaining at the district or local level. Teacher unions may also attempt to narrow differentials by lobbying at either the state or national level or both. As yet teacher unions have had minimal impact in narrowing teacher salary differentials by lobbying either in Michigan or at the national level. The present study only encompassed two years of mandatory collective bargaining in Michigan. Whether labor unions in the future will be able to or will even attempt to narrow differentials will have to be analyzed by later studies.

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APPENDIX A

COEFFICIENTS OF SIMPLE CORRELATION

This Appendix is a matrix showing the correlation between the twenty-six variables listed on the next page. Because the matrix was too large to put on one page, it is divided between variables fifteen and sixteen on successive pages. That is, the first fifteen variables are listed on the first page, and the rest of the first fifteen and the second eleven are continued on the second page.

The matrix is read by first looking at the variable identification page (page 175) in order to determine the code of the variables interested in. Then the year in question is found and the variable code is read from the extreme left column and the top row. For example, assume you wish to know the correlation coefficient between instruction salaries expenditures per pupil and operation millage rates voted. Looking at the next page you see that instruction salaries expenditures per pupil is variable number 8, and operation millage rates voted is variable number 13. Then you turn to whichever year you are interested in and read where 8 and 13 intersect. In 1965, their correlation coefficient was .50, in 1966 it was .52, etc.

Due to a lack of space, each variable could not be spelled out on the matrix page. Therefore, this coding system was adopted. The codes on the next page apply to all four years.

VARIABLE IDENTIFICATION CODES FOR THE FOLLOWING MATRIX TABLES

Variable Code	Variable Identification
1	Local sources of general fund revenues per pupil.
2	State direct appropriation from the general fund per pupil.
3	State redistribution of federal funds per pupil.
4	Federal direct revenues per pupil.
5	Total instruction expenditures per pupil.
6	Current operating expenditures per pupil.
7	Total general fund expenditures per pupil.
8	Instruction salaries expenditures per pupil.
9	Average annual teachers' salary amount.
10	Number of pupils by school district.
11	State equalized valuation per resident member amount.
12	Operation millage rates allocated.
13	Operation millage rates voted.
14	Operation millage rates total.
15	Debt retirement millage rates.
16	1960 county population.
17	1960 county population aged 65 and over.
18	1967 number of county public school teachers.
19	1960 median school years completed by county.
20	1967 per capita county personal income.
21	1967 personal per household county income.
22	1967 average general county property tax rate.
23	1965 number of county public school teachers.
24	1965 personal per capita county income.
25	1965 personal per household county income.
26	1964 average general county property tax rate.

1965 COEFFICIENTS OF SIMPLE CORRELATION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1.00	-.73	-.03	.00	.79	.87	.88	.79	.30	.13	.80	.02	.34	.33	-.30	.33
2		1.00	.01	.04	-.51	-.45	-.45	-.50	-.26	-.11	-.90	-.24	.11	.06	.32	-.17
3			1.00	-.04	.00	.06	.11	-.03	-.04	.04	.09	-.16	-.18	-.24	-.21	-.10
4				1.00	.06	.06	.07	.06	.01	.05	-.04	-.05	.08	.06	-.01	.00
5					1.00	.92	.86	.99	.55	.22	.54	.05	.49	.50	-.20	.47
6						1.00	.96	.90	.38	.17	.62	-.09	.49	.46	-.27	.40
7							1.00	.85	.32	.14	.61	-.12	.46	.41	-.26	.34
8								1.00	.57	.24	.53	.06	.50	.52	-.19	.49
9									1.00	.27	.16	.18	.25	.31	.05	.48
10										1.00	.07	.06	.11	.13	-.05	.27
11											1.00	.11	-.10	-.09	-.35	.16
12												1.00	-.16	.13	.19	.05
13													1.00	.94	.02	.39
14														1.00	.08	.42
15															1.00	.10
16																1.00

To be Continued

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[illegible]

1966 COEFFICIENTS OF SIMPLE CORRELATION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00	-.73	.04	-.03	.75	.82	.83	.75	.35	.13	.81	.03	.37	.39	-.31
2		1.00	-.07	.10	-.43	-.41	-.41	-.43	-.25	-.09	-.89	-.18	.10	.05	.33
3			1.00	.02	.11	.19	.23	.04	-.07	.02	.16	-.11	-.15	-.18	-.28
4				1.00	.15	.21	.21	.14	.03	.07	-.04	-.20	.01	-.04	-.06
5					1.00	.92	.87	.99	.62	.23	.51	.04	.50	.52	-.19
6						1.00	.97	.89	.42	.17	.57	-.09	.51	.49	-.28
7							1.00	.84	.37	.15	.57	-.11	.46	.44	-.28
8								1.00	.66	.23	.49	.06	.52	.54	-.17
9									1.00	.28	.18	.18	.32	.38	.01
10										1.00	.07	.06	.11	.13	-.05
11											1.00	.08	-.11	-.09	-.37
12												1.00	-.19	.06	.16
13													1.00	.97	.00
14														1.00	.04
15															1.00

To be Continued

1966 COEFFICIENTS OF SIMPLE CORRELATION

[illegible]

1967 COEFFICIENTS OF SIMPLE CORRELATION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00	-.78	.06	-.03	.76	.81	.57	.79	.36	.13	.78	-.02	.27	.36	-.31
2		1.00	-.04	.09	-.43	-.44	-.36	-.45	-.28	-.07	-.82	.02	.05	.02	.32
3			1.00	.01	.11	.18	.19	.13	.03	.03	.14	-.04	-.06	-.11	-.25
4				1.00	.18	.20	.17	.19	.05	.07	-.01	-.07	-.02	-.08	-.10
5					1.00	.94	.63	.97	.56	.23	.49	.00	.37	.50	-.18
6						1.00	.65	.96	.43	.18	.54	-.03	.36	.47	-.25
7							1.00	.64	.29	.16	.40	-.02	.25	.38	-.17
8								1.00	.52	.21	.51	-.01	.38	.50	-.21
9									1.00	.23	.21	.01	.18	.29	-.04
10										1.00	.05	.01	.10	.15	-.06
11											1.00	.32	.06	.03	-.29
12												1.00	.27	.27	.13
13													1.00	.77	.00
14														1.00	.02
15															1.00

