

School District Consolidation Study In 10 Michigan Counties

Is district consolidation cost effective?

What is the alternative to consolidation?

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Introduction

School district consolidation represents one of the most significant changes in K-12 education finances, governance and management in the United States during the twentieth century. Since 1938, over 100,000 school districts have been eliminated through consolidation, a decrease of almost 90 percent according to data from the National Center for Education Statistics. This trend continues across the country, mainly because consolidation is widely viewed by policy makers and educators as a way for school districts to cut costs and reduce financial burdens. This study is aimed at providing a look at potential financial consequences of consolidation of school districts at the county level. Using research data sets for ten counties in Michigan, we ask whether the consolidation of districts can produce significant cost savings. The study does not address the impact of consolidation on student achievement, graduation rates, student and staff mobility rates, or the attitudes and perception of students, parents and the community toward consolidation.

In Michigan, the largest number of school district consolidations occurred in the two decades following World War II, during a time of economic prosperity, increasing urbanization and growing student enrollment. The number of school districts decreased from about 7,300 to about 4,900.

A second, smaller wave of consolidation occurred in the 1970's when inflation was rampant, enrollment declining, and suburban areas were growing in population. The number of school districts decreased from about 4,900 to roughly 600 during that period. The number of public school districts or "Local Educational Agencies" (LEAs), as they are often called, held steady at about 550 between 1970 and 2010.

The district consolidations, annexation, and dissolutions in Michigan were due to public policy acts such as The 1917 Rural Agricultural School Act, the 1944 Michigan Public Education Study Commission recommendations, and The School District Reorganization Act of 1964. However, in 1994, the establishment of Public School Academies (PSAs) or charter schools in Michigan brought about an increase in the number of "school districts" in the state because in Michigan PSAs are considered school districts. In 1994, there were 33 charter schools. The number of charter schools has increased steadily over the years, and as of July 2010 Michigan has 240 charter schools. For this study, charter schools are not considered for potential inclusion in school district consolidation since they are intended to function independently of the school districts in their geographic proximity.

Historical Perspective of Education in Michigan Public Schools

Year	Number of School Districts	Number of Pupils
1880	6,352	362,196
1915	7,337	598,159
1950	4,918	1,043,566
1965	1,227	1,917,890
1994	572	N/A
2010*	551*	1,757,604

* In addition, Michigan has 57 “Intermediate School Districts” which are a county or a regional service area.

Starting in 1994, Michigan authorized the establishment of Charter Schools, also called “Public School Academies”. These schools are referred to as “districts”. In July 2010, there were 240 such “districts”.

The Charter Schools would not be considered as part of any consolidation, but can participate in cooperative agreements with other schools for services.

School District Consolidation in Michigan and Across the Nation

The number of school districts relative to enrollment varies greatly across individual states. Hawaii, for example, has one state-wide school district. Many states, like Maryland, Virginia and Florida, have county-wide districts. Texas has the largest number of districts with 1,040. With 551 local school districts, 57 intermediate school districts (which function as service agencies for schools at the county or regional level), Michigan has the 5th largest number of school districts in the nation. Only California, Illinois, New York, and Texas have more school districts than Michigan.

Enrollment variance across school districts in Michigan makes “average enrollment” quite misleading. For example, in 2009, the mean enrollment of a school district in Michigan was 2,972, but half of the districts had fewer than 1,500 students and three-quarters of the districts had fewer than 2,800 students. Ninety percent of the school districts in Michigan have fewer than 6,300 students (U.S. Department of Education, National Center for Education Statistics, 2009). These statistics clearly indicate that the majority of school districts in Michigan are relatively small in size while a few districts in large cities and urban areas have student population in excess of 10,000 students.

The state of Indiana is undergoing an interesting reform effort related to consolidation. The Indiana Commission on Local Government Reform has called for school districts to be reorganized so that all have a minimum student population of 2,000. The Commission recommendations would also require that all purchasing be done through their ISD-like entity, unless additional savings through independent purchasing can be documented. Similar requirements applied in Michigan would impact more than 50 percent of the school districts in the state – those with less than 2,000 total student enrollments.

Although the pace of school consolidation has slowed significantly since the 1970’s across the nation, some states (New York, Maine, Indiana, New Jersey, and Vermont) provide financial support designed to

encourage district “reorganization,” typically in the form of consolidation. In contrast, about 16 states use school aid formulas that compensate school districts for sparse enrollment or small size and thereby discourage consolidation.

Is Consolidation Cost Effective?

