Regional Cost of Living Differences and Education Spending
An Exploratory Analysis

Hamline University School of Business
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Spending on education in Minnesota for children in early grades through high school is one of the central constitutional tasks undertaken by the legislature every two years. This spending is one of the largest budget items, affects every geographic corner of the state and crosses political boundaries. In an environment of limited revenue it competes with other important functions of government such as health care and public safety. Resources are provided to school districts and other entities such as chartered schools to purchase the services and goods required to educate the children of the state. There is no lack of debate about the appropriate levels and distribution of resources reflecting conflicting views of adequacy and equity among elected officials.

There are seven central findings of this report:

1. Spending for education is a significant share of the state's general fund. From 1985 through 2000 it was about 33% to 35% of total spending. This grew to roughly 43% in 2007, but this shift reflected property tax relief passed in the 2001 session more than new resources for educational services. This level was projected to fall in the most recent forecast from the state. When all operating funds are included - beyond just the general fund - the share of spending is much lower. During the early 1980's it was lower than 20% and barely reached 30% by 2007.

2. Education spending adjusted for consumer price inflation and pupil change has grown from 1983 to 2007. However, using two alternative measures of price changes more directly related to education than the CPI, there is a strong indication that education spending has been declining or is flat. In one measure there was a decline between 2002 and 2004 with a slight increase through 2007. The second measure indicates a higher rate of inflation and even lower real spending between 1995 and 2005.

3. Inflation in education is higher than in most other government services. National data measured between 1960 and 2007 indicates that average annual inflation for this 47 year period was 4.9 % compared to the average for all services at 4.7 %. While this difference seems minor, when compounded over the period, it leads to significant differences for K-12 spending. Inflation was higher in K-12 education than in other important areas such as public safety and income security.

4. This report applies a new price index developed by the U.S. Department of Education to specific school districts in the state. It is clear from this data that real price differences between districts exist and that they affect the real level of services delivered to children.

5. Although the state has recognized some cost differences between school districts through its funding formulas, these differences have not been rigorously identified and measured. These costs reflect differences in size, location and student populations. Only through this analysis can the state assure the delivery of a consistent level of services to students.

6. Once cost differences have been properly identified and measured, it is necessary to align the funding formulas with the costs. This alignment may be accomplished either with a reallocation or with new resources. This is a policy decision by the legislature.

7. Detailed cost differences are an important part of this report. An appendix contains measures for each district in the state and some suggestive analysis of referendum and other parts of the general education formula. This data is an initial but important demonstration of how cost differences might be evaluated.

Report Summary
Minnesota is a geographically large state with a dispersed population. A well-known economic fact is that the cost of purchasing the same amount and quality of goods and services can vary across geographic distances. This report provides an analysis of prices and education spending in Minnesota through five separate sections presenting different perspectives on resources, relative prices and spending. This is a broad approach but it is important to provide a general context for the price analysis.

The first section provides an analysis of education spending in the state as a proportion of total spending. This is a measure of how the state prioritizes education among the many demands for government goods and services. The typical approach is to focus solely on the general fund, but this approach provides only a partial view. The general fund is only one, albeit the largest, of state operating funds.

- Education as a share of general fund spending has changed substantially between 1977 and planning estimates for 2013. From a 40 percent level in 1977, the share dropped in the late 1970's and early 1980's to roughly 30%, was relatively flat from 1986 to 1999 at about 33%, trended up to 44 % by 2007 and is expected to drop through the planning period of 2013. Aside from a property-tax-shift-related anomaly in 1982, the roughly 40% share in 1977 was not reached until 2004.

- The share of education spending of all operating funds is substantially lower than the general fund share. Over the same period it ranges from a low of 18 percent in 1984 to roughly 30 percent in 2007. When all operating funds are taken into account education spending appears to be lower priority of the state.

- The spending share increase from 37% to about 44% starting in 2001 reflects property tax policy changes, not education policy changes. The dramatic restructuring of the property tax system in the 2001 session shifted a substantial portion of K-12 funding from local property taxes to state revenue resources. This changed the source of funding for K-12 but did not lead to new revenue.

- There has been a substantial increase in funding for special education over the last 20 years. A question raised is how this increase impacts the data; that is, whether the share of funding is higher solely due to increased special education funding and not overall funding. In 1996 special education was about five percent of total district revenue, a figure that has grown to over 11 percent by 2009. While removing this amount from the total would reduce the K-12 share of the general fund, it would not alter the pattern in a material way since the spending pattern is dominated by funding for basic education.

Section two provides an analysis of price changes for different state and local government functions at the national level. This is important because it provides a clear context for inflation in education compared to other areas such as health, transportation and public safety. If inflation is higher in education, policy makers must provide higher resources simply to maintain real service levels. Even though national numbers are used, there is nothing to suggest that Minnesota would differ materially from these results.

- Rates of inflation by function for five year periods between 1960 and 2007 are presented. In every period shown except two (1970 to1975 and 1995 to 2000), inflation in elementary and secondary education has exceeded the overall average for state and local government.

- Inflation for the whole 47-year period is higher in K-12 education than in most of the other functions.

- Compounding effects of even small differences in average inflation rates are significant over long periods of time.

These figures have important implications for elementary and secondary education. First, they suggest education requires more resources than most other functions simply to maintain real spending power. Second, those interested in education can identify other functions where inflation is higher than in education. From 1997 to 2007 this would include public safety, transportation, housing, health and recreation.

The third section presents information on regional prices indexes for the state. A number of approaches have been undertaken to measure inflation geographically for education. These range from complex cost-of-education indexes to cost-of-living indexes. This report uses two recently produced cost-of-living indexes available from national sources to evaluate K-12 spending in Minnesota. The first is called the regional price parity (RPP) index and the second is called the comparable wage index (CWI). Both price indexes are produced by federal agencies which lends important credibility to the analysis. The analysis shows important patterns:

- First, living on average is cheaper in Minnesota than the average levels for other parts of the country. This means the salaries we pay buy more than they would in other higher cost areas.

- Second, regional costs are higher in areas one would expect. Urban settings such as the Twin Cities (almost 7% higher than the state average) or Rochester (almost 6 % higher than the state average) have higher indexes than other areas.

Section four presents an analysis of real state spending using several price indexes. This is important because it provides a true measure of the state's commitment after inflation in education spending is taken into account. Spending per pupil is used to remove any artificial changes due simply to student growth. There are three different price indexes: the education price index discussed in section two, the CPI, and the state average of the CWI. There are three important observations suggested by the data:

- First, the national functional index and the Twin Cities CPI consistently reflect similar levels in inflation between 1983 and 2002. This is indicated by the adjusted per pupil spending data that is fairly close for this period. From 2002 on there is a dramatic change between the two. The functional index shows much higher inflation rates, i.e., lower real spending per student, than the consumer price index data.

- Second, real per student spending in Minnesota shows a fairly consistent pattern between 1983 and 2007. There are some periods where the change is fairly flat such as the early 1990's followed by growth in 1994 and 1995. From 1996 to 2002 this real spending per pupil rose steadily. However, the divergence in the price indexes indicates a very different pattern in real spending over the last five years.

- Real spending as measured by the CWI shows a dramatically different pattern. Unfortunately this index is available for a much shorter period of time. However, from 1997 to 2005 this index indicates much lower real spending per student in Minnesota than the other two indexes. The CWI shows almost stagnant growth in real spending over this time period. If this result is accurate then the state has provided very little growth in education revenue over this period.

The last section is the heart of the report. The first four sections provided background information on state spending and regional price indexes in the state. This section applied the cost-of-living index as measured by the CWI to each school district in Minnesota for 2008 revenue data. Three different revenue definitions were analyzed: basic revenue, referendum revenue and a third composite that included referendum revenue, equity revenue transition revenue, gifted and talented revenue, training and experience revenue and Q-comp funding. The choice of these components is discussed in the report. The detail of this analysis is presented in a table in the appendix. Three important points are evident in the table:

- School districts across the state face a broad range of cost-of-living.

- School districts in higher cost regions such as the Twin Cities or Rochester require a higher level of resources to provide the same level of services.

- There is a second side to the cost-of-living equation. School districts with lower than average cost-of-living indexes can purchase more services since it costs less to purchase the service in that geography.

This study reveals important trends in real cost differences among school districts in Minnesota. The cost-of-living estimates are applied to certain revenue components that reflect differences in resources among districts in the state.

It is important to note that cost of living may reflect only one of many cost differences faced by school districts or reflected in education funding formulas. The general education formula includes revenue components that adjust for student input differences (compensatory, LEP), capital facility differences, and operating scale differences (sparsity, transportation sparsity) among others. These formulas allocate hundreds of millions of dollars across the state to school districts under an assumption that they fairly reflect cost differences. However, the reality is that the allowances have been arbitrarily established often in response to political urgencies. The state has never undertaken a rigorous analysis of real cost differences school districts must deal with on a daily basis, a fact noted in a number of places in the text. The data in this report suggest that the state undertake serious analysis of these differences and that they be reflected in revenue made available for students.

Introduction

Spending on education in Minnesota for children from the early ages through high school is one of the central constitutional tasks undertaken by the legislature every two years. This spending is one of the largest budget items, affects every geographic corner of the state and crosses political boundaries. In an environment of limited resources, education competes with other important functions of government such as health care or public safety. Revenue is provided to school districts and other entities, such as chartered schools, to purchase needed services and goods for education. There is no lack of debate about the appropriate levels and distribution of revenue, a fact that reflects conflicting views of adequacy and equity among elected officials.

Minnesota is geographically a large state with a widely dispersed population. A well-established economic reality is that the cost of purchasing the same amount and quality of goods and services can vary across geographic locations. This report provides an analysis of prices and education spending in Minnesota. The report's five sections present different perspectives on resources, relative prices and spending.

State policy makers are concerned with revenue for school districts from all sources including state, local and federal. A large portion of their time is spent deciding the share of the state's budget dedicated to this area. Often the share of the state's general fund is used as an indicator of the state's commitment to education. Section One analyzes this commitment over the last 30 years. But the general fund is only a part of all operating funds in the state budget. Other funds like the health care access fund are used to provide services and are important aspects in the budget process. Section One also provides an analysis of state spending on K-12 education on an all-funds basis.

Often state government must deal with pressures from different parts of the budget that are created by relative price changes. The dramatic increase in health care costs in recent years is a key example. Section Two of the report provides an analysis of price changes at the national level in K-12 education relative to other state and local government functions. This analysis will provide a context of price trends at the national level and differences at the functional level that could be used in state discussions.

Relative cost of living differences exist across many geographic areas of the country. It is more expensive to live in San Francisco or New York than it is in Duluth. The literature for evaluating school district funding to reflect geographic cost variations can be divided into two broad categories—cost-of-living and cost-of-education strategies. The basic premise of cost-of-living reflects the view that areas with relatively higher costs of living have to pay higher salaries to attract school employees, thereby increasing the cost of operating schools and districts. The cost of living therefore acts as a proxy for the cost of education. Section Three presents two approaches to measuring cost of living at the regional level in Minnesota: a Regional Price Parity Index (RPP) recently produced by the Bureau of Economic Analysis and a Comparable Wage Index (CWI) produced by the National Center of Economic Statistics. Two key questions for this study are how costs differ across locations in Minnesota and how education spending should be evaluated in light of those differences.

Section Four presents price index comparisons for the education function at the national level. A similar index at the state level would be useful. A number of methods for constructing cost of education indexes have been developed over the years. These methods range from simple techniques using teacher salaries to complex statistical approaches combining many input and output variables. There is little agreement on the most effective approach. The CWI has been estimated by NCES at both a regional and a state wide level. The state wide index is available from 1996 through 2005. Section Four uses this index, the consumer price index and the national functional index for education to analyze real changes in school district revenue in the state.

Regional price differences influence the way we need to evaluate differences in educational resources and opportunity across the state. Section Five uses the RPP and CWI to analyze various sources of revenue at the school district level. Since referendum revenue is a controversial aspect of school district funding, one part of the analysis will focus on this component. The general education formula is very complicated comprising a broad variety of revenue components. Some components reflect student input cost differences like compensatory revenue. Others reflect administrative cost differences like sparsity revenue. Still others reflect historical spending or legacy costs. A second part of the analysis will focus on this third set of revenue components. This analysis will consist of a distributional analysis geographically in both current revenue and price adjusted terms.

The final section of the report summarizes the findings. A bibliography and appendixes follow. This study addresses the question of regional cost differences. It does not address the question of whether the K-12 system has the resources needed to meet expected educational outcomes. That is, is does not address adequacy. The analysis of regional cost of living difference suggests a more fundamental question about the construction of the general education formula. This formula contains numerous revenue components that purport to reflect input and other cost differences. These exist just as cost-of-living differences exist. However, the allowances in these components are not based on rigorous analysis of costs but originate instead from political bargaining and tradeoffs. It seems only reasonable that if the Legislature recognized cost differences in principle then the actual measures should be empirically based.

Section One: Education Spending and State Operating Funds

State policy makers are concerned with revenue for school districts in the state from all sources including state, local and federal. A large portion of their time is spent deciding the share of the state's budget dedicated to this area. Often the share of a state's general fund is used as an indicator of the state's commitment to education. However, while the general fund is the largest, it is nonetheless only one of many operating funds in the state. Other operating funds include transportations funds, federal funds, the Health Care Access fund, special revenue funds and others.[1] These funds are segregated for sound accounting reasons. For instance, the transportation fund reflects constitutionally dedicated gas tax revenues that must be used for highways. Federal funds can only be used for the purposes established by the federal government. Revenue in special revenue accounts is from fees imposed for specific services. The provider tax in the health care access fund is linked to services for health care to lower income people.

As practice has shown, there is nothing immutable about these restrictions. The legislature has often shifted balances from fee-based revenue accounts to the general fund. More recently the line between fees and taxes has been blurred in the health impact fee. The Governor Pawlenty administration's budget proposal changed the use of the provider tax by consolidating the Health Care Access fund and the general fund. The constitution can be changed, although not without great difficulty, to allow for other uses of gas tax revenue. Restrictions on federal funds will always be a limitation, although in certain periods such as the Reagan administration, changes from specific revenues to block granting provided flexibility to states.