To be continued

1967 COEFFICIENTS OF SIMPLE CORRELATION (Cont'd.)

[illegible]

1968 COEFFICIENTS OF SIMPLE CORRELATION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00	-.78	.02	.04	.76	.68	.44	.76	.40	.14	.84	.09	.37	.39	-.28
2		1.00	.07	.02	-.41	-.36	-.27	-.42	-.28	-.08	-.88	-.17	.02	-.02	.26
3			1.00	.10	.13	.15	.16	.10	.00	.15	.06	-.15	-.04	-.07	-.20
4				1.00	.21	.26	.20	.20	.06	.03	.09	-.22	-.06	-.10	-.14
5					1.00	.77	.50	.99	.61	.23	.50	.14	.52	.55	-.13
6						1.00	.72	.75	.40	.16	.48	-.02	.46	.46	-.21
7							1.00	.49	.24	.13	.35	.02	.34	.34	-.14
8								1.00	.64	.23	.49	.14	.53	.56	-.12
9									1.00	.23	.24	.15	.33	.36	.02
10										1.00	.06	.07	.14	.16	-.03
11											1.00	.06	-.07	-.06	-.34
12												1.00	-.08	.13	.12
13													1.00	.98	-.01
14														1.00	.02
15															1.00

To be continued

1968 COEFFICIENTS OF SIMPLE CORRELATION (Cont'd.)

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APPENDIX B
APPENDIX FOR CHAPTER II
INTERIM TABLES

STATE EQUALIZED PROPERTY VALUATION PER RESIDENT MEMBER IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS BY VALUATION AMOUNT, 1966-67.

Rank	School District	County	Valuation Amount
1	River Rouge City	Wayne	\$51,627
2	Essexville Hampton	Bay	50,264
3	Mastadon	Iron	43,900
4	Caseville	Huron	38,760
5	Riverview Community	Wayne	38,290
6	Burt Township	Alger	34,819
7	Dearborn City	Wayne	34,705
8	White Pine	Ontonagon	33,075
9	Leland	Leelanau	32,767
10	Hamtramck City	Wayne	32,388
522	Montrose Township	Genesee	5,549
523	Fruitport Community	Muskegon	5,439
524	Inkster	Wayne	5,214
525	Holton	Muskegon	5,126
526	Birch Run	Saginaw	4,871
527	Adams Township	Houghton	4,815
528	Rock River Township	Alger	4,686
529	Trout Creek	Ontonagon	4,312
530	Forsyth	Marquette	2,820
531	Rudyard Township	Chippewa	1,621

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

STATE EQUALIZED PROPERTY VALUATION PER RESIDENT MEMBER IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS BY VALUATION AMOUNT, 1967-68.

Rank	School District	County	Valuation Amount
1	River Rouge City	Wayne	\$54,741
2	Essexville Hampton	Bay	50,450
3	Whitefish	Chippewa	44,450
4	Caseville	Huron	43,646
5	Riverview Community	Wayne	39,378
6	Gerrish Higgins	Roscommon	38,959
7	Ecorse	Wayne	37,481
8	Dearborn City	Wayne	36,863
9	Houghton Lake	Roscommon	36,622
10	Leland	Leelanau	35,184
517	Holton	Muskegon	5,650
518	Montrose Township	Genesee	5,610
519	Inkster City	Wayne	5,150
520	Fruitport Community	Muskegon	5,244
521	Mathias Township	Alger	5.097
522	Adams Township	Houghton	4,904
523	Rock River Township	Alger	4,879
524	Oakridge	Muskegon	3,877
525	Forsyth	Marquette	2,940
526	Rudyard Township	Chippewa	2,048

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

APPENDIX C
APPENDIX FOR CHAPTER IV
INTERIM TABLES

GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES IN MICHIGAN,
THE TOP AND BOTTOM TEN DISTRICTS: 1966-67.

Rank	School District	County	Amount Per Pupil
1	Mastadon Township	Iron	\$810.49
2	River Rouge City	Wayne	804.99
3	Hematite Township	Iron	699.61
4	Dearborn City	Wayne	689.51
5	Republic Michigamme	Marquette	663.21
6	Trosse Pointe	Wayne	643.12
7	Essexville Hampton	Bay	632.48
8	White Pine	Ontonagon	623.10
9	Fitzgerald	Macomb	567.11
10	Oak Park	Oakland	559.88
522	Redford	Monroe	98.78
523	Calumet	Houghton	97.48
524	Grant	Newaygo	95.88
525	Birch Run Area	Saginaw	94.70
526	Maple Valley	Eaton	94.14
527	Brimley	Chippewa	92.64
528	Holton	Muskegon	88.97
529	Shelby	Oceana	83.80
530	Forsyth	Marquette	67.49
531	Rudyard Township	Chippewa	51.75

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES IN MICHIGAN,
THE TOP AND BOTTOM TEN DISTRICTS: 1967-68.

Rank	School District	County	Amount Per Pupil
1	Dearborn City	Wayne	\$904.50
2	Whitefish	Chippewa	820.01
3	Riverview Community	Wayne	788.22
4	Caseville	Huron	751.08
5	River Rouge City	Wayne	750.43
6	Republic Michigamme	Marquette	724.20
7	Grosse Pointe	Wayne	701.91
8	Essexville Hampton	Bay	680.57
9	Oak Park	Oakland	665.85
10	Ecorse	Wayne	632.68
517	Shelby	Oceana	107.03
518	Gladstone	Delta	106.17
519	Flushing Community	Genesee	105.71
520	Calumet	Houghton	98.58
521	Maple Valley	Eaton	97.08
522	Holton	Muskegon	94.04
523	Oakridge	Muskegon	93.30
524	Grant	Newaygo	79.63
525	Forsyth	Marquette	68.99
526	Rudyard Township	Chippewa	65.83

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

STATE DIRECT APPROPRIATIONS OF GENERAL FUND REVENUES PER PUPIL FOR
1966-67: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY APPROPRI-
ATIONS AMOUNT.

