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School Evaluation Services

Beyond the Averages: Michigan School Trends

Standard & Poor's School Evaluation Services (SES) has been engaged in the analysis of data for Michigan's public schools since the spring of 2001. Thousands of indicators spanning five academic years have been evaluated and displayed on the SES website (www.ses.standardandpoors.com) to provide stakeholders and decisionmakers with increased access to information, and to bring greater transparency to the academic and financial performance of Michigan's public schools. The breadth and scope of the data examined in SES allow for overarching insights to be gained through the disaggregation of data, both over time and in comparison with key benchmarks. This report highlights several analytical insights observed by Standard & Poor's through its examination of Michigan school data broken out by student and regional characteristics, for the academic years 1997-2001.

Beyond the Averages: Michigan School Trends

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The findings presented herein cover the following topics:

- ◆ Michigan Educational Assessment Program (MEAP) Results by Student Group
- ◆ MEAP Results by Region
- ◆ Return on Resources™—Regional Returns by Metropolitan Area, and Districts that Achieve More for Less
- ◆ Participation Rates on Standardized Tests

In conjunction with its third round of SES analysis for Michigan, Standard & Poor's has designed and implemented several enhancements and tools for the SES website that expand its content and allow easier access to the information. Visitors to www.ses.standardandpoors.com will find:

- Faster and easier log in
- Five years of trend data across all areas of analysis
- Detailed school-level data
- Disaggregated MEAP results by grade, subject, and student group for schools and districts
- New search tool to identify better-performing schools
- More graphics and a reader-friendly question-and-answer format for the "S&P Observations" (district-level analytical reports)
- New "Key Data" tables and a reformatted "Parents Corner" table

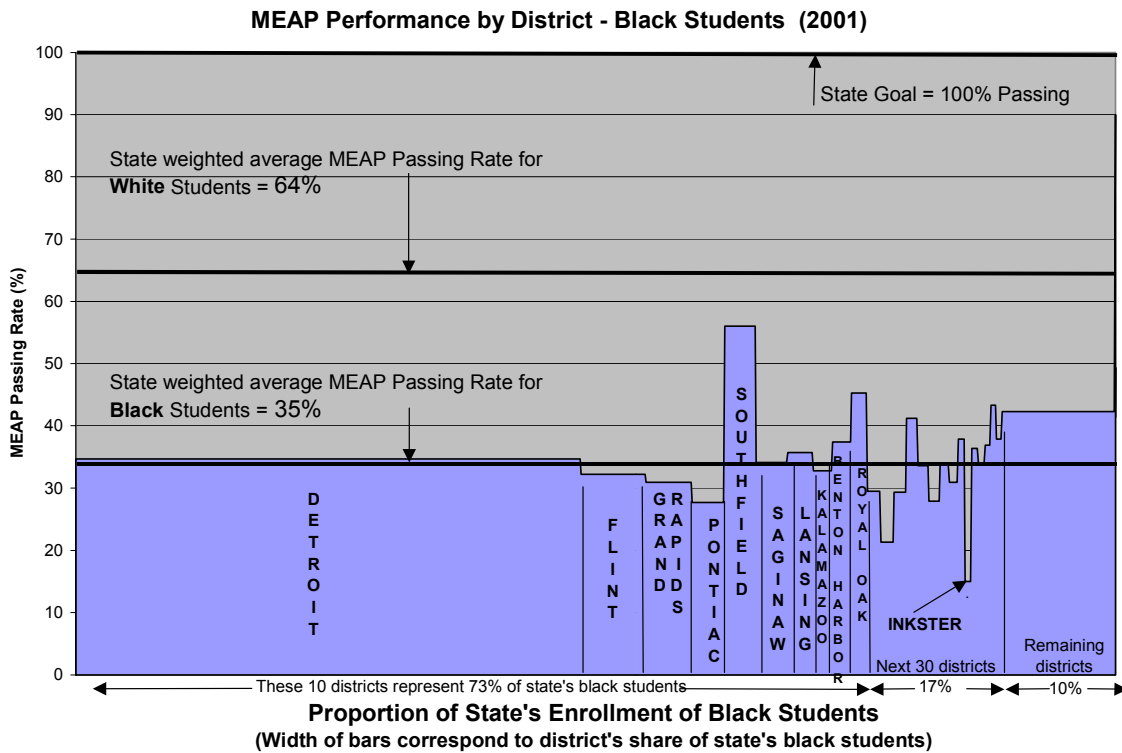
Averages cited in this report are calculated on an unweighted basis, unless otherwise noted. Statewide averages include all Michigan school districts (comprehensive and elementary). Because this report is focused on trend analysis, MEAP passing and participation rates cited are based on MEAP tests that have been administered in the same grade levels and subject areas over the five-year period analyzed, to maximize comparability over time.