Chart 1 shows two variables that measure K-12 spending as a share of total spending. The first is total general fund spending for education as a share of the general fund. The second shows total spending for education as a share of all operating funds. For education this includes federal funds, permanent school funds and a number of smaller accounts.   This spending data is provided by the Minnesota Department of Management and Budget and is measured on a functional basis. Functional categorization is very useful for comparisons across time, legislative definitions and actual use. If the functional use of the money is for education the spending is attributed to education regardless of the legislative decision process used to determine the amount. Education spending is included in the education function whether the money is appropriated in the education committee or the tax committee. This provides two benefits. First, it allows for a consistent measure across time. Often spending programs move jurisdictionally from one budget area to another. For example, child care may be included in education in one year and human services in another. Second, by measuring spending by function, a comprehensive view is offered. This means property tax aids and credits that are driven in part by education levies are counted as a part of education spending.

Total spending in the state budget is far higher than levels for the general fund. For instance, the general fund total for the 2008-09 biennium is about $34 billion.[2] Total spending from the consolidated fund statement for all operating funds exceeds $56.0 billion. The general fund

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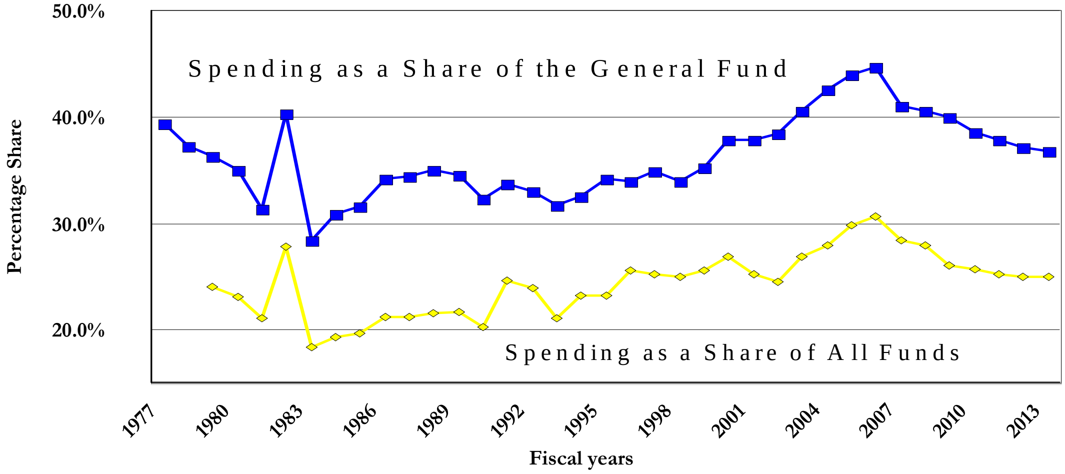
[1] See the Consolidated Fund Statement at http://www.mmb.state.mn.us/doc/budget/report-cons/feb09.pdf. for a list of funds used in this analysis.

[2] See the data in the consolidated fund statement.

reflects about 61 percent of total spending. Chart 1 shows trends in general fund education spending as a share of the total general fund and education spending from all operating funds as a share of total spending. The major differences for education are federal funds and the permanent school fund income. There are other relatively minor components.

Chart 1
E-12 Spending as a Share of Total Spending



Source: Minnesota Office of Management and Budget
November, 2008 Forecast

The chart suggests several conclusions. Education as a share of general fund spending has changed substantially over this time period. From a 40 percent share in 1977, it dropped in the late 1970's and early 1980's , was relatively flat from 1986 to 1999, trended up to 2007 and is expected to drop through the forecast period. Aside from a property-tax-shift-related anomaly in 1982, the roughly 40% share in 1977 was not reached until 2004. Spending as a share of all operating funds is roughly one-third lower than the general fund share, although this difference appears to have widened in recent years.

The increase from 2001 on reflects property tax policy changes more than education policy changes. The dramatic restructuring of the property tax system in the 2001 session shifted a substantial portion of K-12 funding from local property taxes to state revenue resources. This changed the source of funding for K-12, but did not lead to new revenue. From a state funding perspective this change was artificial. Property taxes are typically viewed as local sources of revenue, and in most cases this is an accurate categorization since local officials determine the tax levels. This was not the case with the general education levy; this was the central education levy eliminated in 2001. The fact is that this tax levy was essentially a state resource. The total amount was set by the state every year in the budget process. The tax rate was the same regardless of where one lived in the state. The levy was integral to the general education revenue provided to each student in the state. The functional difference between the general education levy and other state taxes was that it never passed through the state's general fund. While property tax reform in 2001 was the goal, from a school funding perspective, the state traded off a relatively stable source of property tax revenue for more volatile taxes such as the income tax or sales taxes.

There has been a substantial increase in funding for special education over the last 20 years. A question raised is how this increase impacts the data; that is, where the share of funding is higher solely for reasons of this policy. In 1996 special education was about five percent of total district revenue, a figure that has grown to over 11 percent by 2009. While removing this amount from the total would reduce the K-12 share of the general fund, it would not alter the pattern in a material way since the spending pattern is dominated by funding for general education.

Section Two: Education Price Changes and Other Government Functions

Often state governments must deal with pressures from different parts of the budget that are created by relative price changes. Health care costs in recent years are an example. As prices in that area change more rapidly than in other parts of the budget, additional resources need to be shifted to maintain current service level funding. This section of the report provides an analysis of price changes at the national level in K-12 education relative to other state and local government functions. Price data specific to Minnesota is more desirable but necessary data is not available. However, national information is likely a reliable indicator of trends in Minnesota. Although there may be periods of time where the state deviates from national trends, there is no reason to suspect this would be systematic over a long time trend. Note that this is an analysis of price changes, not price levels. Price levels themselves may be different. The current data spans 1959 through 2007 which should provide a clear picture of long term trends and identify relative shifts in price changes.

The data is prepared by the Bureau of Economic Analysis as a part of the national income and product accounts. BEA provides price changes for 11 different functional areas for purchases at the state and local government level. In government budgets, expenditures are classified according to their purpose—that is, their function—so that comparisons of major activities over time can be made even as underlying programs and agencies change. The functions are: general public service, public order and safety, transportation, other economic affairs, housing and community services, health, recreation and culture, elementary and secondary education, higher education, libraries and income security. Functional analyses reveal important trends, enable comparisons with the expenditures by other governments, and summarize significant expenditures of government in terms of continuing, common purposes. The national income and product accounts (NIPA's) present government-by-function tables in an economic framework that is an alternative to the accounting used in government budgets.

Table 1 presents rates of inflation by function for five year periods between 1960 and 2007. The last two columns show changes over the entire period and for the last 10 years.[3] In every period shown except two (1970 to1975 and 1995 to 2000) inflation in elementary and secondary education has exceeded the overall average for state and local government. The average from 1960 to 2007 also exceeds the overall figure but the numbers for most functions are relatively close. These small differences should not be dismissed since the impact of compounding over 47 years makes small variations significant. For example, in order to maintain real purchasing power between 1960 and 2007, spending on a function with 4.9% annual inflation would need to be nearly 20 percent higher between the first and last year than spending on a function with only 4.5% inflation. Four-tenths of a percentage point leads to a dramatic difference over this period of time. It is interesting to note that inflation in higher education tends to be lower than K-12. Given the service delivered and the labor intensity of the two functions one would expect rates to be somewhat closer.

[3] See Table 3.15.4. Price Indexes for Government Consumption Expenditures and Gross Investment by Function Index numbers, 2000=100 , Bureau of Economic Analysis

Table 1
Price Changes by State and Local Government Function
1960 to 2007

	1960 to 1965	1965 to 1970	1970 to 1975	1975 to 1980	1980 to 1985	1985 to 1990	1990 to 1995	1995 to 2000	2000 to 2005	1997 to 2007	1960 to 2007
State and Local Expenditures	2.5%	6.0%	8.0%	7.6%	5.6%	3.6%	2.5%	2.6%	4.0%	3.9%	4.7%
General public service	1.8%	5.6%	7.4%	8.3%	5.5%	3.3%	2.5%	2.3%	3.6%	3.6%	4.5%
Public order and safety	2.3%	6.2%	8.0%	8.1%	6.9%	4.6%	3.6%	2.9%	4.1%	3.9%	5.1%
Economic affairs	2.1%	5.9%	9.7%	6.0%	5.1%	3.6%	2.7%	3.1%	4.4%	4.7%	4.9%
Transportation	2.2%	6.0%	10.0%	5.5%	4.9%	3.5%	2.5%	3.3%	4.5%	5.0%	4.9%
Other economic affairs	1.6%	5.4%	8.6%	7.8%	5.8%	3.9%	3.2%	2.5%	3.9%	3.7%	4.7%
Housing and community services	1.2%	4.7%	9.8%	8.7%	3.9%	2.5%	2.3%	2.9%	4.6%	4.2%	4.5%
Health	1.8%	5.6%	8.5%	6.4%	2.4%	-0.8%	-1.0%	5.1%	2.9%	4.7%	3.5%
Recreation and culture	1.8%	5.5%	8.5%	8.0%	6.3%	4.1%	3.2%	2.8%	4.3%	4.2%	5.0%
Education	3.2%	6.3%	7.0%	7.9%	6.0%	3.8%	2.4%	2.3%	3.9%	3.6%	4.7%
Elementary and secondary	3.4%	6.4%	6.9%	7.9%	6.3%	4.1%	2.9%	2.5%	4.2%	3.8%	4.9%
Higher	2.8%	5.9%	7.3%	8.1%	4.7%	2.7%	0.5%	1.2%	2.6%	2.6%	4.0%
Libraries and other	2.2%	5.1%	7.3%	7.8%	6.3%	3.9%	2.9%	2.2%	3.6%	3.4%	4.6%
Income security	2.4%	6.1%	7.5%	8.3%	6.7%	4.3%	3.2%	2.2%	3.4%	3.3%	4.8%

These figures have important implications for elementary and secondary education. First, they suggest education requires more resources than most other functions simply to maintain real spending power. Second, those interested in education can identify other functions where inflation is higher than in education. From 1997 to 2007 this would include public safety, transportation, housing, health and recreation. These functions require a higher share of budgets simply to maintain service delivery. Policy makers could use this chart to isolate inflationary effects and distinguish between spending decisions that address inflation and those that indicate real changes in policy priorities. The chart can also help distinguish between false and real priority changes. A large increase in resources to a functional area that is insufficient to cover inflation is a reprioritization of spending away from that area.

Section Three: Regional Price Indexes

Estimating price indexes for any geographic area is a very complex undertaking.[4] The Bureau of Labor Statistics (BLS) has, for decades, collected millions of records from consumers and producers on a monthly basis to produce the Consumer Price index, the Producer Price index and other indexes. The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. The CPI is used to adjust many economic series for price changes and to translate these series into inflation-free dollars.

One important use of the CPI is to deflate the value of the consumer's dollar to determine its purchasing power. The purchasing power of the consumer's dollar measures the change in the value to the consumer of goods and services that a dollar will buy at different dates. In other words, as prices increase, the purchasing power of the consumer's dollar declines. The CPI is often used to adjust consumers' income payments, to determine income eligibility levels for government assistance, and to automatically provide cost-of-living wage adjustments to millions of American workers. Over 50 million Social Security beneficiaries, and military and Federal Civil Service retirees, have cost-of-living adjustments tied to the CPI. Eligibility criteria for millions of food stamp recipients and children who eat lunch at school are affected by changes in the CPI. Many collective bargaining agreements also tie wage increases to the CPI. These uses are commonly known but are noted here to emphasize that a number of government programs use price changes to adjust benefits.

A number of researchers have investigated how price changes might be treated in education spending, especially across different geographies. These strategies can be divided into two approaches—cost-of-living and cost-of-education. The basic premise of the cost-of-living approach suggests that areas with relatively higher costs of living have to pay higher salaries to attract school employees, thereby increasing the cost of operating schools and districts. The cost of living acts as a proxy for the cost of education. The cost of education is a more direct approach to the problem. Both have advantages and disadvantages in their construction and use.

Local cost-of-living indexes have been developed through two methods. The first is to examine the cost of a specified “market basket” of goods and services used by consumers in each community. The total costs of the market basket of consumer goods and services in different communities are then compared to indicate differences in the costs of living. A second strategy for estimating geographic variations in the costs of living is the comparable wage strategy. Because all types of workers tend to demand higher wages in areas with a higher cost of living, labor market theory suggests that systematic regional variations in wages will reflect variations in the cost of living. Therefore, one should be able to approximate the cost of living for educators by observing salaries of comparable workers who are not educators.

There are a number of advantages to using cost-of-living indexes to capture geographic variations in the costs of education over the more direct approach. The principal advantage is that cost-of-living indexes measure costs that are clearly beyond the control of school administrators. School district officials are unable to manipulate prices in local market which

[4] This section relies heavily on the discussion in Taylor and Fowler—see Bibliography.

means that researchers do not have to draw controversial distinctions between controllable and uncontrollable costs. Furthermore, the calculation of a cost-of-living index can be quite straightforward and need not employ sophisticated statistical techniques. While there are still many complex measurement issues involved, either cost of living approach produces cost measures that can be compared relatively easily and directly. Finally, a cost-of-living approach is easily understood by policymakers and easily communicated to the public.

These two approaches have limitations. First, high-quality consumer price data as shown in the BLS work is expensive to collect. Florida spends more than $100,000 per year collecting consumer price data for use in calculation of its cost index. Second a cost-of-living approach relies on comparability among market baskets and among workers between two areas that are being compared. If either type of comparability breaks down, a cost-of-living index then becomes a poor proxy for the cost of hiring educators. For example, if people choose different market baskets in one setting than in another, it would be inappropriate to use the same market basket of goods to measure the cost of living in both settings. This may occur between an urban and rural setting if certain goods or services were simply unavailable in one location but very popular in the other. Similarly, if tastes for goods and services or local amenities differ according to worker types then it would be inappropriate to include all types of workers in a comparable-wage index.