Rank	School District	County	Amount Per Pupil
1	Buckley Community	Grand Traverse	\$479.59
2	Rudyard Township	Chippewa	413.73
3	Memphis Community	St. Clair	401.64
4	Forsyth	Marquette	397.79
5	Inkster	Wayne	394.17
6	Rock	Delta	392.84
7	Rock River Township	Alger	380.02
8	Brimley	Chippewa	374.36
9	Trout Creek	Ontonagon	372.42
10	North Dickenson	Dickenson	367.38
522	Leland	Leelanau	155.83
523	East China Township	St. Clair	151.70
524	Mastadon Township	Iron	144.50
525	Ecorse	Wayne	144.11
526	Dearborn City	Wayne	140.73
527	Hamtramck	Wayne	138.12
528	Caseville	Huron	105.83
529	Riverview Community	Wayne	104.72
530	Essexville	Bay	49.54
531	River Rouge City	Wayne	33.31

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan
School Districts by Selected Financial Data, 1966-67, Bulletin Number
1012, published by the State Board of Education, Lansing, Michigan,
January, 1968.

STATE DIRECT APPROPRIATIONS OF GENERAL FUND REVENUES PER PUPIL FOR
1967-68: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY APPROPRI-
ATIONS AMOUNT.

Rank	School District	County	Amount Per Pupil
1	Rudyard Township	Chippewa	\$427.55
2	Forsyth	Marquette	413.78
3	Adams Township	Houghton	410.28
4	Inkster	Wayne	410.22
5	Rock	Delta	408.93
6	Ironwood City	Gogebic	408.17
7	Buckley	Grand Traverse	401.60
8	Rock River Township	Alger	390.81
9	Oakridge	Muskegon	387.41
10	North Dickinson	Dickinson	386.33
517	Frankenmuth	Saginaw	145.98
518	East China Township	St. Clair	142.54
519	Dearborn City	Wayne	136.41
520	Whitefish	Chippewa	130.34
521	Hamtramck	Wayne	124.72
522	Ecorse	Wayne	118.77
523	Riverview Community	Wayne	94.59
524	Caseville	Huron	80.30
525	Essexville Hampton	Bay	43.06
526	River Rouge City	Wayne	14.20

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

STATE DIRECT APPROPRIATIONS OF GENERAL FUND REVENUES PER PUPIL FOR
1968-69: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY APPROPRI-
ATIONS AMOUNT.

Rank	School District	County	Amount Per Pupil
1	Rock	Delta	\$592.99
2	Buckley	Grand Traverse	531.13
3	Rudyard	Chippewa	503.17
4	Forsyth	Marquette	484.76
5	Inkster	Wayne	480.89
6	Kingsley	Grand Traverse	480.87
7	Oakridge	Muskegon	448.42
8	Adams	Houghton	444.78
9	Mathias	Alger	443.27
10	Rock River Township	Alger	437.86
516	Frankenmuth	Saginaw	155.65
517	Hamtramck	Wayne	147.97
518	East China Township	St. Clair	143.39
519	Dearborn City	Wayne	140.63
520	Ecorse	Wayne	136.16
521	Riverview Community	Wayne	89.41
522	Caseville	Huron	74.19
523	Leland	Leelanau	64.13
524	Essexville Hampton	Bay	54.21
525	River Rouge City	Wayne	11.50

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

STATE OF MICHIGAN REDISTRIBUTION OF FEDERAL REVENUE PER PUPIL: THE
TOP AND BOTTOM^a TEN DISTRICTS BY REDISTRIBUTION AMOUNT: 1966-67.

Rank	School District	County	Amount Per Pupil
1	Carney Nadeau	Menominee	\$157.24
2	Northport	Leelanau	115.43
3	Central Lake	Charlevoix	106.01
4	Owendale Gagetown Area	Huron	93.84
5	Rock	Delta	86.86
6	Rock River Township	Alger	86.49
7	Harbor Beach Community	Huron	85.66
8	Johannesburg-Central	Otsego	84.10
9	Baldwin	Lake	82.95
10	Mecosta Remus Consolid.	Mecosta	82.95

^aThere were seventeen school districts that received no state redistribution of federal funds in 1966-67.

Source: .

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1968.

STATE OF MICHIGAN REDISTRIBUTION OF FEDERAL REVENUE FOR PUPIL: THE
TOP^a TEN DISTRICTS BY REDISTRIBUTION AMOUNT: 1967-68.

Rank	School District	County	Amount Per Pupil
1	Elkton-Pigeon-Bayport	Huron	\$94.10
2	Rock River Township	Alger	93.83
3	Port Hope Community	Huron	85.08
4	Hamtramck	Wayne	85.08
5	Burt Township	Alger	79.36
6	Carney-Nadeau	Menominee	75.32
7	Harbor Beach Community	Huron	72.62
8	Paw Paw	Van Buren	72.29
9	Atlanta	Montmorency	72.18
10	Lamphere	Oakland	72.18

^aThere were thirteen school districts that received no state redistribution of federal funds in 1967-68.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1968.

STATE OF MICHIGAN REDISTRIBUTION OF FEDERAL REVENUE PER PUPIL: THE TOP^a TEN DISTRICTS BY REDISTRIBUTION AMOUNT: 1968-69.

Rank	School District	County	Amount Per Pupil
1	Mio Au Sable	Oscoda	\$120.23
2	Paw Paw	Van Buren	75.23
3	Rock River Township	Alger	67.77
4	Detroit City	Wayne	66.35
5	Muskegon	Muskogon	62.05
6	Ecorse	Wayne	61.39
7	Lamphere	Oakland	61.32
8	Ubly Community	Huron	60.58
9	River Rouge City	Wayne	59.92
10	Carney-Nadeau	Menominee	57.73

^aThere were eleven school districts that received no state redistribution of federal funds in 1968-69.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1968-69, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1969.