MEAP Results by Student Group

By disaggregating student achievement data¹, significant insights can be gained about the relative performance and progress of different student groups. The analysis of disaggregated data is consistent with the provisions of the recently enacted federal “No Child Left Behind Act,” (NCLB) which requires states to demonstrate that all students are making adequate yearly progress (AYP) toward attaining standards. Achievement gaps, which are not unique to Michigan, are garnering nationwide attention, as evidenced by state-level results from the National Assessment of Educational Progress (NAEP).

When examining the percentage of MEAP tests that meet or exceed state standards, significant gaps in student achievement exist among student groups in Michigan, particularly between white students and black students. On a weighted average basis (based on enrollment), the MEAP passing rate was 35% for black students and 64% for white students. Given the magnitude of this gap, and that black students account for 18% of the students statewide, focusing on improving the achievement levels of black students—particularly in the ten school districts identified in Figure 1 below—may enable Michigan to make a significant gain toward the goal of having students in all racial/ethnic groups meet or exceed state standards.

Figure 1



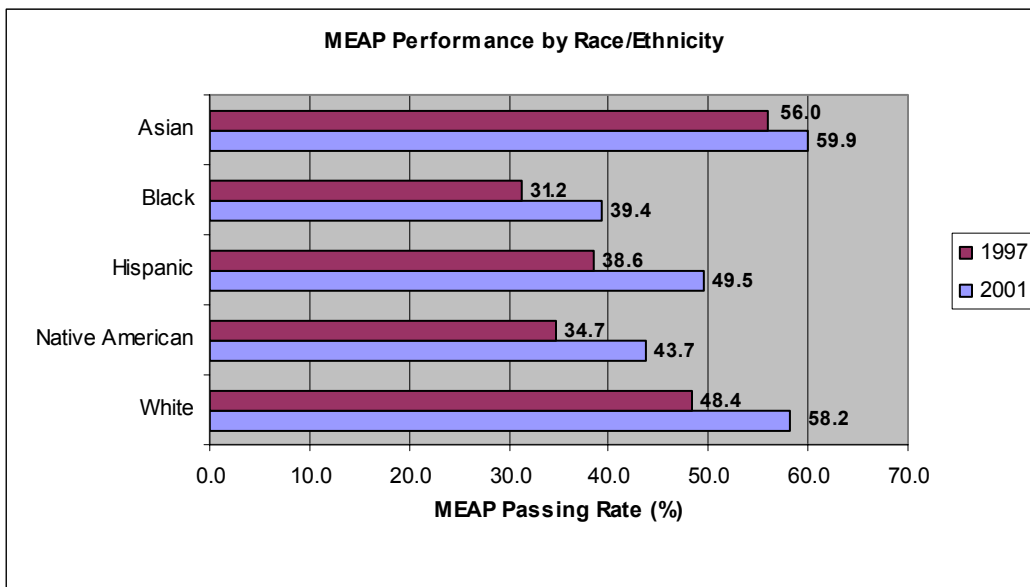
The 40 school districts with the largest proportion of black students enroll 90% of the state’s total black student population. Detroit Public Schools alone accounts for nearly half of the state’s enrollment of black

¹ Achievement gap data should be interpreted carefully because some MEAP test records do not include demographic information on students.

students. Among these districts, performance of black students varies widely—Southfield Public School District achieves a 56% MEAP passing rate among black students, while only 15% of the MEAP tests taken by black students in Inkster Public Schools receive a passing score. For the remaining districts, which enroll 10% of the state’s black students, the MEAP passing rate for black students is 42%, above the state average of 35%.