Educational researchers and policy studies do not agree on the financial impact of consolidation. Some studies suggest that the current political emphasis on the consolidation of small or rural districts is misplaced, and estimate that the potential savings from consolidating small districts is about 10 times smaller than the potential savings from breaking up large districts of 100,000 or more students. Other studies show that the potential value of consolidating small or rural districts goes beyond cost savings and would likely result in improved curriculum and educational opportunities for students. School district consolidation is likely to remain a prominent item on the education policy agenda, particularly when school districts in Michigan are under increasing pressure to cut costs and raise student academic performance. The increased use of technology in general and the computer in particular – coupled with more emphasis on higher order learning in mathematics, science, technology, and communication skills – is likely to prompt additional district reorganization efforts especially for rural and small districts.

School district consolidation has been used extensively as a strategy to reduce fiscal cost of education and address the quality of curricular and instructional efficiency of small and rural school districts. However, there is little research-based evidence to prove that consolidation has solved the problems for which it has been intended – those of finance, staff reduction, facilities and curriculum improvement. The consolidation of school districts has several opposing arguments from a psychological or emotional perspective. District residents might see a loss of community identity if their children’s district consolidates with another. For longtime community members, there is a loss of history because they might have once attended schools in that district. Some worry the loss of a school district will have a negative impact on the local economy due to a reduction in the number of employees who spend a portion of their salaries in the local economy.

In Michigan, most school districts abhor consolidation and resist any efforts in that direction. Communities often try to attract new residents and students (to increase revenue to their schools), attempt cost-cutting measures or suggest school closure. However, when and if consolidation talks begin, it can take years before school districts actually combine because consolidation in Michigan has a series of legal steps including the vote of all districts involved in the consolidation. Only two districts have consolidated in Michigan during the last 10 years. In 2003-04, Wakefield and Marenisco school districts in Gogebic County consolidated, due to very small enrollments in both districts totaling 340 students. A 2004 survey of Michigan citizens indicated that 47% of the adults favor consolidation of school districts in Michigan, while 53% prefer to keep their district within their local communities.

Considering Alternatives to Consolidation

Given the resistance at the community level to consolidation of school districts, attention should be given to alternative strategies that could reduce costs and bring quality education to students living in rural or sparsely populated areas of the state of Michigan.

There are several alternatives to full school district consolidation that can help improve the quality of education while reducing cost. These alternatives are referred to generally as coordination of services. Coordination of services among school districts basically entails two or more districts in close geographic proximity jointly sharing and providing services. The following are the major examples of coordination of services that are being applied in a few Michigan rural and small districts.

1. Coordination of Administrative Services

Local boards of education can select a superintendent or other specialized administrators (curriculum, budget, transportation, special education) who spend their time in more than one district. In Michigan, administrative coordination has been formed around math and science centers, technology and technical education centers and materials, staff development, and education for students with special needs.

2. Program Coordination Across Districts

Neighboring school districts may, on a formal or informal basis, agree to share personnel, programs and equipment to provide needed services to students. Sharing allows school districts to remain separate while gaining additional curricular programs of higher quality. It also lets the community keep its own schools and consequently its own identity and vitality. Through shared services, a comprehensive educational program can be made available even though a particular school may not be very comprehensive in its offerings. Instructional materials, teachers, equipment, ancillary services, transportation, staff development, counseling services, special education and vocational education can be shared.

Some of the advantages of sharing have been identified as follows:

- Program offerings can be secured and often expanded.
- A balanced faculty is maintained and the academic expertise increases.
- Sharing enables schools to comply with federal and state mandates.
- Transportation facilities can be shared.
- Expenditures can be decreased through joint purchasing.
- Sharing increases community cooperation and support, a sense of local autonomy, teacher retention and school district stability.

In Michigan, the 57 intermediate school districts (ISDs) should take a larger role in helping constituent districts organize these kinds of program and administrative coordination. The ISDs in most cases are mandated, approved and directed by the Michigan Department of Education to facilitate the sharing of services and resources among school districts. Some ISDs are very effective in the coordination of services, while others are rather passive in their support. The ISDs can and should provide the mechanism whereby constituent school districts can share services such as purchasing, warehousing and data processing, as well as the coordination of contractual services for transportation, food and building maintenance.

3. Voluntary Inter-District Coordination

This is a voluntary arrangement made by two or more districts to share services, programs, or resources. The less formalized structure of this voluntary agreement enables school districts to maintain their identity and autonomy. One district may take a lead on the coordination of a particular service such as transportation or data processing, while another district may coordinate food services or special education programs. This form of coordination differs from ISD coordination in that resources and services are shifted from district to district instead of a central location.

The advent of educational technology and distance learning comprises an alternative strategy for offering instruction. Education technology makes it possible for small schools to have access to a broader range of information and curricular offerings, so that learning opportunities can be expanded without the need for consolidation. The use of expensive equipment such as microwaves, satellites, fiber optics, and audio-video teleconferences make coordination of services at the ISD level more cost efficient and easier to manage.