DISTRICTS THAT RECEIVED NO STATE REDISTRIBUTION OF FEDERAL FUNDING
FOR 1965-66 AND 1966-67.

1965-66	1966-67
Burt Township (Alger)	Essexville Hampton (Bay)
Saugatuck (Allegan)	Springfield (Calhoun)
Hamilton (Allegan)	Beaver Island Community (Charlevoix)
Au Gres Sims (Arenac)	Boyne Falls (Charlevoix)
Watervliet (Berrien)	Mackinaw City (Cheboygan)
Springfield (Calhoun)	Whitefish (Chippewa)
Beaver Island (Charlevoix)	Big Bay of Noc (Delta)
Boyne Falls (Charlevoix)	Goodrich Area (Genesee)
Whitefish (Chippewa)	Genesee (Genesee)
Nahma Township (Delta)	Marenisco (Gogebic)
Bank River Harris (Delta)	Hamatite (Iron)
Garden Township (Delta)	Mastodon Township (Iron)
Littlefield (Emmet)	Engadine Consolidated (Mackinac)
Genesee (Genesee)	Bear Lake (Manistee)
Linden Community (Genesee)	Lake City Area (Missaukee)
Marenisco (Gogebiv)	Pentwater (Oceana)
Hematite (Iron)	Walkerville Rural Community (Oceana)
Mastodon Township (Iron)	
East Grand Rapids (Kent)	
Dryden (Lapeer)	
Les Cheneaux Community (Mackinac)	
Hermansville (Menominee)	
Meridian (Midland)	
Lake City Area (Missaukee)	
Merritt Consolidated (Missaukee)	
Clawson City (Oakland)	
Pentwater (Oceana)	
Walkerville Rural Community (Oceana)	
Trout Creek (Ontonagon)	
Johannesburg-Central (Otsego)	
Freeland Community (Saginaw)	
Lawton Community (Van Buren)	
North Dearborn Heights (Wayne)	
Northville (Wayne)	
Riverview Community (Wayne)	

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1965-66 and 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan.

DISTRICTS THAT RECEIVED NO STATE REDISTRIBUTION OF FEDERAL FUNDS
FOR 1967-68 AND 1968-69.

1967-68	1968-69
Springfield (Calhoun)	Alba (Antrim)
Beaver Island Community (Charlevoix)	Springfield (Calhoun)
Mackinaw City (Cheboygan)	Beaver Island Community (Charlevoix)
Detour Township (Chippewa)	Boyne Falls (Charlevoix)
Boyne Falls (Charlevoix)	Mackinaw City (Cheboygan)
Whitefish (Chippewa)	Whitfish (Chippewa)
Genesee (Genesee)	Goodrich Area (Genesee)
Marenisco (Gogebic)	Genesee (Genesee)
Caseville (Huron)	Caseville (Huron)
Les Cheneaux Community (Mackinac)	Leland (Leelanau)
Lake City Area (Missaukee)	Les Cheneaux Community (Mackinac)
Pentwater (Oceana)	
Walkerville Rural Community (Oceana)	

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68 and 1968-69, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan.

FEDERAL DIRECT GENERAL FUND REVENUES PER PUPIL, 1966-67 THE TOP^a TEN DISTRICTS IN MICHIGAN BY REVENUE AMOUNT.

Rank	School District	County	Amount Per Pupil
1	Watersmeet Township	Gogebic	\$211.49
2	Rudyard Township	Chippewa	183.46
3	Forsyth	Marquette	166.13
4	Oscoda Area	Iosco	139.19
5	Marenisco	Gogebic	78.90
6	Springfield City	Calhoun	78.89
7	Anchor Bay	Macomb	67.91
8	Brimley	Chippewa	60.52
9	Mt. Clemens Community	Macomb	60.90
10	Elkton-Pigeon-Bayport	Huron	39.32

^aThere were sixty school districts that received no direct federal funds in 1966-67.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

FEDERAL DIRECT GENERAL FUND REVENUES PER PUPIL, 1967-68 THE TOP^a TEN DISTRICTS IN MICHIGAN BY REVENUE AMOUNT.

Rank	School District	County	Amount Per Pupil
1	Watersmeet Township	Gogebic	\$160.40
2	Rudyard Township	Chippewa	149.67
3	Forsyth	Marquette	142.35
4	Oscoda Area	Iosco	111.59
5	Marenisco	Gogebic	81.35
6	Springfield City	Calhoun	77.13
7	Anchor Bay	Macomb	74.22
8	Alcona Community	Alcona	73.45
9	Brimley	Chippewa	51.39
10	Mt. Clemens Community	Macomb	42.94

^aThere were sixty-nine school districts that received no direct federal funds in 1967-68.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

1966-67 GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES AND
OPERATING MILLAGE RATES VOTED AND TOTAL AND EFFECTIVE TAX RATES:
THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY AMOUNT OF REVENUE

Rank	School District	Local Revenue Amount per Pupil	Operating Millage Rates		Effective Tax Rate ^a Per cent
			Voted	Total	
1	Mastadon Township	\$810.49	10.40	16.80	2.07
2	River Rouge City	804.99	6.00	14.90	1.85
3	Hematite Township	699.61	3.80	12.80	1.82
4	Dearborn City	689.51	9.50	18.40	2.66
5	Republic Michigamme	663.21	9.20	16.00	2.41
6	Grosse Pointe	643.12	14.00	22.81	3.54
7	Essexville Hampton	632.48	3.25	11.23	1.77
8	White Pine	623.10	11.00	17.47	2.80
9	Fitzgerald	567.11	9.60	19.21	3.38
10	Oak Park	559.88	20.95	30.55	5.45
522	Redford	98.78	3.00	11.86	12.00
523	Calumet	97.78	3.00	11.86	11.95
524	Grant	95.88	2.00	10.00	10.42
525	Birch Run Area	94.70	5.00	14.03	14.81
526	Maple Valley	94.14	5.00	13.00	13.80
527	Brimley	92.64	3.18	10.00	10.79
528	Holton	88.97	7.00	15.44	17.35
529	Shelby	83.80	5.00	13.46	16.06
530	Forsyth	67.49	2.80	10.00	14.81
531	Rudyard Township	51.75	3.18	10.00	19.32

^aEffective Tax Rate Column computed by dividing total operating millage rates by local revenue amount per pupil.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

1966-67 TOTAL REVENUE, TOTAL OPERATING MILLAGE RATES, AND ADJUSTED TAX RATES: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY AMOUNT OF LOCAL REVENUE.