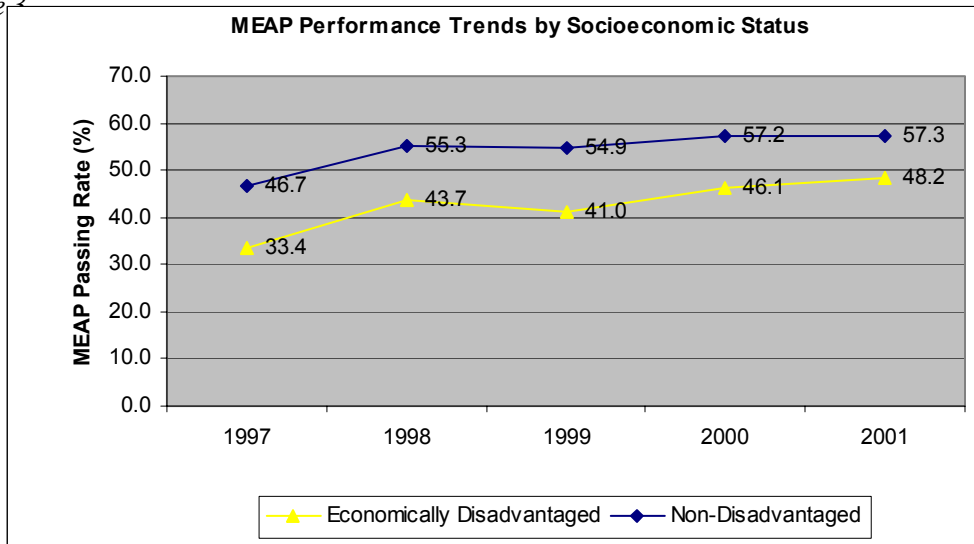
On average, MEAP passing rates for all racial/ethnic student groups in Michigan increased over the five-year period analyzed. Average annual increases ranged from 2.7 percentage points for Hispanic students to 2.0 points for white students. As a point of reference, the student enrollment distribution by race/ethnicity for the typical Michigan school district in 2001 was 88.3% white, 5.8% black, 2.9% Hispanic, 1.9% Native American, and 1.1% Asian/Pacific Islander.

Figure 2



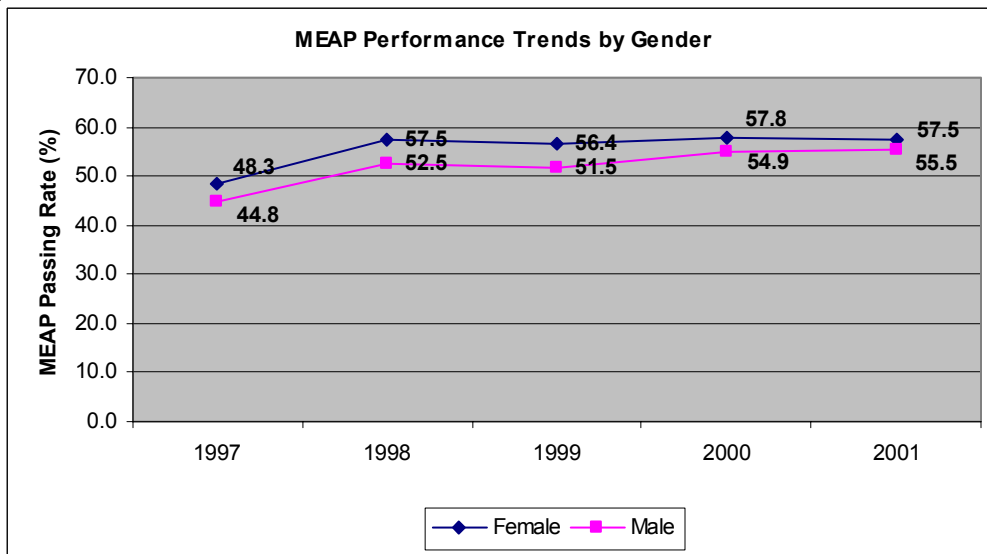
From 1997 to 2001, MEAP passing rates increased by an average of 2.9 percentage points per year for economically disadvantaged students and 2.7 points per year for non-disadvantaged students. Although achievement gaps still exist between the two groups, 2001 marked the smallest gap in achievement—at 9.1 percentage points—over the five-year period. In 2001, the proportion of economically disadvantaged students enrolled in Michigan’s school districts averaged 29.3%.