A third limitation of cost-of-living methods using market-basket measures is that they do not reflect local variations in community characteristics. Cost adjustments based on market baskets of consumer goods may over-compensate districts that face high costs of goods and services but that also have a number of amenities that make them desirable places to work. Finally, cost-of-living indexes measure the cost of living in broad labor markets. They do not capture variations in the costs of education within labor markets. This is important in a regional area such as the Twin Cities. A cost-of-living index may have the same index value for a school district such as Edina as it does for Brooklyn Center.

A second general approach for estimating geographic cost variations involves the construction of cost-of-education indexes. This approach uses data on district expenditures to estimate either the costs of providing comparable levels of educational services or the costs of producing comparable educational outcomes. The service approach estimates the additional amount each district would have to spend to operate a typical school. The second strategy generates estimates of approximately how much each district would need to spend to achieve a certain level of educational achievement or outcome. A significant problem with this approach is that school districts spend the money they receive. A cost index may reflect state funding policy as much as it does education cost phenomena.

Cost-of-education strategies have a number of important features. First they directly examine school district expenditures and through appropriate statistical analyses estimate the costs of providing equivalent levels of educational services or outcomes in particular districts. Cost-of-education strategies can therefore be used to take account of cost variations within labor markets—an option not available with cost-of-living adjustments. Second, for states that already maintain data on educator salaries and district expenditures, it can be much less expensive to construct this index than to apply a market-basket approach. Third, cost of education indexes can account for both price and mix of inputs to achieve the same result. For example, one district may choose smaller class sizes to achieve a result, while another may choose after-school tutoring. Cost-of-living indexes only reflect price variations. Cost-of-education indexing strategies also have a number of potential disadvantages. First, it is impossible to account completely for all relevant controllable and uncontrollable cost factors. For example, important differences in teacher quality or educational outcomes may not be observable in the data. Second, patterns of district expenditure probably do not reflect cost-minimizing behavior. This is an important point. A cost index that simply reflects inefficient use of resources is not one policy makers would want to use for funding decisions.

This study uses the cost of living approach described above. There are two measures presented but only the second is used to adjust district spending data. The first measure is a regional price parity index produced by BEA.[5] The second is the comparable wage index produced by the NCES. The cost of living choice was made for two reasons. First, cost of living indexes are readily available. They have been recently produced for school districts and regions in the state by two independent federal government agencies. This independence serves as a tool of both accuracy and credibility. Second, while the Minnesota Department of Education produces a substantial amount of information on district spending and wages, the time needed to accumulate the data and produce an index was outside the scope of this project.

Although these two cost-of-living indexes were produced by highly credible federal agencies, they are based on a number of important assumptions and complicated statistical analysis.

The Bureau of Economic Analysis released estimates of place-to-place price indexes in the November 2008 Survey of Current Business. These indexes measure regional price level differences. Percent differences in regional price levels are called regional price parities (RPPs). The main difference between inflation indexes and price parities is that the former measures changes in price levels across different time periods for one specific place, while the latter captures differences in price levels across various regions for one specific time period**.** These indexes reflect the consumption of goods and services, not other products such as investment and government price differences. They are useful in this analysis because a major portion of education spending is on labor costs which should closely align with consumer prices.

The BEA has produced RPP for Metropolitan areas in or adjoining Minnesota.[6] The indexes are produced for the state and for the following regions: Minneapolis-St. Paul, Rochester, Duluth, St. Cloud, Grand Forks, Fargo, La Crosse and Sioux Falls. The final two regions in the list include parts of Minnesota. BEA has produced regional price parity indexes for 2005 and 2006. To insure that all parts of the state are covered, statistical methods are used to geographically interpolate between published areas.[7]

Regional price parities (RPPs) are expressed relative to the national average which is set at 100 for each year. They can easily be used to compare relative price levels between two states or

[5] "Regional Price Parities Comparing Price Level Differences Across Geographic Areas", <u>Survey of Current Business,</u> November, 2008.
[6] The exact definition of these areas can be found at the BEA website, www.bea.gov.
[7] This is described in the appendix

two metropolitan areas. Simply divide the RPP in the first state or area by the RPP of the second state or area and multiply by 100. For example the RPP for Massachusetts was 120.8 in 2006, and for Minnesota, it was 92.6. Therefore, the RPP for Massachusetts was 30.5 percent higher than that for Minnesota (120.8 divided by 92.6 times 100, which equals the national average and are set at 100 for each year. 130.5).

Table 2 shows the published data for the two years for the metropolitan areas in the BEA report.

Table 2
Regional Price Parity Indexes for Minnesota
2005 and 2006

Geographic Area	2005	2006
United States	100.0	100.0
Minnesota	97.5	92.6
Minnesota-Non-Metropolitan		74.6
Minnesota-Metropolitan		97.2
Duluth MN-WI	76.5	74.4
Fargo ND-MN	87.6	95.3
Grand Forks ND-MN	82.1	83.0
La Crosse WI-MN	88.5	86.4
Minneapolis-St. Paul- Bloomington	105.9	99.7
Rochester	95.3	93.8
St. Cloud	89.8	86.8
Sioux Falls	93.2	94.9

Table 2 reveals several important points. First, living in Minnesota is on average cheaper than the rest of the nation. The relationship ranges from roughly 2.5 percent lower to 7.4 percent lower in the two years shown. Comparisons take on more meaning when computed for specific economic variables and a specific location. For instance, per capita personal income rankings are a common measure of economic well being. The per capita ranking for Minnesota improves significantly when regional price parities are taken into account. Second, there are important differences across the state as one would expect. Moreover, the relative differences are in line with expectations as well. For instance, the fact that the Twin Cities metropolitan area has the highest cost of living is not a surprise. Neither is the relative level of the Rochester area given industries (medical, high technology) that dominate that region. Finally, there are wide swings between the two years in a number of locations. This is somewhat disturbing but since these are relative numbers, changes at both the specific geographic location and the national level may create a compounding effect in the same direction.

These geographic locations cover parts of the state with a large portion of the population, but there are significant geographic areas without coverage. To address this problem the indexes were geographically interpolated. This method creates an index for intervening counties by creating a linear relation between three different points. Specific details on the methodology can be found in the appendix.

The alternative approach developed by the National Center for Education Statistics is an analysis of comparable wages in the labor market. [8] The result is called a Comparable Wage Index (CWI). The basic premise of a CWI is that all types of workers—including teachers—demand higher wages in areas with a higher cost of living (e.g., San Diego) or a lack of amenities (e.g., Detroit, which has a particularly high crime rate). The CWI reflects systematic, regional variations in the salaries of college graduates who are not educators. Provided that these non-educators are similar to educators in terms of age, educational background, and tastes for local amenities, a CWI can be used to measure the uncontrollable component of variations in the wages paid to educators. Intuitively, if certain occupations in a city are paid 3 percent more than the national average wage for that occupation, and this holds for other occupations, then the CWI predicts that teachers in that city should also be paid 3 percent more than the national average teacher wage.

NCES developed a CWI by combining baseline estimates from the 2000 U.S. census with annual data from the Bureau of Labor Statistics (BLS). The Occupational Employment Statistics (OES) survey contains average annual earnings by occupation for states and metropolitan areas from about 400,000 nonfarm businesses. This data is available from 1997 to 2005. Combining the census with the OES makes it possible to have yearly CWI estimates for states and local labor markets for a number of years.

By matching each school district with the corresponding labor market, CWI estimates for each school district in the United States can be generated. For urban school districts, this would be the CWI for the corresponding metropolitan area. For rural districts, this would be the CWI for the corresponding census “place of work”. A census place of work is a cluster of counties or census-defined places that contains at least 100,000 persons. All counties—and therefore all districts—in a census place of work area have the same CWI.

Unlike the RPP information produced by BEA the comparable wage index data has been estimated not only for all of the school districts in the state but also for charter school and regional cooperative districts. Table 3 shows the results for a select number of districts presented for expository purposes only. These are not intended to focus on any specific district. More detail on district differences is presented in section five.

[8] Appendix A contains more detail on the construction of the CWI

Table 3
Comparable Price Indexes For Certain school Districts
1997 to 2005

Dist No.	Dist. Name	1997	1998	1999	2000	2001	2002	2003	2004	2005
1	Aitkin	0.775	0.809	0.870	0.928	0.950	0.996	1.029	1.061	1.089
1	Minneapolis	0.941	0.975	1.032	1.095	1.134	1.201	1.232	1.274	1.305
88	New Ulm	0.714	0.745	0.802	0.855	0.875	0.918	0.948	0.977	1.004
91	Barnum	0.803	0.839	0.867	0.920	0.959	1.011	1.041	1.079	1.120
252	Cannon Falls	0.786	0.821	0.883	0.941	0.964	1.011	1.044	1.076	1.105
2142	St. Louis County	0.803	0.839	0.867	0.920	0.959	1.011	1.041	1.079	1.120
2342	West Central Area	0.699	0.729	0.785	0.837	0.857	0.898	0.928	0.956	0.983
2358	Karlstad-Strandq	0.742	0.775	0.809	0.842	0.872	0.923	0.942	0.987	1.013
	State Average	0.876	0.911	0.967	1.027	1.062	1.120	1.153	1.192	1.223

The results in Table 3 are not unexpected. Indexes in all areas increase over time as prices typically do. The Minneapolis school district index is the highest of the group shown although comparisons with other districts state may result in a different pattern. Inflation, as measured by the index between 1997 and 2005, is second lowest in Minneapolis compared to other districts in the group and below the state average.

These two measures, the RPP and the CWI, are an important source of information on relative cost of living differences. Do they tell the same story about Minnesota? In general terms the answer is yes. Table 4 shows a comparison between the two indexes for published geographic areas.

Table 4
A Comparison of RPP and CWI by Area

	RPP		**CWI**	
Region	**Level**	**Relative to State Average**	**Level**	**Relative to State Average**
Duluth-Superior	76.5	0.785	1.1197	0.916
Fargo-Moorhead	87.6	0.898	1.0739	0.878
La Crosse-Winona	88.5	0.908	1.1568	0.946
Twin Cities	105.9	1.086	1.3054	1.068
Rochester	95.3	0.977	1.2901	1.055
St Cloud	89.8	0.921	1.1616	0.950
State Average	97.5		1.2225	

Costs are higher in areas one would expect. Urban settings such as the Twin Cities or Rochester have higher indexes than other areas. The RPP indicates the metropolitan regions have much higher costs than the non-metropolitan areas. But this consistency does not hold in the analysis of patterns across all districts shown in Table 5. [9] For example, the range for the RPP is 8.6 % above the state average to 21% below for a total spread of almost 30 points. The CWI is tighter at 6.8% above to 18% below the average. When one takes the ratio of CWI to RPP, 89 districts are above the number one and 252 are below. Of all districts, 224 have absolute differences greater than 3.5% between the two measures. The greatest difference is about 14%. Perhaps this is not surprising given the fact that the geographic distribution of the RPP was synthesized from BEA data through artificial interpolation. Finally, the differences tend to be larger in non-metropolitan parts of the state. This reflects lower populations and less data upon which to develop these kinds of measures. This suggests that while the RPP and CWI follow similar patterns, important inconsistencies between the two measures remain.

[9] Each index is standardized to the state average. This makes direct comparisons possible.

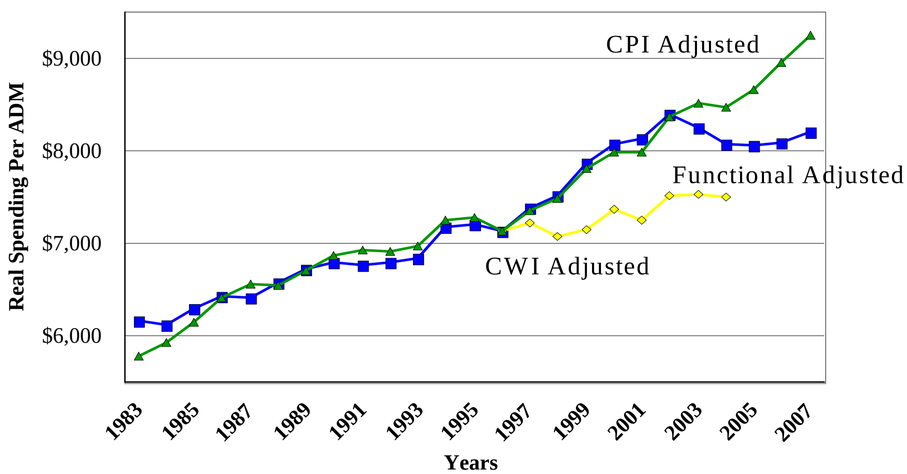
Section Four: Statewide Education Spending Adjusted for Prices

Section Two presented comparisons of national price indexes for different spending functions. Other indexes are typically used to measure real spending for a certain geographic area, the most common being the consumer price index (CPI). The CPI is often used as a default index although it measures price changes in consumer purchases, not costs for school districts. But in keeping with the discussion of cost-of-living indexes, the CPI is one measure that could be used. The goal of this section is to provide an analysis of state-wide education revenue trends adjusted for price changes.

Chart 2 shows spending per student in the state adjusted by three different three price indexes. The first is the national price index for the education function discussed above. The second is the consumer price index for the Twin Cities areas. Revenue per pupil data is available from the Minnesota Department of Education from 1983 to 2007. These first two indexes are applied to that data. The third is the CWI that has been estimated by NCES at both a regional and a state-wide level. The state-wide index is available from 1997 through 2005.[10] The CWI index is used to analyze real changes in school district operating revenue over this period.[11]

Total per-student revenue obtained from the Minnesota Department of Education adjusted for inflation is shown in Chart 2. The variables are labeled to indicate the index used to deflate the revenue figures.

Chart 2
Total Education Spending Adjusted by Different Inflation Measures



There are three important observations suggested by the data. First, the national functional index and the Twin Cities CPI consistently reflect similar levels in inflation between 1983 and 2002. This is indicated by the adjusted per pupil spending data that is fairly close for this period. From

[10] Data for 2006 and 2007 has been developed and should be released by NCES sometime in May, 2009. The state-wide index is a weighted average of the regional indexes.
[11] The three indexes have been rebased to 1997 to establish a common reference point.