Rank	School District	Total Revenue	Total Operating Millage Rates	Adjusted Tax Rate ^a Per Cent
1	Mastadon Township	\$ 957.54	16.80	1.75
2	River Rouge City	917.43	14.90	1.62
3	Hematite Township	1,010.66	12.80	1.26
4	Dearborn City	845.30	18.40	2.18
5	Republic Michigamme	976.39	16.00	1.64
6	Grosse Pointe	828.35	22.81	2.75
7	Essexville Hampton	682.50	11.23	1.65
8	White Pine	800.43	17.47	2.18
9	Fitzgerald	759.45	19.21	2.54
10	Oak Park	841.49	30.55	3.63
522	Redford	436.71	11.86	2.72
523	Calumet	447.42	11.65	2.60
524	Grant	438.50	10.00	2.28
525	Birch Run Area	456.32	14.03	3.07
526	Maple Valley	442.77	13.00	2.94
527	Brimley	544.25	10.00	1.84
528	Holton	494.86	15.44	3.12
529	Shelby	453.11	13.46	2.97
530	Forsyth	639.66	10.00	1.56
531	Rudyard Township	663.65	10.00	1.51

^aAdjusted tax rate computed by dividing total operating millage rates by total revenue.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

1967-68 GENERAL FUND REVENUES PER PUPIL FROM LOCAL SOURCES AND
OPERATING MILLAGE RATES VOTED AND TOTAL AND EFFECTIVE TAX RATES:
THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY AMOUNT OF REVENUE

Rank	School District	Local Revenue Amount per Pupil	Operating Millage Rates		Effective Tax Rate ^a Per Cent
			Voted	Total	
1	Dearborn City	\$904.50	14.00	22.90	2.53
2	Whitefish	820.01	24.00	31.00	3.78
3	Riverview Community	788.22	10.00	18.90	2.39
4	Caseville	751.08	6.00	15.25	2.03
5	River Rouge City	750.43	6.00	14.90	1.98
6	Republic Michigamme	724.20	10.20	17.00	2.34
7	Grosse Pointe	701.91	14.00	22.90	3.26
8	Essexville Hampton	680.57	4.00	12.00	1.76
9	Oak Park	665.85	21.00	30.60	4.59
10	Ecorse	632.68	7.50	16.60	2.62
517	Shelby	107.03	5.00	13.00	12.14
518	Gladstone	106.17	4.00	10.67	10.04
519	Flushing Community	105.71	1.75	10.00	9.45
520	Calumet	98.58	5.00	12.05	12.22
521	Maple Valley	97.08	5.00	13.00	13.39
522	Holton	94.04	5.85	15.20	16.16
523	Oakridge	93.30	7.40	15.75	16.88
524	Grant	79.63	2.00	10.00	12.55
525	Forsyth	68.99	2.80	10.00	14.49
526	Rudyard Township	65.83	4.50	11.50	17.46

^aEffective Tax Rate column computed by dividing total operating millage rates by local revenue amount per pupil.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, December, 1968.

1967-68 TOTAL REVENUE, TOTAL OPERATING MILLAGE RATES, AND ADJUSTED TAX RATES: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN BY AMOUNT OF LOCAL REVENUE.

Rank	School District	Total Revenue	Total Operating Millage Rates	Adjusted Tax Rate ^a Per Cent
1	Dearborn City	\$1,058.86	22.90	2.16
2	Whitefish	1,113.16	31.00	2.78
3	Riverview Community	885.06	18.90	2.14
4	Caseville	836.78	15.25	1.82
5	River Rouge City	840.33	14.90	1.77
6	Republic Michigamme	1,027.15	17.00	1.66
7	Grosse Pointe	877.22	22.90	2.61
8	Essexville Hampton	726.83	12.00	1.65
9	Oak Park	959.61	30.60	3.19
10	Ecorse	982.40	16.60	1.69
517	Shelby	466.03	13.00	2.79
518	Gladstone	485.02	10.67	2.20
519	Flushing Community	400.09	10.00	2.50
520	Calumet	475.63	12.05	2.53
521	Maple Valley	474.37	13.00	2.74
522	Holton	484.81	15.20	3.14
523	Oakridge	514.92	15.75	3.06
524	Grant	458.35	10.00	2.18
525	Forsyth	631.87	10.00	1.52
526	Rudyard Township	653.62	11.50	1.76

^aAdjusted tax rate computed by dividing total operating millage rates by total revenue.

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

APPENDIX D

APPENDIX FOR CHAPTER VII

INTERIM TABLES

AVERAGE ANNUAL TEACHERS' SALARIES IN MICHIGAN: THE TOP AND BOTTOM
TEN DISTRICTS 1966-67.

Rank	School District	County	Average Annual Salary
1	Dearborn City	Wayne	\$9,961
2	Hazel Park City	Oakland	9,705
3	Ecorse	Wayne	9,310
4	Fitzgerald	Macomb	9,205
5	Jackson Union	Jackson	9,138
6	Bay City	Bay	9,071
7	Riverview Community	Wayne	8,968
8	Van Dyke Community	Macomb	8,834
9	Grosse Pointe	Wayne	8,833
10	Livonia	Wayne	8,833
522	Beal City	Isabella	5,037
523	Powers Spalding	Menominee	5,007
524	Rock	Delta	4,891
525	Trout Creek	Ontonagon	4,884
526	Osceola Township	Houghton	4,880
527	Vanderbilt Area	Otsego	4,846
528	Johannesburg Central	Otsego	4,843
529	Walkerville Rural Comm.	Oceana	4,592
530	Lincoln Consolidated	Washtenaw	4,371
531	Beaver Island Community	Charlevoix	2,650

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

AVERAGE ANNUAL TEACHERS' SALARIES IN MICHIGAN: THE TOP AND BOTTOM TEN DISTRICTS, 1967-68.