The different alternative coordination of services described above is being used effectively in a few districts in Michigan. They are available for local school boards and school administrators to use to solve problems of rural and small school districts without resorting to full scale consolidation between districts or at the county level. These alternative approaches enable communities to retain the advantages of smallness while providing quality education for their students at a manageable cost.

Economy of Scale

This study empirically tests the notion that consolidating school districts at the county level will save money and reduce operational costs of schools. Research studies from across the country utilized mathematical modeling and statistical analyses to study the relationship between district size, per pupil expenditures, cost of services, and administrative, instructional and operational costs. The mathematical models developed by research studies across the nation clearly indicate that the savings are derived from the economic principal of “economy of scale,” which basically refers to the relationship between per pupil expenditure and enrollment after accounting for other factors that might influence spending. The conventional wisdom is that consolidating small districts (in terms of enrollment), particularly those in rural areas, can result in significant cost savings. For example, large districts may be able to take advantage of the price benefits of scale by negotiating bulk purchases of supplies and equipment. Larger districts can make more efficient use of communication systems, data processing, and budget management, or make effective use of specialized facilities, such as science or computers and advanced technology laboratories.

Mathematical Model to Predict Cost Savings

Consolidation of school districts is considered as a way to improve school districts efficiency. This study evaluates the potential cost impacts of 10 county-wide consolidations in Michigan. The actual data for these counties and their constituent districts are derived from the 2009 state and national data provided by Michigan’s Center for Educational Performance and Information (CEPI) and the National Center for Education Statistics (NCES), respectively. Holding student performance constant, the study does not

consider outcome variables such as student achievement on standardized tests, graduation rates, drop-out rates, teacher retention rates, and parental and community involvements in school activities.

This study relied on the mathematical model developed by William Duncombe and John Yinger.¹ The mathematical model predicts that consolidation of rural, small and medium size districts will produce savings of the following amounts after three years of consolidation:

- 8% of the Operating Cost,
- 4% of the Instructional Support Cost,
- 15% of the Administrative Cost, and
- 18% of the Transportation Cost.

While these savings percentages may not apply equally to all size districts, the average numbers may overestimate the savings for school districts with 10,000 or more students and underestimate the savings for districts with 1,500 or less students.

The cost savings for the alternative approach to consolidation, the coordination of services, considered only the savings produced by Operation Costs (8%) and Transportation Costs (18%). The general mathematical formulas used in this study were:

1. County Level Consolidation Cost Savings =
 - 0.08 (Operations and Maintenance Total – Column L)
 - + 0.04 (Instructional Support Total – Column B)
 - + 0.15 (Central Administration Total – Column J)
 - + 0.18 (Transportation Total – [N – (B + J + L)])
2. Coordination of Services Cost Savings =
 - 0.08 (Operations and Maintenance Total – Column L)
 - + 0.18 (Transportation Costs)

The attached tables, one for each of the 10 counties studied, show the baseline financial, student and staff, and per pupil expenditures for the school year 2008-2009 as well as the estimated savings for the consolidation and coordination of services options.

Conclusion

It appears that significant savings can be achieved in consolidating school districts at the county level. The coordination of services also produces cost savings for the districts assuming participation in a

¹ Does School District Consolidation Cut Costs?, by William Duncome and John Yinger, Center for Policy Research, Working Paper No. 33, Syracuse University, 2001, Syracuse, N.Y.

county level (ISD) coordination of services. These findings are consistent with other research studies in New York and Indiana. However, consolidation studies conducted in Arizona and New Jersey indicated that the fiscal savings hoped for did not materialize to the extent expected. Overall, consolidation seems to make fiscal sense, particularly in rural and small districts. The coordination of services seems more palatable to Michigan communities and also produces significant reduction in cost of services such as transportation and operation. The results of this study should be of interest to state and local elected officials, to state education agency staff, and to public school administrators.

As the economy of the state declined in the past few years, so did state funds for education, and schools were forced to make cuts or reduce the quality of services. State and local boards of education, operating under pressure to run schools efficiently and meet national and state performance goals, must consider administrative options such as consolidation or the coordination of services to reduce operating costs and improve the quality of education for all students.

The Future of School Districts Consolidation in Michigan

The National Governors Association are among national groups that have begun encouraging states to take a serious look at some form of school consolidation as a way to offset funding cuts to K-12 education and to keep as much money as possible in the classroom. “We are in such financial crises in this country that we cannot afford to worry anymore about some of these considerations that, in light of the financial situation, appear minor,” says John Thomasian, director of The National Governors Association Center for Best Practices. “Now that we are in such a clear and long-run fiscal climate of austerity, issues like school district consolidation have to be taken straight on.”