2002 on there is a dramatic change between the two. The functional index shows much higher inflation rates, i.e., lower real spending per student, than the consumer price index data. Second, real per student spending in Minnesota shows a fairly consistent pattern between 1983 and 2007. There are some periods where the change is fairly flat such as the early 1990's followed by growth in 1994 and 1995. From 1996 to 2002 this real spending per pupil rose steadily. However, the divergence in the price indexes indicates a very different pattern in real spending over the last five years. The third point is reflected in real spending measured by the CWI. Unfortunately this is available for a much shorter period of time. However, from 1997 to 2005 this index indicates much lower real spending per student in Minnesota than the other two indexes. The CWI shows almost stagnant growth in real spending over this time period. If this result is accurate then the state has provided very little growth in education revenue over this period.

Section Five: School District Revenue Adjusted for Prices

The first four sections of this report have described state funding for education and national and regional price indexes. The main focus of the report is the application of the regional price indexes to school district revenue data. This section provides that analysis.

Two regional price indices have been discussed: the Regional Price Parity index provided by BEA and the Comparable Wage Index provided by NCES. The RPP and the CWI measure the same economic phenomena but were independently developed through different methods. Estimates of regional prices depend on a number of assumptions and estimation techniques. As discussed in section three the two generally reflect expected differences among regions in the state. There is one common year between the two indexes- 2005. Both indexes are shown in Appendix C but only the CWI is used to adjust the school district data. The CWI has a stronger data underpinnings justifying this choice.[12] The CWI from 2005, the latest available, is used to adjust school district spending data for 2008. The analysis in this section is of relative differences across school districts, not real changes across time. Applying the 2005 cost of living index to 2008 works only under the assumption that the relative price relationship between districts has not changed between the two years. Put another way, this assumes that inflation between the two years has been the same in each school district. While this is not likely, the relative differences in inflation rates among districts in the two years will not materially change the basic findings.[13] School year data for 2008 was chosen since it reflects the most current data available. Pupil counts and spending for 2009 is still subject to adjustment. Using data for 2005, 2006 or 2007 would not reflect referendum revenue or other policy changes in formulas that have occurred.

A careful discussion of the revenue data analyzed is important. The general education formula used by the state is quite complicated and contains a number of different components. For our analytical purposes they are put into four different categories. The first and largest is the basic revenue. Basic revenue is an equal amount- the basic allowance- provided to districts for each student in that district. The basic allowance was set at $5,704 for 2008. The allowance reflects the average cost of educating an average student across the state. Whether the amount is adequate is a point of contention. Basic revenue reflects different student weights that are assigned to the total number of kindergarten, elementary and secondary students in a district. These weights are very important and drive revenue differences based on local student composition. Students are weighted differently for revenue purposes under the assumption that it costs different amounts to educate students at different grades. However, there is no rigorous cost analysis that serves as a base for these differences.

The second revenue category is defined by student input differences. The two main components are compensatory revenue targeted to students from low income families and Limited English Proficiency revenue targeted to students from families in which English is not a first language.

[12] Taylor and Fowler compare the CWI for the state of Florida with the cost of living index separately estimated by the state. The correlation coefficient between the two is about .65. While this leaves some room for dramatic differences in some geographic areas, this is a strong figure for cross section data.
[13] One could compare the relationships between 1997 and 2005 to test this assumption.

The third category includes revenue for administrative input differences. This includes sparsity and operating capital related formulas. Sparsity revenue was established under the notion that small school districts could not reach certain economies of scale to offer needed courses and thus faced higher relative operating costs. A part of the capital formula is constant across districts but a portion does recognize the different age of buildings across the state. As with student weights there is no rigorous cost analysis that serves as a base for these differences.

The fourth category includes the remaining components of the revenue sources that are not related to identified cost differences but reflect local choices, legacy costs or spending or policy responses to perceived differences. This category includes referendum revenue, equity revenue transition revenue, gifted and talented revenue, training and experience revenue and Q-comp funding. The choice of these components is open to some debate. Some may argue that gifted and talented revenue reflects additional costs to educate these children in a district. However, the formula has no cost component. It simply provides $12 for every student in a district regardless of actual costs. This funding simply supplants other revenue the district may have been spending in this area. As with other components, the lack of rigorous cost analysis is potentially problematic

The analysis examines referendum revenue and the sum of the other components in the fourth category separately. The key question is how much of this revenue is needed to account for cost of living differences and how much reflects real resources for programming. Appendix C shows revenue and related price analysis for each district in the state for 2008. There are three different sections in the table. The first shows the two different cost indexes for each district. This section shows the index level and the level for the district relative to the state average. For example, in Aitkin the regional purchase parity index is 84.8, an amount that is 87 % of the state average. The CWI is 1.0894 which is 89% of the state average. For this district the two are fairly close and indicate that the cost of living in this district is roughly 11 to 13 percent lower than the state average. In other districts the two indexes relative to the state average may be quite different.

The second section applies the CWI to referendum revenue. The section presents referendum revenue per pupil and separates out the amount needed for cost of living differences above the state average and the remaining portion that is available for real program spending. The portion for cost of living difference reflects the fact that a district with a higher than average cost of education (as measured by the cost of living index) needs additional revenue above that provided by the basic revenue formula. To determine this amount the percent cost difference is multiplied by the basic allowance for 2008. For example, in Minneapolis the cost of living is 6.8% above the state average. This means the district needs an additional $344 per student simply to buy the same services as districts with average or below average costs (6.8% times $5,074). The district had $690 in referendum revenue per student in 2008. This left $346 per student to purchase real program services. This is shown in the third column in that section. In some districts the amount of referendum authority in place is lower than the amount needed to meet cost differences. This is reflected in negative numbers in column three.

The fourth column shows an important result suggested by this cost analysis. This column increases referendum revenue per pupil for districts with below average cost of living indexes. In Detroit Lakes the referendum revenue is $308 per pupil. None of this is needed to cover cost differences since the district cost of living is 14.5% below the state average. But this means that purchasing power in Detroit Lakes is higher by this amount. The referendum revenue reflects $360 in purchasing power or $52 more than the authorized level. Discussions about relative cost differences usually focus on above average costs. However, there are important implications for the evaluation of revenue in districts with below costs of living.

The third section in the table adds the other components indicated above to referendum revenue. The CWI is applied to this revenue total to show how much is needed to cover cost differences and how much is left for real program spending.

The data in the table reflects the application of regional price indexes for education to certain revenue components to assess how much revenue is needed to cover cost differences and how much is remaining to provide real program spending. No further analysis is presented; the data stands on its own.

Conclusions

This report has presented data from the Department of Management and Budget indicating that the share of state spending dedicated to K-12 education increased between 1979 and 2008. It is important that comparisons are made both in the general fund, the state's largest operating fund, and all other operating funds. Inflation in K-12 education at the national levels when compared to other functions of state and local government tends to be higher than average over the last 47 years. If resources do not keep up with inflation, real services suffer and there are important implications for the economy. A number of approaches have been undertaken to measure inflation geographically for education. These range from complex cost-of-education indexes to cost of living indexes. This report uses two recently produced cost of living indexes available from national sources to evaluate K-12 spending in Minnesota.

This study reveals important trends in real cost differences among school districts in Minnesota. The use of the CWI is justified for a number of reasons. First, it is well established theoretically in the context of labor market analysis. Second, it uses nationally developed data sources to provide the estimates. Third, it was produced for the NCES, an important part of the department of education. The cost-of-living estimates are applied to certain revenue components that reflect differences in resources among districts in the state. This application is not meant to suggest any changes in funding policy on the part of the state legislature. It is meant to spur real conversations about real cost differences faced by school districts across the state.

It is important to note that cost of living may reflect only one of many cost differences faced by school districts or reflected in education funding formulas. The general education formula includes revenue components that adjust for student input differences (compensatory, LEP), capital facility differences, and operating scale differences (sparsity, transportation sparsity) among others. These formulas allocate hundreds of millions of dollars across the state to school districts under an assumption that they fairly reflect cost differences. However, the reality is that the allowances have been arbitrarily established often in response to political urgencies. The state has never undertaken a rigorous analysis of real cost differences school districts must deal with on a daily basis, a fact noted in a number of places in the text. The data in this report suggest that the state undertake serious analysis of these differences and that they be reflected in revenue made available for students.

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Appendix A

This appendix explains in more detail the construction of the regional price parity index and the comparable wage index. Interested readers should review the source documents for a more thorough discussion.[14]

The Regional Price Parity Index from BEA

BEA begins the estimation of the RPP with the individual price observations used in the CPI for 38 different major metropolitan areas. The CPI survey includes price quotes for hundreds of consumer goods and services, ranging from new cars to haircuts as well as observations on rent price levels for each area. Statistical models are then estimated to take into account differences in the characteristics of the items. These individual price levels were then aggregated into major categories, such as food and beverages, and into an overall price level for consumption.

To extend the study beyond these 38 (the Twin Cities is one of these) areas to other counties, mainly nonmetropolitan ones, required some indication of their price levels. As with other regional indexes, BEA relied on average housing cost data published by the Census Bureau. The Bureau took the analysis an important step further in accounting for different types of housing stock across the country with hedonic regression analysis. BLS uses this approach to make adjustments for differences in the characteristics of items in the CPI. Data for this purpose comes from the American Community Survey that contains detailed information on housing characteristics for all counties with more than 65,000 people. Hedonic regressions reflect differences in characteristics of the rented and owned housing stock in each state, including the number of rooms, bathrooms, age and type of housing unit, as well as their mortgage status. This was done separately for renters and owners, and the final housing costs levels are an average of the two, weighted by the proportion of owners and renters in each county.

The final step was to model the statistical relationship between the price levels directly estimated from the CPI and the housing cost levels estimated from the Census Bureau. The areas range widely in terms of their geographic size and population, from Los Angeles and New York to smaller ones such as Anchorage, Milwaukee, and Kansas City. There is a very strong positive relationship between price levels and housing cost levels, enabling the study to estimate the model with some confidence.

The 38 areas were decomposed into their 425 counties and estimates for these smaller units were controlled so that the price level of each area equaled the population weighted average price level of its counties. A second model was then created to obtain the expected price levels of the nonmetropolitan counties, given the estimates of the metropolitan areas, plus the information on housing costs for both metropolitan and nonmetropolitan counties totaling over 3,000 observations. This second, larger model also takes into account the fact that many counties are adjacent to each other, have similar housing costs, and are therefore more likely to have similar price levels.

[14] Much of this explanation is summarized from the source documents and in some cases taken verbatim. These are documents in the public realm and full attribution is recognized.

Comparable Wage Index from NCES

<u>Previous Cost Adjustments</u>

Prior geographic cost adjustment work published by NCES used sophisticated statistical modeling of data on teacher salaries and school district characteristics. Cost analyses based on education data are directly related to school district costs and can be used to make adjustments for a wide array of district-level cost factors, such as school district size or student demographics. To be accurate the indexes must distinguish between costs that are outside the control of the school district. This categorization is both complicated and controversial. Important characteristics such as differences in teacher quality are not included. By using school district expenditure data the resulting estimates of higher costs may simply reflect inefficiency and not cost minimization. Finally, at the national level, the main source of data for constructing nationwide estimates of geographic cost variation - the School and Staffing Survey - is only available from NCES approximately every four years. Staffing data at the state level is usually available and could be used for state specific indexes.

The comparable wage index at the state level using data on the earnings of college graduates from the Current Population Survey (CPS) was developed by Goldhaber as an alternative method. His approach did not provide estimates below the state level. Within-state-variation in cost indexes is an important component limiting the usefulness for the purpose of making geographic cost adjustments. Taylor and Fowler have prepared alternative indexes of comparable wages to the labor market level using a Comparable Wage Index (CWI). The basic premise of a CWI is that all types of workers—including teachers—demand higher wages in areas with a higher cost of living, a lack of amenities, or simply negative conditions. The CWI reflects systematic, regional variations in the salaries of college graduates who are not educators. The analysis of non-educators must only include those who are similar to educators in terms of age, educational background, and tastes for local amenities. Intuitively, if accountants in the Atlanta metro area are paid 5 percent more than the national average accounting wage, Atlanta engineers are paid 5 percent more than the national average engineering wage, Atlanta nurses are paid 5 percent more than the national average nursing wage, and so on, then the CWI predicts that Atlanta teachers should also be paid 5 percent more than the national average teacher wage.

Taylor and Fowler start with occupational comparisons from the 2000 U.S. census. The 2000 census provides data that can be used to estimate a baseline comparable wage analysis. The 5-Percent Individual Public Use Micro-data Sample contains information on the earnings, occupation, place of work, and demographic characteristics of individual workers throughout the United States. These demographic variables allow for the control of important characteristics and avoid erroneous conclusions about wage levels. By restricting the analysis to college graduates, a wage index for non-educators professionals most comparable to teachers can be developed.

Regression analysis of the 2000 census yields the baseline estimates of the CWI. The dependent variable is the log of annual wage and salary earnings for non-educators. The independent variables are age, gender, race, educational attainment, amount of time worked, occupation, and industry of each individual in the national sample. There is also a variable indicating each labor market area. Some potentially important worker and employer characteristics (such as union participation and firm size) are not available in the public use sample. If these characteristics vary systematically by occupation or industry, their influence on wages will be captured by the occupational and industrial indicators. However, to the extent that deviations from industry and occupational norms are location specific, they could influence the wage level estimates. The extent of such influence is unknown.

Labor market indicators capture the effect on wages of all market-specific characteristics, including the price of housing, the crime rate, and the climate. Because the CWI is an index of wage levels outside of education, it would not be appropriate to include in the model aggregate measures of school characteristics like school district size or student demographics. However, to the extent that those factors differ from one labor market to another, some of their effect on the prevailing wage level will be captured as a locational amenity by the labor market indicators. All labor markets are based on "place-of-work areas" defined by the Census Bureau. Census place-of-work areas are geographic regions designed to contain at least 100,000 persons. The place-of-work areas do not cross state boundaries and generally follow the boundaries of county groups, single counties, or census-defined places. Counties in sparsely-populated parts of a state are clustered together into a single Census place-of-work area.