Rank	School District	County	Average Annual Salary
1	River Rouge City	Wayne	\$11,521
2	Grand Rapids City	Kent	11,453
3	Fitzgerald	Macomb	10,573
4	Midland City	Midland	10,005
5	Jackson Union	Jackson	9,997
6	Ann Arbor City	Washtenaw	9,956
7	Crosse Pointe	Wayne	9,911
8	Van Dyke Community	Macomb	9,811
9	Livonia	Wayne	9,562
10	Riverview Community	Wayne	9,532
517	Lincoln Consolidated	Washtenaw	5,247
518	Walkerville Rural Community	Oceana	5,102
519	Rock	Delta	4,791
520	Willow Run	Washtenaw	4,670
521	Concord Community	Jackson	4,279
522	Detour Township	Chippewa	4,237
523	Elk Rapids	Antrim	3,898
524	Chesaning Union	Saginaw	3,639
525	Chassell Township	Houghton	3,060
526	Beaver Island Community	Charlevoix	3,025

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

ALL SALARY EXPENDITURES OF THE GENERAL FUND PER PUPIL IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS 1966-67.

Rank	School District	County	Amount Per Pupil
1	Oak Park City	Oakland	\$602.58
2	Dearborn City	Wayne	554.20
3	Highland Park City	Wayne	553.80
4	River Rouge City	Wayne	519.25
5	Riverview Community	Wayne	515.71
6	Birmingham City	Oakland	515.52
7	White Pine	Ontonagon	499.16
8	Grosse Pointe	Wayne	496.06
9	Ann Arbor City	Washtenaw	488.36
10	Hamtramck City	Wayne	486.09
522	Walkerville Rural Community	Oceana	239.49
523	Manton Consolidated	Wexford	235.77
524	Rock	Delta	234.43
525	Gobles	Van Buren	233.49
526	Pentwater	Oceana	230.31
527	Lincoln Consolidated	Washtenaw	223.10
528	Hale Area	Iosco	222.08
529	Beal City	Isabella	221.10
530	Freesoil Community	Mason	211.41
531	Beaver Island Community	Charlevoix	198.65

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

ALL SALARY EXPENDITURES OF THE GENERAL FUND PER PUPIL IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS, 1967-68.

Rank	School District	County	Amount Per Pupil
1	Oak Park City	Oakland	\$765.47
2	Highland Park City	Wayne	678.99
3	Whitefish	Chippewa	663.46
4	River Rouge City	Wayne	656.34
5	Ann Arbor City	Washtenaw	653.19
6	Dearborn City	Wayne	642.47
7	Bloomfield Hills	Oakland	633.04
8	Republic Michigamme	Marquette	620.40
9	White Pine	Ontonagon	606.96
10	Birmingham City	Oakland	603.26
517	Hartford	Van Buren	303.87
518	Airport Community	Monroe	302.32
519	Lincoln Consolidated	Washtenaw	298.91
520	Almont Community	Lapeer	297.14
521	Genesee	Genesee	295.56
522	Millington Community	Tuscola	295.56
523	Elk Rapids	Antrim	294.89
524	Walkerville Rural Community	Oceana	289.01
525	Freesoil Community	Mason	267.94
526	Beaver Island Community	Charlevoix	265.10

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

SALARY EXPENDITURES AS A PER CENT OF TOTAL REVENUE: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1966-67.

School District	Salary Expenditures as a Per Cent of Total Revenues
Oak Park City	72
Dearborn City	66
Highland Park City	62
River Route City	57
Riverview Community	79
Birmingham City	69
White Pine	63
Grosse Pointe	60
Ann Arbor City	67
Hamtramck City	65
Walkerville Rural Community	49
Manton Consolidated	52
Rock	35
Gobles	48
Pentwater	56
Lincoln Consolidated	39
Hale Area	42
Beal City	40
Freesoil Community	43
Beaver Island Community	45

Source:

Computed by dividing all salary expenditures of the general fund per pupil for 1966-67 by total revenues collected per pupil for 1966-67.

SALARY EXPENDITURES AS A PER CENT OF TOTAL REVENUE: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1967-68.

School District	Salary Expenditures as a Per Cent of Total Revenue
Oak Park City	80
Highland Park City	70
Whitefish	60
River Rouge City	78
Ann Arbor City	89
Dearborn City	61
Bloomfield Hills	86
Republic Michigamme	60
White Pine	84
Birmingham City	72
Hartford	61
Airport Community	64
Lincoln Consolidated	51
Almont Community	60
Genesee	62
Millington Community	62
Elk Rapids	54
Walkerville Rural Community	58
Freesoil Community	56
Beaver Island Community	57

Source:

Computed by dividing all salary expenditures of the general fund per pupil for 1967-68 by total revenues collected per pupil for 1967-68.

TOTAL GENERAL FUND INSTRUCTION EXPENDITURE PER PUPIL IN MIGHICAN:
THE TOP AND BOTTOM TEN DISTRICTS, 1966-67.

Rank	School District	County	Amount Per Pupil
1	Oak Park City	Oakland	\$644.49
2	Highland Park City	Wayne	612.72
3	Dearborn City	Wayne	577.63
4	River Rouge City	Wayne	560.35
5	Riverview Community	Wayne	557.26
6	Birmingham City	Oakland	546.03
7	Hamtramck City	Wayne	545.20
8	White Pine	Ontonagon	538.75
9	Grosse Pointe	Wayne	527.78
10	Republic Michigamme	Marquette	521.02
522	Airport Community	Monroe	259.60
523	Manton Consolidated	Wexford	257.10
524	Onaway Area Community	Presque Isle	256.34
525	Walkerville Rural Community	Oceana	254.16
526	Pentwater	Oceana	253.90
527	Gobles	Van Buren	250.50
528	Freesoil Community	Mason	244.32
529	Beaver Island Community	Charlevoix	241.85
530	Hale Area	Iosco	241.14
531	Beal City	Isabella	238.15

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

TOTAL GENERAL FUND INSTRUCTION EXPENDITURE PER PUPIL IN MICHIGAN:
THE TOP AND BOTTOM TEN DISTRICTS, 1967-68.