But savings in school administration have been difficult for states to achieve because of the limited control the states have over how school districts spend their money. According to an October 2009 survey by the American Association of School Administrators, more districts have cut core subject teachers to cope with budget cuts than have cut central office or administration personnel. For the current school year, 42 percent of the districts surveyed reported that cutting core subject teachers, while 32 percent reported cutting administrative personnel. Next year, 36 percent of districts plan to cut additional core subject teachers, while only 20 percent plan to cut central office of administration personnel.

Even advocates of consolidation, such as Thomasian, acknowledge that the savings potential of these initiatives can be somewhat unclear. When states such as Maine pair significant cuts with massive reorganization plans, it can be difficult to tell savings from outright cuts. “States don’t go into budget

cutting as a clinical test,” says Thomasian. “We don’t have control groups, so a lot of it gets mixed together. That’s why a lot of research to date on school district consolidation has been mixed.

The state of Michigan can approach school district consolidation in a number of different ways – using the carrots and sticks approach by offering incentive to rural or small districts to consolidate within a certain time period or face reduction in state aid. Another approach is changing funding formulas to encourage districts to consolidate. It would seem that without state level legislation, it is not likely that local districts in Michigan will consider consolidation at any level in the near future.

Impact of School District Consolidation on Student Achievement

Research studies on the relationship school district consolidation and student achievement suggests that no consensus exists. Some recent research on student performance at the school (not district) level indicates that “small may be beautiful.” Small high schools have evident advantage for achievement, at least among disadvantaged students. Although they are controversial, performance measures, such as achievement data in math, science, reading, and writing, or graduation and drop-out rates, are available and reflect what parents and voters in a school district ultimately care about. But as is well recognized, student achievement is a function of school activities produced from purchased services (teachers, administrators, and instructional materials), but also of student, family and neighborhood socio-economic characteristics

Impact of Consolidation at the County Level

The model used in this study is designed to determine the impact of school district consolidation on costs, holding constant student performance and other factors such staff salaries and “quality of education.” The model develops estimates based on district-specific cost factors for a specific year.

The study of the 10 counties finds that consolidation clearly cuts cost for small and rural districts in Michigan, the cost saving appears to be driven entirely by the economics of scale or size. Consolidation impacts the pattern of both operating and capital spending. We conclude that consolidation at the county level is likely to cut cost of general fund expenditures exclusive of capital outlay by about 8-11 percent. However, these percentages are averages for all districts in the counties. The saving may be significantly more for districts of less than 2000 students, and significantly less for districts with more than 10,000 students.

The Impact of consolidation on Transportation cost is rather complicated. Transportation is a service that impacts the estimate of saving from consolidation. School districts targeted for consolidation are often rural or with low student densities distributed over large geographic areas. As a result, more students qualify for busing which forces the districts to add more buses and longer routes. Consolidations often result in more efficient transportation operations by maximizing use of buses and scheduling of school operations.

Transportation and operational costs may be worth further investigation when outright consolidation is not practical due to other factors. Transportation and operational costs are more susceptible to the economy of scale factor.

However, in a countywide consolidation, research studies tell us that school bus travel time over 45 minutes should be avoided if at all possible. The use of natural gas fueling facilities should be utilized to power buses as a method of saving money that can find better use in the classroom to improve student learning, which is the primary purpose of schooling.

Estimated Cost Savings at the State Level from School District Consolidation or Coordination of Services

The State of Michigan K-12 Public Education Expenditureⁱ	
Types of Support	FY 08 Expenditures in Thousands of Dollars
Instruction Total	9,665,947
Instructional Support	2,087,801
General Administration Cost	1,337,231
Operation, Maintenance & Food	2,367,117
Transportation	769,771
Other Support Services	825,594

Estimate of Potential Saving of Consolidation at the County Level

$$\begin{aligned}
 &8\% \text{ of } 2,367,117 + 4\% \text{ of } 2,087,801 + 15\% \text{ of } 1,337,231 + 18\% \text{ of } 769,771 = \\
 &189,369 \text{ (Operation + Food)} + 83,512 \text{ (Instructional Support)} + 200,584 \text{ (Administration)} \\
 &\quad + 138,558 \text{ (Transportation)} = \\
 &\$612,023 \text{ Total Estimated Savings at the State Level (In Thousands of \$)}
 \end{aligned}$$

Estimated Saving from Statewide Level Coordination of Services at the County Level

$$\begin{aligned}
 &8\% \text{ of Operation/Maintenance, Food Service} + 18\% \text{ of Transportation Costs} \\
 &0.08 (2,367,117) + 0.18 (769,771) = \\
 &189,369 + 138,558 = \\
 &\$327,927 \text{ Total Estimated Savings from Coordinating Services at the State Level (In Thousands of \$)}
 \end{aligned}$$

ⁱ The National Center for Education Statistics, Current Expenditure by Function 2007-08 Fiscal Years, U.S. Dept. of Education; The Common Core of Data, Table 2, 2010.

The data for the 10 Counties are attached in an EXCEL File.