To ensure that the sample represents non-educators who are directly comparable to teachers, the estimation excludes a number of worker classifications. Because the sample is restricted to non-educators, anyone who has a teaching occupation or who is employed in the elementary and secondary education industry is excluded. Workers without a college degree are excluded because they are not directly comparable with teachers. Self-employed workers are excluded because their reported earnings may not represent the market value of their time. Workers who work less than half-time or for less than $5,000 per year are excluded because such part-time employees are not directly comparable to teachers. Finally, individuals employed outside the United States are excluded because their earnings may represent compensation for foreign travel or other working conditions not faced by domestic workers. After these exclusions, the sample retains 1,053,184 employed, college graduates drawn from 460 occupations and 256 industries.

Arguably, some of the 460 occupations included in the analysis are more directly comparable to teaching than others. Other research has identified 16 occupations that are particularly similar to teaching based on the skills required to do the job. One might consider restricting the CWI sample to a carefully selected subset of the occupations held by college graduates.

The model estimated by Taylor and Fowler conforms to reasonable expectations about labor markets. Wage and salary earnings increase with the amount of time worked and the age of the worker (a rough proxy for experience). Persons with advanced degrees earn systematically more than persons with bachelor's degrees. Women earn less than men of comparable age and educational attainment, possibly because age is a better indicator of experience for men than for women. Whites earn systematically more than apparently comparable individuals from most other racial groups.

The national average predicted wage, which is an employment-weighted average of local area predicted wages, is $47,836 per year in 1999 dollars. Dividing each local wage prediction by this national average yields the CWI. A state's CWI is a weighted average of the local wages within its borders. The resulting distribution of index values generally corresponds to reasonable expectations. Almost without exception, the labor markets with the lowest CWI are located in rural areas. The labor markets with the highest CWI are generally in major urban areas. The wage level in New York City (the market with the highest CWI) is 77 percent higher than the wage level in rural Idaho (the market with the lowest CWI). Interestingly, variations within states are an important part of the cost variations detected by the CWI. Nearly half of the total variation in the baseline CWI (44 percent) comes from variations within states. The large amount of within-state variation suggests that the CWI is a helpful extension of Goldhaber's state-level index. Since the CWI also varies significantly within states, it may prove a particularly useful tool for analyses of school finance adequacy and equity.

By matching each school district with the corresponding labor market, the research methodology can support CWI estimates for each school district in the United States. For urban school districts, this would be the CWI for the corresponding metropolitan area. For rural districts, this would be the CWI for the corresponding census "place of work". A census place of work is a cluster of counties or census-defined places that contains at least 100,000 persons. All counties—and therefore all districts—in a census place of work area have the same CWI.

Extending the Baseline CWI

The estimates are extended both backward and forward in time with annual Occupational Employment Statistics (OES) survey data from the Bureau of Labor Statistics (BLS). This is a very detailed data set that contains average annual earnings by occupation for states and metropolitan areas from about 400,000 nonfarm businesses. Combining the census with the OES makes it possible to have yearly CWI estimates for states and local labor markets for each year between 1997 and 2005. The data is updated each May by BLS.

The OES survey categorizes workers into 770 detailed occupations but does not provide any demographic information. Wage growth for occupations from year to year is used to adjust the census based estimates of wage levels. This adjustment process is valid as long as the demographic profiles of states and metropolitan areas are relatively stable from one year to the next. The evidence suggests that demographic profiles are remarkably stable over time, so any bias in the growth rates induced by demographic shifts should be modest. Among metropolitan areas included in the census's American Community Survey (ACS), there is a 0.968 correlation between the share of the adult population with a bachelor's degree in 2002 and the share with a bachelor's degree in 2004. Even across the decade between censuses, there is a 0.959 correlation between the share of the adult population with a bachelor's degree in a metropolitan area in 1990 and the same indicator in 2000. Similarly, there is a 0.942 correlation between share of the working-age population that is under 30 in 1990 and the share under 30 in 2000. Although the bias arising from a lack of demographic information in the OES data should be modest, it will tend to cumulate over time. Therefore, we have more confidence in the estimates within a few years on either side of the 1999 census than we have in estimates further away in time. As the Bureau of the Census expands the coverage of the ACS, it may be desirable to use it to update the CWI rather than the OES.

The first step in extending the CWI is generating OES-based estimates of the annual wage level in each labor market. The OES provides estimates of average annual earnings and employment by occupation for states and metropolitan areas from 1997 through 2005. To allow for both occupation-specific and location-specific shifts in wage levels over time, each year is also analyzed separately. The second step is to calculate the growth rate for wages in each state and metropolitan area from the OES-based estimates of wage levels, and to adjust the baseline CWI accordingly. One advantage to extending the baseline CWI with the OES is that it generates a very timely index of school-district labor cost. The annual OES estimates are generated with only a one-year lag. Together, census and OES data can be used to support a viable CWI, which is the dataset employed in this study that NCES will release for use by the public and education finance researchers as a geographically based, cost-of-living adjustment. The resulting panel of index values measures the wage level for college graduates in all parts of the United States for the years 1997 through 2005.

The CWI methodology offers many advantages over the previous NCES geographic cost adjustment methodologies, including relative simplicity, timeliness, and intrastate variations in labor costs that are undeniably outside school district control. However, the CWI is not designed to detect cost variations within labor markets. Thus, all the school districts in the Twin City metro area would have the same CWI cost index.

Appendix B
RPP County Interpolation Methodology

The interpolation was done by first establishing centroid latitude and longitude coordinates for each of the counties in Minnesota. These centroid points were given the value of the Metropolitan Statistical Area (MSA) they were located in. If no data was established in *Research Spotlight: Regional Price Parity - Comparing Price Level Differences Across Geographic Areas* the county centroid was deleted. The points with data were run through an interpolation using ArcGIS Spatial Analyst. The interpolation method used was the Spline Tension Method with a weight of .1 and 27 points. The interpolation was run on both the 2005 Regional Price Parity figures as well as the 2006 figures. This created two raster data files for most of Minnesota with areas of Northern Minnesota without coverage. Zonal Statistics were gathered on all Minnesota counties using ArcGIS Spatial Analyst and the mean was calculated for 2005 and 2006 Regional Price Parity.

MSA's Used:
Duluth, MN-WI (MSA) (20260)

- Carlton County, MN
- St. Louis County, MN
- Douglas County, WI

Fargo, ND-MN (MSA) (22020)

- Clay County, MN
- Cass County, ND

Grand Forks, ND-MN (MSA) (24220)

- Polk County, MN
- Grand Forks County, ND

La Crosse, WI-MN (MSA) (29100)

- Houston County, MN
- La Crosse County, WI

Minneapolis – St. Paul – Bloomington, MN-WI (MSA) (33460)

- Anoka County, MN
- Carver County, MN
- Chisago County, MN
- Dakota County, MN
- Hennepin County, MN
- Isanti County, MN
- Ramsey County, MN
- Scott County, MN
- Sherburne County, MN
- Washington County, MN
- Wright County, MN

Rochester, MN (MSA) (40340)

- Dodge County, MN
- Olmsted County, MN
- Wabasha County, MN

Sioux Falls, SD (MSA) (43620)

- Lincoln County, SD
- McCook County, SD
- Minnehaha County, SD
- Turner County, SD

St. Cloud, MN (MSA)

- Stearns County, MN

Appendix C

Cost and Revenue Analysis for Minnesota School Districts

			Cost indexes for 2005				Referendum Analysis					Other Component Analysis		
No.	District Name	AMCPU	RPP	Relative to State Average	CWI	Relative to State Average	Referendum per Pupil	CWI Relative Cost Difference	Inflationary Referendum	Real Program Referendum	Adjusted Real Program Referendum	Referendum plus other Non-cost Components	Inflationary Amount	Real Program Amount
1	AITKIN	1,505	84.8	87.0%	1.0894	89.1%	0	-10.9%	-	0	0	252	-	252
1	MINNEAPOLIS	39,503	105.9	108.6%	1.3054	106.8%	690	6.8%	344	346	346	1,058	344	714
2	HILL CITY	369	84.8	87.0%	1.0894	89.1%	-	-10.9%	-	-	-	175	-	175
4	MCGREGOR	457	84.8	87.0%	1.0894	89.1%	1	-10.9%	-	1	1	239	-	239
6	SOUTH ST. PAUL	3,847	105.9	108.6%	1.3054	106.8%	784	6.8%	344	440	440	1,097	344	753
11	ANOKA-HENNEPIN	46,703	105.9	108.6%	1.3054	106.8%	733	6.8%	344	389	389	891	344	547
12	CENTENNIAL	8,040	105.9	108.6%	1.3054	106.8%	659	6.8%	344	315	315	959	344	615
13	COLUMBIA HEIGHTS	3,415	105.9	108.6%	1.3054	106.8%	987	6.8%	344	643	643	1,097	344	753
14	FRIDLEY	3,103	105.9	108.6%	1.3054	106.8%	873	6.8%	344	529	529	1,217	344	873
15	ST. FRANCIS	6,575	105.9	108.6%	1.3054	106.8%	433	6.8%	344	89	89	830	344	486
16	SPRING LAKE PARK	5,338	105.9	108.6%	1.3054	106.8%	830	6.8%	344	486	486	997	344	653
22	DETROIT LAKES	3,082	84.2	86.4%	1.0449	85.5%	308	-14.5%	-	308	360	449	-	449
23	FRAZEE	1,111	84.2	86.4%	1.0449	85.5%	-	-14.5%	-	-	-	179	-	179
25	PINE POINT	70	84.2	86.4%	1.0449	85.5%	-	-14.5%	-	-	-	334	-	334
31	BEMIDJI	5,378	75.5	77.4%	1.0449	85.5%	551	-14.5%	-	551	645	672	-	672
32	BLACKDUCK	770	75.5	77.4%	1.0449	85.5%	1	-14.5%	-	1	1	265	-	265
36	KELLIHER	279	75.5	77.4%	1.0449	85.5%	41	-14.5%	-	41	48	348	-	348
38	RED LAKE	1,495	75.5	77.4%	1.0449	85.5%	1,505	-14.5%	-	1,505	1,761	1,778	-	1,778
47	SAUK RAPIDS	4,257	99.5	102.1%	1.1616	95.0%	-	-5.0%	-	-	-	101	-	101
51	FOLEY	1,929	99.5	102.1%	1.1616	95.0%	227	-5.0%	-	227	239	372	-	372
62	ORTONVILLE	522	85	87.2%	0.9825	80.4%	845	-19.6%	-	845	1,051	951	-	951
75	ST. CLAIR	719	98.6	101.1%	1.0516	86.0%	-	-14.0%	-	-	-	131	-	131
77	MANKATO	8,179	98.6	101.1%	1.0516	86.0%	439	-14.0%	-	439	510	591	-	591
81	COMFREY	187	95.5	97.9%	1.0035	82.1%	1,231	-17.9%	-	1,231	1,500	1,412	-	1,412
84	SLEEPY EYE	739	95.5	97.9%	1.0035	82.1%	-	-17.9%	-	-	-	149	-	149
85	SPRINGFIELD	699	95.5	97.9%	1.0035	82.1%	551	-17.9%	-	551	671	683	-	683
88	NEW ULM	2,436	95.5	97.9%	1.0035	82.1%	459	-17.9%	-	459	560	595	-	595
91	BARNUM	811	78.5	80.5%	1.1197	91.6%	192	-8.4%	-	192	210	344	-	344
93	CARLTON	721	78.5	80.5%	1.1197	91.6%	639	-8.4%	-	639	698	767	-	767
94	CLOQUET	2,970	78.5	80.5%	1.1197	91.6%	88	-8.4%	-	88	96	232	-	232
95	CROMWELL	370	78.5	80.5%	1.1197	91.6%	-	-8.4%	-	-	-	165	-	165
97	MOOSE LAKE	854	78.5	80.5%	1.1197	91.6%	236	-8.4%	-	236	257	383	-	383
99	ESKO	1,304	78.5	80.5%	1.1197	91.6%	1	-8.4%	-	1	1	207	-	207
100	WRENSHALL	384	78.5	80.5%	1.1197	91.6%	-	-8.4%	-	-	-	149	-	149
108	NORWOOD	1,234	105.9	108.6%	1.3054	106.8%	534	6.8%	344	190	190	691	344	347
110	WACONIA	3,413	105.9	108.6%	1.3054	106.8%	541	6.8%	344	196	196	683	344	339
111	WATERTOWN-MAYER	1,879	105.9	108.6%	1.3054	106.8%	236	6.8%	344	(108)	-	401	344	57
112	CHASKA	10,231	105.9	108.6%	1.3054	106.8%	1,084	6.8%	344	740	740	1,191	344	847
113	WALKER-AKELEY	1,036	78.6	80.6%	1.0367	84.8%	-	-15.2%	-	-	-	180	-	180
115	CASS LAKE	1,188	78.6	80.6%	1.0367	84.8%	-	-15.2%	-	-	-	465	-	465
116	PILLAGER	891	78.6	80.6%	1.0367	84.8%	-	-15.2%	-	-	-	196	-	196
118	REMER	518	78.6	80.6%	1.0367	84.8%	406	-15.2%	-	406	479	533	-	533
129	MONTEVIDEO	1,767	86.8	89.0%	1.0035	82.1%	454	-17.9%	-	454	553	586	-	586
138	NORTH BRANCH	4,405	105.9	108.6%	1.3054	106.8%	-	6.8%	344	(344)	-	111	344	(233)
139	RUSH CITY	1,075	105.9	108.6%	1.3054	106.8%	-	6.8%	344	(344)	-	139	344	(205)
146	BARNESVILLE	927	87.6	89.8%	1.0739	87.8%	950	-12.2%	-	950	1,082	1,062	-	1,062