Rank	School District	County	Amount Per Pupil
1	Oak Park City	Oakland	\$818.72
2	Dearborn City	Wayne	782.20
3	River Route City	Wayne	773.90
4	Whitefish	Chippewa	769.40
5	Highland Park City	Wayne	762.45
6	Republic Michigamme	Marquette	758.63
7	Bloomfield Hills	Oakland	717.13
8	Ann Arbor City	Washtenaw	714.66
9	White Pine	Ontonagon	693.45
10	Birmingham City	Oakland	688.17
517	Elk Rapids	Antrim	343.59
518	Ionia City	Ionia	343.02
519	Walkerville Rural Community	Oceana	342.90
520	Shelby	Oceana	340.84
521	Lake City Area	Missaukee	340.54
522	Almont Community	Lapeer	338.65
523	Hartford	Van Buren	336.98
524	Genesee	Genesee	334.59
525	Freesoil Community	Mason	321.80
526	Beaver Island Community	Charlevoix	286.86

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan Schools Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

OTHER INSTRUCTION EXPENDITURES AND OTHER INSTRUCTION EXPENDITURES
AS A PER CENT OF INSTRUCTION EXPENDITURES: THE TOP AND BOTTOM TEN
DISTRICTS IN MICHIGAN, 1966-67.

School District	Other Instruction Expenditure	Per Cent of Instruction Expenditure
Oak Park City	\$41.91	6
Highland Park City	58.92	10
Dearborn City	23.43	4
River Rouge City	41.10	7
Riverview Community	41.55	7
Birmingham City	30.51	6
Hamtramck City	59.11	11
White Pine	39.59	7
Grosse Pointe	31.72	6
Republic Michigamme	37.94	7
Airport Community	12.02	5
Manton Consolidated	21.33	8
Onaway Area Community	15.46	6
Walkerville Rural Community	14.67	6
Pentwater	23.59	9
Groble	17.01	7
Freesoil Community	32.91	13
Beaver Island Community	43.20	18
Hale Area	19.06	8
Beal City	17.05	7

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1968.

OTHER INSTRUCTION EXPENDITURES AND OTHER INSTRUCTION EXPENDITURES
AS A PER CENT OF INSTRUCTION EXPENDITURES: THE TOP AND BOTTOM TEN
DISTRICTS IN MICHIGAN, 1967-68.

School District	Other Instruction Expenditure	Per Cent Instruction Expenditure
Oak Park City	\$ 53.25	7
Dearborn City	139.73	22
River Rouge City	117.56	18
Whitefish	105.94	16
Highland Park City	83.46	12
Republic Michigamme	138.23	22
Bloomfield Hills	84.09	13
Ann Arbor City	61.47	9
White Pine	86.49	14
Birmingham City	84.91	14
Elk Rapids	48.70	17
Ionia City	13.41	4
Walkerville Rural Community	53.89	19
Shelby	28.14	8
Lake City Area	24.65	7
Almont Community	41.51	14
Hartford	33.11	11
Genesee	39.03	13
Freesoil Community	53.86	20
Beaver Island Community	21.76	8

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

GENERAL FUND CURRENT OPERATING EXPENDITURES PER PUPIL: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1966-67.

Rank	School District	County	Amount Per Pupil
1	Dearborn City	Wayne	\$818.73
2	Oak Park City	Oakland	810.51
3	Watersmeet Township	Gogebic	807.94
4	Riverview Community	Wayne	807.58
5	Highland Park City	Wayne	804.94
6	White Pine	Ontonagon	799.10
7	Republic Michigamme	Marquette	798.27
8	River Rouge City	Wayne	772.58
9	Mastadon Township	Iron	756.07
10	Hematite Township	Iron	751.87
522	Genesee	Genesee	377.09
523	Vassar	Tuscola	376.18
524	Birch Run Area	Saginaw	373.27
525	Hartford	Van Buren	369.51
526	Flushing Community	Genesee	368.25
527	Gladstone	Delta	360.58
528	Millington Community	Tuscola	360.32
529	Ionia City	Ionia	357.83
530	Gobles	Van Buren	356.21
531	Pentwater	Oceana	355.95

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

OTHER OPERATING EXPENDITURES AND OTHER OPERATING EXPENDITURES AS A PER CENT OF CURRENT OPERATING EXPENDITURES: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1966-67.

School District	Other Operating Expenditures	Per Cent of Operating Expenditures
Dearborn City	\$241.10	29
Oak Park City	166.02	20
Watersmeet Township	360.85	45
Riverview Community	250.32	31
Highland Park City	192.22	24
White Pine	260.35	33
Republic Michigamme	277.25	35
River Rouge City	212.23	27
Mastadon Township	252.18	33
Hematite Township	347.46	46
Genesee	106.61	28
Vassar	92.01	24
Birch Run Area	110.81	30
Hartford	92.38	25
Flushing Community	89.13	24
Gladstone	63.55	18
Millington Community	100.11	28
Ionia City	91.91	26
Gobles	105.71	30
Pentwater	102.05	29

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, Published by the State Board of Education, Lansing, Michigan, January, 1968.

GENERAL FUND CURRENT OPERATING EXPENDITURES PER PUPIL: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1967-68.

Rank	School District	County	Amount Per Pupil
1	Oak Park City	Oakland	\$951.32
2	Whitefish	Chippewa	950.55
3	Republic Michigamme	Marquette	933.13
4	Dearborn City	Wayne	924.90
5	River Rouge City	Wayne	903.55
6	White Pine	Ontonagon	893.54
7	Highland Park City	Wayne	891.71
8	Bloomfield Hills	Oakland	875.07
9	Watersmeet Township	Gogebic	801.91
10	Ann Arbor City	Washtenaw	799.21
517	Clio Area	Genesee	431.37
518	Bolding Area	Ionia	430.66
519	Summerfield	Monroe	426.30
520	Vassar	Tuscola	422.97
521	Mt. Morris Consolidated	Genesee	420.81
522	Flushing Community	Genesee	419.59
523	Gladstone	Delta	419.43
524	Beaver Island Community	Charlesvoix	409.46
525	Freesoil Community	Mason	403.87
526	Hartford	Van Buren	402.08

Source:

Compiled from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

OTHER OPERATING EXPENDITURES AND OTHER OPERATING EXPENDITURES AS
A PER CENT OF CURRENT OPERATING EXPENDITURES: THE TOP AND BOTTOM
TEN DISTRICTS IN MICHIGAN, 1967-68.

School District	Other Operating Expenditures	Per Cent Operating Expenditures
Oak Park City	\$185.85	20
Whitefish	287.09	30
Republic Michigamme	312.73	34
Dearborn City	282.43	31
River Rouge City	247.21	27
White Pine	286.58	32
Highland Park City	212.72	24
Bloomfield Hills	242.03	28
Watersmeet Township	272.05	34
Ann Arbor City	146.02	18
Clio Area	102.64	24
Belding Area	103.77	24
Summerfield	94.62	22
Vassar	108.25	26
Mt. Morris Consolidated	109.70	26
Flushing Community	101.56	24
Gladstone	75.57	18
Beaver Island Community	122.60	30
Freesoil Community	135.93	34
Hartford	98.21	24

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.

TOTAL GENERAL FUND EXPENDITURES PER PUPIL: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1966-67.

Rank	School District	Country	Amount Per Pupil
1	Republic Michigamme	Marquette	\$915.02
2	Highland Park City	Wayne	908.13
3	Watersmeet Township	Gogebic	897.13
4	Dearborn City	Wayne	884.41
5	Riverview Community	Wayne	875.78
6	White Pine	Ontonagon	868.47
7	Mastadon Township	Iron	850.39
8	Grosse Pointe	Wayne	834.39
9	Oak Park City	Oakland	828.40
10	River Rouge City	Wayne	826.69
522	Otsego	Allegan	416.52
523	Byron Area	Shiawassee	413.09
524	Birch Run Area	Saginaw	412.86
525	Airport Community	Monroe	411.65
526	Gobles	Van Buren	411.55
527	Summerfield	Monroe	404.32
528	Millington Community	Tuscola	043.37
529	Ionia City	Ionia	400.72
530	North Beach Area	Lapeer	393.82
531	Pentwater	Oceana	391.19

Source:

Compiled from *Michigan Public School*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

OTHER GENERAL FUND EXPENDITURES AND OTHER GENERAL FUND EXPENDITURES
AS A PER CENT OF TOTAL GENERAL FUND EXPENDITURES PER PUPIL: THE TOP
AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1966-67.

School District	Other General Fund Expenditures	Per Cent of Total Expenditures
Republic Michigamme	\$116.75	13
Highland Park City	103.19	11
Watersmeet Township	89.19	10
Dearborn City	65.68	7
Riverview Community	68.20	8
White Pine	69.37	8
Mastadon Township	94.32	11
Grosse Pointe	113.14	14
Oak Park City	17.89	2
River Rouge City	54.11	7
Otsego	10.00	2
Byron Area	19.41	5
Birch Run Area	39.59	10
Airport Community	30.73	7
Gobles	55.34	13
Summerfield	17.00	4
Millington Community	43.05	11
Ionia City	42.89	11
North Branch Area	12.69	3
Pentwater	35.24	9

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1966-67, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, January, 1968.

TOTAL GENERAL FUND EXPENDITURES PER PUPIL: THE TOP AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1967-68.

Rank	School District	County	Amount Per Pupil
1	Whitefish	Chippewa	\$1,038.40
2	Republic Michigamme	Marquette	1,033.55
3	Highland Park City	Wayne	1,014.93
4	Dearborn City	Wayne	998.74
5	Oak Park City	Oakland	973.21
6	Bloomfield Hills	Oakland	959.54
7	River Rouge City	Wayne	950.08
8	White Pine	Ontonagon	949.38
9	Grosse Pointe	Wayne	909.44
10	Ann Arbor City	Washtenaw	878.30
517	Freesoil Community	Mason	468.74
518	Hastings	Barry	466.27
519	St. Johns	Clinton	463.87
520	Huron	Wayne	460.16
521	Mt. Morris Consolidated	Genesee	458.41
522	Hartford	Van Buren	456.77
523	Three Rivers	St. Joseph	450.88
524	Summerfield	Monroe	432.91
525	Flushing Community	Genesee	425.82
526	Beaver Island Community	Charlevoix	411.96

Source:

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OTHER GENERAL FUND EXPENDITURES AND OTHER GENERAL FUND EXPENDITURES
AS A PER CENT OF TOTAL GENERAL FUND EXPENDITURES PER PUPIL: THE TOP
AND BOTTOM TEN DISTRICTS IN MICHIGAN, 1967-68.

School District	Other General Fund Expenditures	Per Cent of Total Expenditures
Whitefish	\$ 87.85	8
Republic Michigamme	100.42	10
Highland Park City	123.22	12
Dearborn City	73.84	7
Oak Park City	21.89	2
Bloomfield Hills	84.47	9
River Rouge City	46.53	5
White Pine	55.84	6
Grosse Pointe	115.19	13
Ann Arbor City	79.09	9
Freesoil Community	64.87	14
Hastings	5.25	1
St. Johns	1.64	0
Huron	13.84	3
Mt. Morris Consolidated	37.60	8
Hartford	54.69	12
Three Rivers	8.73	2
Summerfield	6.61	2
Flushing Community	6.23	1
Beaver Island Community	2.50	1

Source:

Computed from *Michigan Public Schools*, Ranking of Michigan School Districts by Selected Financial Data, 1967-68, Bulletin Number 1012, published by the State Board of Education, Lansing, Michigan, December, 1968.