Cost and Revenue Analysis for Minnesota School Districts

No.	District Name	AMCPU	Cost indexes for 2005: RPP	Cost indexes for 2005: Relative to State Average	Cost indexes for 2005: CWI	Cost indexes for 2005: Relative to State Average	Referendum Analysis: Referendum per Pupil	Referendum Analysis: CWI Relative Cost Difference	Referendum Analysis: Inflationary Referendum	Referendum Analysis: Real Program Referendum	Referendum Analysis: Adjusted Real Program Referendum	Other Component Analysis: Referendum plus other Non-cost Components	Other Component Analysis: Inflationary Amount	Other Component Analysis: Real Program Amount
150	HAWLEY	1,053	87.6	89.8%	1.0739	87.8%	449	-12.2%	-	449	511	574	-	574
152	MOORHEAD	6,167	87.6	89.8%	1.0739	87.8%	41	-12.2%	-	41	47	251	-	251
162	BAGLEY	1,181	80.8	82.9%	1.0449	85.5%	-	-14.5%	-	-	-	183	-	183
166	COOK COUNTY	684	78.5	80.5%	1.0367	84.8%	-	-15.2%	-	-	-	147	-	147
173	MOUNTAIN LAKE	580	93.2	95.6%	0.9943	81.3%	874	-18.7%	-	874	1,075	979	-	979
177	WINDOM	1,121	93.2	95.6%	0.9943	81.3%	398	-18.7%	-	398	489	525	-	525
181	BRAINERD	8,006	85.4	87.6%	1.0894	89.1%	193	-10.9%	-	193	216	571	-	571
182	CROSBY	1,412	85.4	87.6%	1.0894	89.1%	488	-10.9%	-	488	548	714	-	714
186	PEQUOT LAKES	1,806	85.4	87.6%	1.0894	89.1%	1	-10.9%	-	1	1	202	-	202
191	BURNSVILLE	11,891	105.9	108.6%	1.3054	106.8%	873	6.8%	344	529	529	1,250	344	906
192	FARMINGTON	7,100	105.9	108.6%	1.3054	106.8%	185	6.8%	344	(159)	-	582	344	237
194	LAKEVILLE	12,938	105.9	108.6%	1.3054	106.8%	856	6.8%	344	512	512	977	344	633
195	RANDOLPH	609	105.9	108.6%	1.3054	106.8%	442	6.8%	344	98	98	591	344	247
196	ROSEMOUNT-APPLE	32,105	105.9	108.6%	1.3054	106.8%	1,047	6.8%	344	703	703	1,391	344	1,047
197	WEST ST. PAUL	5,220	105.9	108.6%	1.3054	106.8%	940	6.8%	344	596	596	1,054	344	710
199	INVER GROVE	4,375	105.9	108.6%	1.3054	106.8%	899	6.8%	344	555	555	1,028	344	684
200	HASTINGS	5,820	105.9	108.6%	1.3054	106.8%	1,254	6.8%	344	910	910	1,349	344	1,005
203	HAYFIELD	991	95.3	97.7%	1.2901	105.5%	403	5.5%	281	122	122	530	281	249
204	KASSON-MANTORVIL	2,340	95.3	97.7%	1.2901	105.5%	347	5.5%	281	66	66	476	281	196
206	ALEXANDRIA	4,648	83.6	85.7%	1.006	82.3%	402	-17.7%	-	402	489	572	-	572
207	BRANDON	348	83.6	85.7%	1.006	82.3%	452	-17.7%	-	452	550	808	-	808
208	EVANSVILLE	203	83.6	85.7%	1.006	82.3%	1,892	-17.7%	-	1,892	2,299	1,950	-	1,950
213	OSAKIS	862	83.6	85.7%	1.006	82.3%	-	-17.7%	-	-	-	124	-	124
227	CHATFIELD	1,023	95.3	97.7%	1.2901	105.5%	349	5.5%	281	69	69	479	281	198
229	LANESBORO	418	91.3	93.6%	1.1091	90.7%	230	-9.3%	-	230	254	401	-	401
238	MABEL-CANTON	376	91.3	93.6%	1.1091	90.7%	1,259	-9.3%	-	1,259	1,388	1,357	-	1,357
239	RUSHFORD-PETERSO	748	91.3	93.6%	1.1091	90.7%	863	-9.3%	-	863	952	1,189	-	1,189
241	ALBERT LEA	3,880	94.5	96.9%	1.0782	88.2%	517	-11.8%	-	517	586	921	-	921
242	ALDEN	495	94.5	96.9%	1.0782	88.2%	316	-11.8%	-	316	359	662	-	662
252	CANNON FALLS	1,503	100.1	102.7%	1.1053	90.4%	514	-9.6%	-	514	569	636	-	636
253	GOODHUE	745	100.1	102.7%	1.1053	90.4%	107	-9.6%	-	107	118	261	-	261
255	PINE ISLAND	1,434	100.1	102.7%	1.1053	90.4%	446	-9.6%	-	446	493	571	-	571
256	RED WING	3,328	100.1	102.7%	1.1053	90.4%	623	-9.6%	-	623	689	775	-	775
261	ASHBY	312	85.3	87.5%	0.9825	80.4%	-	-19.6%	-	-	-	135	-	135
264	HERMAN-NORCROSS	134	85.3	87.5%	0.9825	80.4%	2,037	-19.6%	-	2,037	2,535	2,135	-	2,135
270	HOPKINS	9,053	105.9	108.6%	1.3054	106.8%	1,488	6.8%	344	1,143	1,143	1,776	344	1,432
271	BLOOMINGTON	12,137	105.9	108.6%	1.3054	106.8%	1,001	6.8%	344	657	657	1,110	344	766
272	EDEN PRAIRIE	11,446	105.9	108.6%	1.3054	106.8%	1,199	6.8%	344	855	855	1,523	344	1,179
273	EDINA	8,943	105.9	108.6%	1.3054	106.8%	1,311	6.8%	344	966	966	1,397	344	1,053
276	MINNETONKA	9,228	105.9	108.6%	1.3054	106.8%	1,320	6.8%	344	976	976	1,627	344	1,283
277	WESTONKA	2,628	105.9	108.6%	1.3054	106.8%	1,241	6.8%	344	897	897	1,337	344	993
278	ORONO	3,082	105.9	108.6%	1.3054	106.8%	1,186	6.8%	344	842	842	1,504	344	1,160
279	OSSEO	25,308	105.9	108.6%	1.3054	106.8%	904	6.8%	344	560	560	1,278	344	934
280	RICHFIELD	4,765	105.9	108.6%	1.3054	106.8%	1,199	6.8%	344	855	855	1,294	344	950
281	ROBBINSDALE	15,361	105.9	108.6%	1.3054	106.8%	864	6.8%	344	520	520	1,002	344	658
282	ST. ANTHONY-NEW	2,008	105.9	108.6%	1.3054	106.8%	953	6.8%	344	609	609	1,293	344	948
283	ST. LOUIS PARK	4,961	105.9	108.6%	1.3054	106.8%	1,510	6.8%	344	1,166	1,166	1,813	344	1,469
284	WAYZATA	11,672	105.9	108.6%	1.3054	106.8%	1,390	6.8%	344	1,046	1,046	1,695	344	1,351

Cost and Revenue Analysis for Minnesota School Districts

No.	District Name	AMCPU	Cost indexes for 2005 RPP	Relative to State Average	CWI	Relative to State Average	Referendum Analysis Referendum per Pupil	CWI Relative Cost Difference	Inflationary Referendum	Real Program Referendum	Adjusted Real Program Referendum	Other Component Analysis Referendum plus other Non-cost Components	Inflationary Amount	Real Program Amount
286	BROOKLYN CENTER	2,066	105.9	108.6%	1.3054	106.8%	301	6.8%	344	(43)	-	689	344	345
294	HOUSTON	1,541	88.5	90.8%	1.1568	94.6%	288	-5.4%	-	288	304	438	-	438
297	SPRING GROVE	390	88.5	90.8%	1.1568	94.6%	1,409	-5.4%	-	1,409	1,489	1,505	-	1,505
299	CALEDONIA	961	88.5	90.8%	1.1568	94.6%	760	-5.4%	-	760	804	876	-	876
300	LACRESCENT	1,641	88.5	90.8%	1.1568	94.6%	550	-5.4%	-	550	581	900	-	900
306	LAPORTE	315	78.4	80.4%	1.0449	85.5%	-	-14.5%	-	-	-	171	-	171
308	NEVIS	623	78.4	80.4%	1.0449	85.5%	75	-14.5%	-	75	88	270	-	270
309	PARK RAPIDS	1,851	78.4	80.4%	1.0449	85.5%	652	-14.5%	-	652	763	767	-	767
314	BRAHAM	1,084	105.9	108.6%	1.3054	106.8%	330	6.8%	344	(14)	-	461	344	117
316	GREENWAY	1,363	76.5	78.5%	1.0367	84.8%	998	-15.2%	-	998	1,177	1,122	-	1,122
317	DEER RIVER	1,088	76.5	78.5%	1.0367	84.8%	-	-15.2%	-	-	-	184	-	184
318	GRAND RAPIDS	4,332	76.5	78.5%	1.0367	84.8%	-	-15.2%	-	-	-	162	-	162
319	NASHWAUK-KEEWATI	707	76.5	78.5%	1.0367	84.8%	116	-15.2%	-	116	137	297	-	297
323	FRANCONIA	40	105.9	108.6%	1.3054	106.8%	2,018	6.8%	344	1,674	1,674	2,076	344	1,732
330	HERON LAKE-OKABE	405	93.7	96.1%	0.9943	81.3%	894	-18.7%	-	894	1,100	1,004	-	1,004
332	MORA	2,160	98.6	101.1%	1.0894	89.1%	121	-10.9%	-	121	136	262	-	262
333	OGILVIE	721	98.6	101.1%	1.0894	89.1%	-	-10.9%	-	-	-	185	-	185
345	NEW LONDON-SPICE	1,830	88.9	91.2%	1.0744	87.9%	377	-12.1%	-	377	429	505	-	505
347	WILLMAR	4,672	88.9	91.2%	1.0744	87.9%	495	-12.1%	-	495	563	653	-	653
356	LANCASTER	227	75	76.9%	1.013	82.9%	1,177	-17.1%	-	1,177	1,421	1,268	-	1,268
361	INTERNATIONAL FA	1,529	74.2	76.1%	1.0367	84.8%	657	-15.2%	-	657	775	1,006	-	1,006
362	LITTLEFORK-BIG F	401	74.2	76.1%	1.0367	84.8%	1	-15.2%	-	1	1	205	-	205
363	SOUTH KOOCHICHIN	434	74.2	76.1%	1.0367	84.8%	1	-15.2%	-	1	1	182	-	182
371	BELLINGHAM	137	86.3	88.5%	1.0035	82.1%	1,599	-17.9%	-	1,599	1,948	1,657	-	1,657
378	DAWSON	596	86.3	88.5%	1.0035	82.1%	713	-17.9%	-	713	869	858	-	858
381	LAKE SUPERIOR	1,766	76.1	78.1%	1.0367	84.8%	-	-15.2%	-	-	-	140	-	140
390	LAKE OF THE WOOD	655	73	74.9%	1.0449	85.5%	123	-14.5%	-	123	144	314	-	314
391	CLEVELAND	494	103.1	105.7%	1.1053	90.4%	650	-9.6%	-	650	719	777	-	777
392	LECENTER	752	103.1	105.7%	1.1053	90.4%	641	-9.6%	-	641	709	994	-	994
394	MONTGOMERY	1,251	103.1	105.7%	1.1053	90.4%	-	-9.6%	-	-	-	151	-	151
402	HENDRICKS	189	90	92.3%	1.0035	82.1%	781	-17.9%	-	781	952	891	-	891
403	IVANHOE	212	90	92.3%	1.0035	82.1%	1,343	-17.9%	-	1,343	1,637	1,426	-	1,426
404	LAKE BENTON	225	90	92.3%	1.0035	82.1%	1,632	-17.9%	-	1,632	1,988	1,690	-	1,690
411	BALATON	122	90.4	92.7%	1.0035	82.1%	1,589	-17.9%	-	1,589	1,935	1,718	-	1,718
413	MARSHALL	2,539	90.4	92.7%	1.0035	82.1%	194	-17.9%	-	194	237	565	-	565
414	MINNEOTA	543	90.4	92.7%	1.0035	82.1%	108	-17.9%	-	108	131	249	-	249
415	LYND	189	90.4	92.7%	1.0035	82.1%	1,453	-17.9%	-	1,453	1,770	1,626	-	1,626
417	TRACY	796	90.4	92.7%	1.0035	82.1%	431	-17.9%	-	431	525	624	-	624
423	HUTCHINSON	3,412	101.5	104.1%	1.0744	87.9%	826	-12.1%	-	826	940	934	-	934
424	LESTER PRAIRIE	520	101.5	104.1%	1.0744	87.9%	1,064	-12.1%	-	1,064	1,211	1,160	-	1,160
432	MAHNOMEN	772	84.1	86.3%	1.0449	85.5%	-	-14.5%	-	-	-	242	-	242
435	WAUBUN	711	84.1	86.3%	1.0449	85.5%	-	-14.5%	-	-	-	227	-	227
441	MARSHALL COUNTY	421	75	76.9%	1.013	82.9%	670	-17.1%	-	670	809	785	-	785
447	GRYGLA	241	75	76.9%	1.013	82.9%	110	-17.1%	-	110	133	280	-	280
458	TRUMAN	396	94.3	96.7%	0.9943	81.3%	883	-18.7%	-	883	1,086	987	-	987
463	EDEN VALLEY	1,009	96.3	98.8%	1.0744	87.9%	410	-12.1%	-	410	466	572	-	572
465	LITCHFIELD	2,074	96.3	98.8%	1.0744	87.9%	320	-12.1%	-	320	364	462	-	462
466	DASSEL-COKATO	2,687	96.3	98.8%	1.0744	87.9%	-	-12.1%	-	-	-	127	-	127

Cost and Revenue Analysis for Minnesota School Districts

			Cost indexes for 2005				Referendum Analysis					Other Component Analysis		
No.	District Name	AMCPU	RPP	Relative to State Average	CWI	Relative to State Average	Referendum per Pupil	CWI Relative Cost Difference	Inflationary Referendum	Real Program Referendum	Adjusted Real Program Referendum	Referendum plus other Non-cost Components	Inflationary Amount	Real Program Amount
473	ISLE	656	98.5	101.0%	1.0894	89.1%	-	-10.9%	-	-	-	167	-	167
477	PRINCETON	4,006	98.5	101.0%	1.0894	89.1%	339	-10.9%	-	339	381	704	-	704
480	ONAMIA	796	98.5	101.0%	1.0894	89.1%	1	-10.9%	-	1	1	269	-	269
482	LITTLE FALLS	2,965	90.4	92.7%	1.006	82.3%	905	-17.7%	-	905	1,099	1,040	-	1,040
484	PIERZ	1,230	90.4	92.7%	1.006	82.3%	415	-17.7%	-	415	504	541	-	541
485	ROYALTON	803	90.4	92.7%	1.006	82.3%	1	-17.7%	-	1	1	245	-	245
486	SWANVILLE	408	90.4	92.7%	1.006	82.3%	800	-17.7%	-	800	972	908	-	908
487	UPSALA	466	90.4	92.7%	1.006	82.3%	-	-17.7%	-	-	-	194	-	194
492	AUSTIN	4,840	92.8	95.2%	1.0782	88.2%	731	-11.8%	-	731	829	882	-	882
495	GRAND MEADOW	423	92.8	95.2%	1.0782	88.2%	813	-11.8%	-	813	922	1,143	-	1,143
497	LYLE	285	92.8	95.2%	1.0782	88.2%	723	-11.8%	-	723	820	866	-	866
499	LEROY	359	92.8	95.2%	1.0782	88.2%	941	-11.8%	-	941	1,067	1,043	-	1,043
500	SOUTHLAND	692	92.8	95.2%	1.0782	88.2%	850	-11.8%	-	850	963	963	-	963
505	FULDA	494	92.5	94.9%	0.9943	81.3%	1,903	-18.7%	-	1,903	2,340	1,986	-	1,986
507	NICOLLET	353	99.9	102.5%	1.0516	86.0%	867	-14.0%	-	867	1,008	981	-	981
508	ST. PETER	2,141	99.9	102.5%	1.0516	86.0%	710	-14.0%	-	710	825	847	-	847
511	ADRIAN	749	93.8	96.2%	0.9943	81.3%	360	-18.7%	-	360	443	489	-	489
513	BREWSTER	196	93.8	96.2%	0.9943	81.3%	1,550	-18.7%	-	1,550	1,906	1,631	-	1,631
514	ELLSWORTH	225	93.8	96.2%	0.9943	81.3%	573	-18.7%	-	573	705	692	-	692
516	ROUND LAKE	136	93.8	96.2%	0.9943	81.3%	1,384	-18.7%	-	1,384	1,702	1,465	-	1,465
518	WORTHINGTON	2,532	93.8	96.2%	0.9943	81.3%	1,091	-18.7%	-	1,091	1,341	1,186	-	1,186
531	BYRON	1,933	95.3	97.7%	1.2901	105.5%	116	5.5%	281	(165)	-	258	281	(23)
533	DOVER-EYOTA	1,396	95.3	97.7%	1.2901	105.5%	81	5.5%	281	(199)	-	235	281	(46)
534	STEWARTVILLE	2,038	95.3	97.7%	1.2901	105.5%	758	5.5%	281	477	477	871	281	591
535	ROCHESTER	18,352	95.3	97.7%	1.2901	105.5%	468	5.5%	281	187	187	616	281	336
542	BATTLE LAKE	608	84.9	87.1%	0.9825	80.4%	-	-19.6%	-	-	-	170	-	170
544	FERGUS FALLS	2,959	84.9	87.1%	0.9825	80.4%	432	-19.6%	-	432	538	619	-	619
545	HENNING	425	84.9	87.1%	0.9825	80.4%	1,187	-19.6%	-	1,187	1,478	1,299	-	1,299
547	PARKERS PRAIRIE	657	84.9	87.1%	0.9825	80.4%	350	-19.6%	-	350	435	479	-	479
548	PELICAN RAPIDS	1,181	84.9	87.1%	0.9825	80.4%	-	-19.6%	-	-	-	177	-	177
549	PERHAM	1,785	84.9	87.1%	0.9825	80.4%	26	-19.6%	-	26	32	248	-	248
550	UNDERWOOD	603	84.9	87.1%	0.9825	80.4%	-	-19.6%	-	-	-	120	-	120
553	NEW YORK MILLS	850	84.9	87.1%	0.9825	80.4%	184	-19.6%	-	184	228	321	-	321
561	GOODRIDGE	223	75	76.9%	1.013	82.9%	1,516	-17.1%	-	1,516	1,829	1,591	-	1,591
564	THIEF RIVER FALL	2,298	75	76.9%	1.013	82.9%	781	-17.1%	-	781	942	921	-	921
577	WILLOW RIVER	529	90.3	92.6%	1.0894	89.1%	136	-10.9%	-	136	153	324	-	324
578	PINE CITY	1,886	90.3	92.6%	1.0894	89.1%	857	-10.9%	-	857	962	963	-	963
581	EDGERTON	352	92	94.4%	0.9943	81.3%	443	-18.7%	-	443	545	585	-	585
592	CLIMAX	162	82.1	84.2%	1.013	82.9%	1,829	-17.1%	-	1,829	2,207	1,952	-	1,952
593	CROOKSTON	1,555	82.1	84.2%	1.013	82.9%	635	-17.1%	-	635	767	809	-	809
595	EAST GRAND FORKS	2,003	82.1	84.2%	1.013	82.9%	116	-17.1%	-	116	140	256	-	256
599	FERTILE-BELTRAMI	556	82.1	84.2%	1.013	82.9%	1,125	-17.1%	-	1,125	1,357	1,247	-	1,247
600	FISHER	323	82.1	84.2%	1.013	82.9%	663	-17.1%	-	663	800	795	-	795
601	FOSSTON	750	82.1	84.2%	1.013	82.9%	819	-17.1%	-	819	989	927	-	927
611	CYRUS	112	84	86.2%	0.9825	80.4%	1,067	-19.6%	-	1,067	1,327	1,173	-	1,173
621	MOUNDS VIEW	11,673	105.9	108.6%	1.3054	106.8%	1,479	6.8%	344	1,135	1,135	1,790	344	1,446
622	NORTH ST. PAUL-M	13,525	105.9	108.6%	1.3054	106.8%	820	6.8%	344	476	476	1,170	344	826
623	ROSEVILLE	7,645	105.9	108.6%	1.3054	106.8%	1,523	6.8%	344	1,179	1,179	1,660	344	1,316

Cost and Revenue Analysis for Minnesota School Districts

No.	District Name	AMCPU	Cost indexes for 2005				Referendum Analysis					Other Component Analysis		
			RPP	Relative to State Average	CWI	Relative to State Average	Referendum per Pupil	CWI Relative Cost Difference	Inflationary Referendum	Real Program Referendum	Adjusted Real Program Referendum	Referendum plus other Non-cost Components	Inflationary Amount	Real Program Amount
624	WHITE BEAR LAKE	9,796	105.9	108.6%	1.3054	106.8%	868	6.8%	344	524	524	999	344	655
625	ST. PAUL	45,462	105.9	108.6%	1.3054	106.8%	682	6.8%	344	338	338	965	344	621
627	OKLEE	225	81.9	84.0%	1.013	82.9%	1,055	-17.1%	-	1,055	1,273	1,179	-	1,179
628	PLUMMER	171	81.9	84.0%	1.013	82.9%	1,252	-17.1%	-	1,252	1,511	1,340	-	1,340
630	RED LAKE FALLS	434	81.9	84.0%	1.013	82.9%	1,005	-17.1%	-	1,005	1,213	1,104	-	1,104
635	MILROY	99	91.8	94.2%	1.0035	82.1%	1,325	-17.9%	-	1,325	1,615	1,422	-	1,422
640	WABASSO	476	91.8	94.2%	1.0035	82.1%	475	-17.9%	-	475	578	613	-	613
656	FARIBAULT	4,683	102.7	105.3%	1.1053	90.4%	419	-9.6%	-	419	463	557	-	557
659	NORTHFIELD	4,527	102.7	105.3%	1.1053	90.4%	1,195	-9.6%	-	1,195	1,322	1,290	-	1,290
671	HILLS-BEAVER CRE	382	93.2	95.6%	0.9943	81.3%	885	-18.7%	-	885	1,088	989	-	989
676	BADGER	254	75	76.9%	1.013	82.9%	1,540	-17.1%	-	1,540	1,859	1,645	-	1,645
682	ROSEAU	1,514	75	76.9%	1.013	82.9%	513	-17.1%	-	513	619	649	-	649
690	WARROAD	1,384	75	76.9%	1.013	82.9%	588	-17.1%	-	588	710	732	-	732
695	CHISHOLM	880	78.5	80.5%	1.1197	91.6%	908	-8.4%	-	908	992	1,031	-	1,031
696	ELY	629	78.5	80.5%	1.1197	91.6%	1,092	-8.4%	-	1,092	1,192	1,203	-	1,203
698	FLOODWOOD	424	78.5	80.5%	1.1197	91.6%	-	-8.4%	-	-	-	266	-	266
700	HERMANTOWN	2,339	78.5	80.5%	1.1197	91.6%	1	-8.4%	-	1	1	203	-	203
701	HIBBING	2,796	78.5	80.5%	1.1197	91.6%	592	-8.4%	-	592	647	711	-	711
704	PROCTOR	1,983	78.5	80.5%	1.1197	91.6%	1	-8.4%	-	1	1	463	-	463
706	VIRGINIA	1,865	78.5	80.5%	1.1197	91.6%	754	-8.4%	-	754	823	867	-	867
707	NETT LAKE	134	78.5	80.5%	1.1197	91.6%	784	-8.4%	-	784	856	965	-	965
709	DULUTH	11,356	78.5	80.5%	1.1197	91.6%	460	-8.4%	-	460	502	581	-	581
712	MOUNTAIN IRON-BU	652	78.5	80.5%	1.1197	91.6%	651	-8.4%	-	651	710	793	-	793
716	BELLE PLAINE	1,757	105.9	108.6%	1.3054	106.8%	-	6.8%	344	(344)	-	150	344	(195)
717	JORDAN	1,828	105.9	108.6%	1.3054	106.8%	1	6.8%	344	(343)	-	265	344	(79)
719	PRIOR LAKE	7,852	105.9	108.6%	1.3054	106.8%	841	6.8%	344	497	497	965	344	621
720	SHAKOPEE	7,177	105.9	108.6%	1.3054	106.8%	562	6.8%	344	218	218	720	344	376
721	NEW PRAGUE	4,063	105.9	108.6%	1.3054	106.8%	443	6.8%	344	99	99	594	344	250
726	BECKER	3,068	105.9	108.6%	1.3054	106.8%	735	6.8%	344	391	391	847	344	503
727	BIG LAKE	4,129	105.9	108.6%	1.3054	106.8%	8	6.8%	344	(337)	-	185	344	(159)
728	ELK RIVER	14,007	105.9	108.6%	1.3054	106.8%	713	6.8%	344	369	369	831	344	487
738	HOLDINGFORD	1,167	89.8	92.1%	1.1616	95.0%	451	-5.0%	-	451	475	596	-	596
739	KIMBALL	880	89.8	92.1%	1.1616	95.0%	294	-5.0%	-	294	310	446	-	446
740	MELROSE	1,648	89.8	92.1%	1.1616	95.0%	697	-5.0%	-	697	734	816	-	816
741	PAYNESVILLE	1,220	89.8	92.1%	1.1616	95.0%	405	-5.0%	-	405	426	532	-	532
742	ST. CLOUD	10,824	89.8	92.1%	1.1616	95.0%	605	-5.0%	-	605	636	952	-	952
743	SAUK CENTRE	1,285	89.8	92.1%	1.1616	95.0%	665	-5.0%	-	665	699	788	-	788
745	ALBANY	1,861	89.8	92.1%	1.1616	95.0%	387	-5.0%	-	387	407	519	-	519
748	SARTELL	3,683	89.8	92.1%	1.1616	95.0%	307	-5.0%	-	307	323	439	-	439
750	COLD SPRING	2,611	89.8	92.1%	1.1616	95.0%	121	-5.0%	-	121	128	288	-	288
756	BLOOMING PRAIRIE	823	97.6	100.1%	1.0782	88.2%	359	-11.8%	-	359	407	488	-	488
761	OWATONNA	5,692	97.6	100.1%	1.0782	88.2%	706	-11.8%	-	706	801	853	-	853
763	MEDFORD	866	97.6	100.1%	1.0782	88.2%	-	-11.8%	-	-	-	144	-	144
768	HANCOCK	295	84.6	86.8%	0.9825	80.4%	741	-19.6%	-	741	921	861	-	861
769	MORRIS	1,027	84.6	86.8%	0.9825	80.4%	618	-19.6%	-	618	769	754	-	754
771	CHOKIO-ALBERTA	201	84.6	86.8%	0.9825	80.4%	2,421	-19.6%	-	2,421	3,012	2,497	-	2,497
775	KERKHOVEN-MURDOC	630	85.1	87.3%	0.9825	80.4%	545	-19.6%	-	545	679	684	-	684
777	BENSON	1,137	85.1	87.3%	0.9825	80.4%	523	-19.6%	-	523	651	645	-	645

Cost and Revenue Analysis for Minnesota School Districts

No.	District Name	AMCPU	Cost indexes for 2005: RPP	Relative to State Average	CWI	Relative to State Average	Referendum Analysis: Referendum per Pupil	CWI Relative Cost Difference	Inflationary Referendum	Real Program Referendum	Adjusted Real Program Referendum	Other Component Analysis: Referendum plus other Non-cost Components	Inflationary Amount	Real Program Amount
786	BERTHA-HEWITT	552	83.3	85.4%	1.006	82.3%	568	-17.7%	-	568	690	702	-	702
787	BROWERVILLE	597	83.3	85.4%	1.006	82.3%	91	-17.7%	-	91	110	233	-	233
801	BROWNS VALLEY	125	85.7	87.9%	0.9825	80.4%	1,682	-19.6%	-	1,682	2,092	1,740	-	1,740
803	WHEATON	482	85.7	87.9%	0.9825	80.4%	769	-19.6%	-	769	956	883	-	883
811	WABASHA	740	95.3	97.7%	1.2901	105.5%	1,203	5.5%	281	922	922	1,292	281	1,012
813	LAKE CITY	1,518	95.3	97.7%	1.2901	105.5%	604	5.5%	281	324	324	724	281	443
815	PRINSBURG	-	88.9	91.2%	1.0744	87.9%		-12.1%	-				-	
818	VERNDALE	506	80.9	83.0%	1.006	82.3%	-	-17.7%	-	-	-	152	-	152
820	SEBEKA	631	80.9	83.0%	1.006	82.3%	834	-17.7%	-	834	1,014	955	-	955
821	MENAHGA	856	80.9	83.0%	1.006	82.3%	-	-17.7%	-	-	-	187	-	187
829	WASECA	2,170	99.1	101.6%	1.0516	86.0%	634	-14.0%	-	634	737	755	-	755
831	FOREST LAKE	8,321	105.9	108.6%	1.3054	106.8%	799	6.8%	344	455	455	1,173	344	829
832	MAHTOMEDI	3,679	105.9	108.6%	1.3054	106.8%	982	6.8%	344	637	637	1,098	344	754
833	SOUTH WASHINGTON	19,262	105.9	108.6%	1.3054	106.8%	957	6.8%	344	613		1,240	344	896
834	STILLWATER	10,411	105.9	108.6%	1.3054	106.8%	873	6.8%	344	529	529	994	344	650
836	BUTTERFIELD	254	95.5	97.9%	0.9943	81.3%	1,245	-18.7%	-	1,245	1,531	1,333	-	1,333
837	MADELIA	655	95.5	97.9%	0.9943	81.3%	739	-18.7%	-	739	908	889	-	889
840	ST. JAMES	1,378	95.5	97.9%	0.9943	81.3%	576	-18.7%	-	576	708	696	-	696
846	BRECKENRIDGE	993	87.7	89.9%	0.9825	80.4%	-	-19.6%	-	-	-	140	-	140
850	ROTHSAY	240	87.7	89.9%	0.9825	80.4%	1,816	-19.6%	-	1,816	2,260	1,874	-	1,874
852	CAMPBELL-TINTAH	131	87.7	89.9%	0.9825	80.4%	3,364	-19.6%	-	3,364	4,185	3,422	-	3,422
857	LEWISTON	861	91.4	93.7%	1.1091	90.7%	748	-9.3%	-	748	825	868	-	868
858	ST. CHARLES	1,174	91.4	93.7%	1.1091	90.7%	-	-9.3%	-	-	-	152	-	152
861	WINONA	4,214	91.4	93.7%	1.1091	90.7%	1,685	-9.3%	-	1,685	1,857	1,783	-	1,783
876	ANNANDALE	2,093	105.9	108.6%	1.3054	106.8%	612	6.8%	344	268	268	739	344	395
877	BUFFALO	6,590	105.9	108.6%	1.3054	106.8%	498	6.8%	344	154	154	632	344	288
879	DELANO	2,633	105.9	108.6%	1.3054	106.8%	417	6.8%	344	73	73	760	344	416
881	MAPLE LAKE	1,165	105.9	108.6%	1.3054	106.8%	611	6.8%	344	267	267	729	344	385
882	MONTICELLO	4,516	105.9	108.6%	1.3054	106.8%	211	6.8%	344	(133)	-	354	344	10
883	ROCKFORD	1,830	105.9	108.6%	1.3054	106.8%	14	6.8%	344	(330)	-	240	344	(104)
885	ST. MICHAEL-ALBE	5,285	105.9	108.6%	1.3054	106.8%	513	6.8%	344	169	169	636	344	292
891	CANBY	620	88.4	90.7%	1.0035	82.1%	517	-17.9%	-	517	629	638	-	638
911	CAMBRIDGE-ISANTI	5,999	105.9	108.6%	1.3054	106.8%	104	6.8%	344	(240)	-	252	344	(92)
912	MILACA	2,201	98.5	101.0%	1.0894	89.1%	1	-10.9%	-	1	1	192	-	192
914	ULEN-HITTERDAL	334	87.6	89.8%	1.0739	87.8%	1,362	-12.2%	-	1,362	1,551	1,420	-	1,420
2071	LAKE CRYSTAL-WEL	924	98.6	101.1%	1.0516	86.0%	800	-14.0%	-	800	930	945	-	945
2125	TRITON	1,301	95.3	97.7%	1.2901	105.5%	436	5.5%	281	155	155	561	281	281
2134	UNITED SOUTH CENTRAL	952	95.5	97.9%	0.9943	81.3%	762	-18.7%	-	762	937	872	-	872
2135	MAPLE RIVER	1,361	98.6	101.1%	1.0516	86.0%	798	-14.0%	-	798	928	910	-	910
2137	KINGSLAND	882	91.3	93.6%	1.1091	90.7%	329	-9.3%	-	329	362	469	-	469
2142	ST. LOUIS COUNTY	2,436	78.5	80.5%	1.1197	91.6%	152	-8.4%	-	152	166	303	-	303
2143	WATERVILLE-ELYSIAN-MORRISTO	1,116	103.1	105.7%	1.1053	90.4%	489	-9.6%	-	489	540	636	-	636
2144	CHISAGO LAKES AREA	4,091	105.9	108.6%	1.3054	106.8%	428	6.8%	344	84	84	564	344	220
2149	MINNEWASKA	1,390	84	86.2%	0.9825	80.4%	732	-19.6%	-	732	911	879	-	879
2154	EVELETH-GILBERT	1,447	78.5	80.5%	1.1197	91.6%	376	-8.4%	-	376	410	506	-	506
2155	WADENA-DEER CREEK	1,319	80.9	83.0%	1.006	82.3%	112	-17.7%	-	112	136	273	-	273
2159	BUFFALO LAKE-HECTOR	669	92.8	95.2%	1.0744	87.9%	859	-12.1%	-	859	977	1,014	-	1,014
2164	DILWORTH-GLYNDON	1,501	87.6	89.8%	1.0739	87.8%	-	-12.2%	-	-	-	153	-	153

Cost and Revenue Analysis for Minnesota School Districts

			Cost indexes for 2005				Referendum Analysis					Other Component Analysis		
No.	District Name	AMCPU	RPP	Relative to State Average	CWI	Relative to State Average	Referendum per Pupil	CWI Relative Cost Difference	Inflationary Referendum	Real Program Referendum	Adjusted Real Program Referendum	Referendum plus other Non-cost Components	Inflationary Amount	Real Program Amount
2165	HINCKLEY-FINLAYS	1,180	90.3	92.6%	1.0894	89.1%	134	-10.9%	-	134	150	275	-	275
2167	LAKEVIEW	671	90.4	92.7%	1.0035	82.1%	459	-17.9%	-	459	559	583	-	583
2168	NRHEG	1,140	99.1	101.6%	1.0516	86.0%	-	-14.0%	-	-	-	143	-	143
2169	MURRAY COUNTY	866	92.5	94.9%	0.9943	81.3%	1,320	-18.7%	-	1,320	1,622	1,407	-	1,407
2170	STAPLES-MOTLEY	1,668	83.3	85.4%	1.006	82.3%	515	-17.7%	-	515	626	697	-	697
2171	KITTSON CENTRAL	366	75	76.9%	1.013	82.9%	2,415	-17.1%	-	2,415	2,915	2,497	-	2,497
2172	KENYON-WANAMINGO	1,019	100.1	102.7%	1.1053	90.4%	435	-9.6%	-	435	481	560	-	560
2174	PINE RIVER-BACKU	1,122	78.6	80.6%	1.0367	84.8%	1	-15.2%	-	1	1	388	-	388
2176	WARREN-ALVARADO-	545	75	76.9%	1.013	82.9%	1,822	-17.1%	-	1,822	2,198	1,912	-	1,912
2180	MACCRAY	838	86.8	89.0%	1.0035	82.1%	785	-17.9%	-	785	956	913	-	913
2184	LUVERNE	1,406	93.2	95.6%	0.9943	81.3%	1,083	-18.7%	-	1,083	1,331	1,178	-	1,178
2190	YELLOW MEDICINE EAST	1,125	88.4	90.7%	1.0035	82.1%	1,256	-17.9%	-	1,256	1,531	1,343	-	1,343
2198	FILMORE CENTRAL	691	91.3	93.6%	1.1091	90.7%	1,005	-9.3%	-	1,005	1,108	1,104	-	1,104
2215	NORMAN COUNTY EAST	406	85	87.2%	1.013	82.9%	686	-17.1%	-	686	827	800	-	800
2310	SIBLEY EAST	1,422	101.2	103.8%	1.0744	87.9%	632	-12.1%	-	632	719	753	-	753
2311	CLEARBROOK-GONVICK	542	80.8	82.9%	1.0449	85.5%	549	-14.5%	-	549	642	839	-	839
2342	WEST CENTRAL AREA	922	85.3	87.5%	0.9825	80.4%	933	-19.6%	-	933	1,161	1,050	-	1,050
2358	KARLSTAD-STRANDQ	278	75	76.9%	1.013	82.9%	930	-17.1%	-	930	1,122	1,021	-	1,021
2364	BELGRADE-BROOTEN-ELR	812	89.8	92.1%	1.1616	95.0%	918	-5.0%	-	918	966	1,112	-	1,112
2365	G.F.W.	907	101.2	103.8%	1.0744	87.9%	514	-12.1%	-	514	585	683	-	683
2396	A.C.G.C.	942	96.3	98.8%	1.0744	87.9%	739	-12.1%	-	739	841	851	-	851
2397	LESUEUR-HENDERSO	1,446	103.1	105.7%	1.1053	90.4%	314	-9.6%	-	314	347	458	-	458
2448	MARTIN COUNTY	953	94.3	96.7%	0.9943	81.3%	633	-18.7%	-	633	778	784	-	784
2527	HALSTAD-HENDRUM	319	85	87.2%	1.013	82.9%	1,508	-17.1%	-	1,508	1,820	1,639	-	1,639
2534	OLIVIA-BIRD ISLA	949	92.8	95.2%	1.0744	87.9%	707	-12.1%	-	707	804	820	-	820
2536	GRANADA HUNTLEY-	337	94.3	96.7%	0.9943	81.3%	792	-18.7%	-	792	974	925	-	925
2580	EAST CENTRAL ISD 2580	898	90.3	92.6%	1.0894	89.1%	129	-10.9%	-	129	144	341	-	341
2609	WIN-E-MAC	579	82.1	84.2%	1.013	82.9%	853	-17.1%	-	853	1,030	961	-	961
2683	GREENBUSH-MIDDLE RIV	551	75	76.9%	1.013	82.9%	657	-17.1%	-	657	793	772	-	772
2687	HOWARD LAKE-WAVERLY-WINST	1,182	105.9	108.6%	1.3054	106.8%	826	6.8%	344	482	482	940	344	596
2689	PIPESTONE-JASPER	1,398	92	94.4%	0.9943	81.3%	432	-18.7%	-	432	532	577	-	577
2711	MESABI EAST	997	78.5	80.5%	1.1197	91.6%	159	-8.4%	-	159	173	298	-	298
2752	FAIRMONT AREA SCHOOLS	2,089	94.3	96.7%	0.9943	81.3%	513	-18.7%	-	513	631	664	-	664
2753	LONG PRAIRIE-GREY EA	1,427	83.3	85.4%	1.006	82.3%	456	-17.7%	-	456	554	580	-	580
2754	CEDAR MOUNTAIN	489	91.8	94.2%	1.0035	82.1%	515	-17.9%	-	515	627	636	-	636
2759	EAGLE BEND-CLARISSA	386	83.3	85.4%	1.006	82.3%	1,032	-17.7%	-	1,032	1,254	1,143	-	1,143
2805	ZUMBROTA-MAZEPPA	1,278	95.3	97.7%	1.2901	105.5%	719	5.5%	281	438	438	841	281	561
2835	JANESVILLE-WALDO	620	99.1	101.6%	1.0516	86.0%	1,191	-14.0%	-	1,191	1,385	1,281	-	1,281
2853	MADISON-MARIETTA-LACQUI PAI	1,105	86.3	88.5%	1.0035	82.1%	1,221	-17.9%	-	1,221	1,488	1,534	-	1,534
2854	ADA-BORUP	644	85	87.2%	1.013	82.9%	646	-17.1%	-	646	780	771	-	771
2856	STEPHEN-ARGYLE	414	75	76.9%	1.013	82.9%	1,263	-17.1%	-	1,263	1,524	1,363	-	1,363
2859	GLENCOE-SILVER LAKE	1,881	101.5	104.1%	1.0744	87.9%	742	-12.1%	-	742	844	885	-	885
2860	BLUE EARTH-DELAVAN-ELMORE	1,453	95.5	97.9%	0.9943	81.3%	673	-18.7%	-	673	828	816	-	816
2884	RED ROCK CENTRAL	575	91.8	94.2%	1.0035	82.1%	1,163	-17.9%	-	1,163	1,417	1,473	-	1,473
2886	GLENVILLE-EMMONS	494	94.5	96.9%	1.0782	88.2%	869	-11.8%	-	869	985	989	-	989
2887	MCLEOD WEST SCHOOLS	407	101.5	104.1%	1.0744	87.9%	972	-12.1%	-	972	1,106	1,101	-	1,101
2888	CLINTON-GRACEVILLE-BEARDSLE\'	464	85	87.2%	0.9825	80.4%	1,241	-19.6%	-	1,241	1,545	1,329	-	1,329
2889	LAKE PARK-AUDUBON	737	84.2	86.4%	1.0449	85.5%	591	-14.5%	-	591	692	709	-	709

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2890	DRSH	682	92.8	95.2%	1.0744	87.9%	1,445	-12.1%	-	1,445	1,644	1,523	-	1,523
2895	JACKSON COUNTY CENTRAL	1,382	93.7	96.1%	0.9943	81.3%	52	-18.7%	-	52	64	214	-	214
2897	REDWOOD AREA SCHOOLS	1,466	91.8	94.2%	1.0035	82.1%	543	-17.9%	-	543	662	716	-	716
2898	WESTBROOK-WALNUT GROVE	651	93.2	95.6%	0.9943	81.3%	502	-18.7%	-	502	617	730	-	730
2899	PLAINVIEW-ELGIN-MILLVILLE	1,815	95.3	97.7%	1.2901	105.5%	291	5.5%	281	10	10	431	281	151
2902	RUSSELL-TYLER-RUTHTON	634	90.4	92.7%	1.0035	82.1%	732	-17.9%	-	732	891	852	-	852
							0			0	0	187		171
							1524			1233	1488	1434		1372
												7.671475238		8.024999549