Figure 2



From 1997 to 2001, MEAP passing rates increased by an average of 2.3 percentage points per year for female students and 2.7 points per year for male students. Additionally, the difference in achievement between male and female students has steadily decreased over the period examined. In 2001, the male-female achievement gap was at its lowest level in five years at 2.0 percentage points, down from a five-year high of 5.0 percentage points in 1998.

Figure 4



MEAP Results by Region

Examining MEAP results by geographic region provides a unique perspective on variations in the Michigan's academic performance. For the purposes of this analysis, the state has been divided into four regions, each of which possesses a mix of urban, suburban, and rural traits, including student poverty levels that should be considered when comparing regional achievement levels.

The following graphs display MEAP passing rates on a geographic basis. The four regions are the Upper Peninsula (UP); the Northern Lower Peninsula (NLP), which includes school districts in 27 counties in line with and north of Mason, Lake, Osceola, Clare, Gladwin, and Arenac counties; South East (SE), which includes school districts in 23 counties in line with and east of Isabella, Gratiot, Clinton, Ingham, Jackson, and Hillsdale counties; and South West (SW), which includes school districts in 18 counties. These findings are based on individual test results, not district-wide averages, and thus are “weighted” based on student enrollment.

The Upper Peninsula experienced the largest improvement in MEAP scores between 1997 and 2001, trailed closely by the Northern Lower Peninsula. Both regions are rural, as designated by the U.S. Bureau of the Census. Additionally, both regions enroll higher proportions of economically disadvantaged students than the more urbanized South East and South West regions.

Figure 5: MEAP Passing Rates by Region
(Figures 5 and 6 should be viewed in tandem)

- The MEAP passing rates for all four regions improved between 1997 and 2001.
- The Upper Peninsula achieved the highest MEAP passing rates in 2001, as well as the greatest improvement in MEAP passing rates between 1997 and 2001.

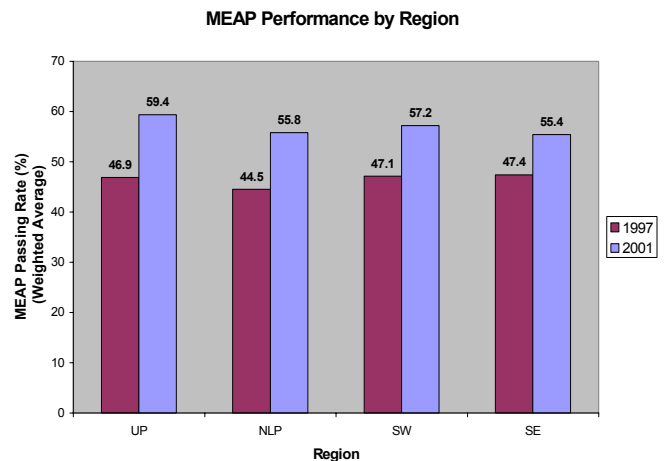
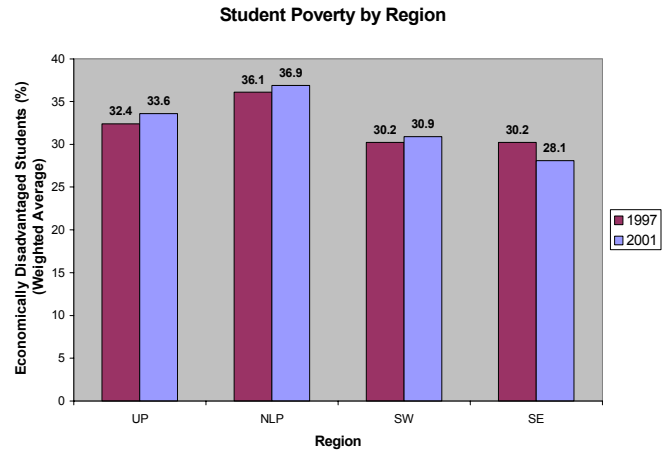


Figure 6: Student Poverty Levels by Region
 (Figures 5 and 6 should be viewed in tandem)

Despite serving the lowest proportion of economically disadvantaged students, the South East had the lowest MEAP passing rates in 2001 and the smallest rate of improvement on the MEAP between 1997 and 2001. This is due in part to the region's concentration of low-performing urban school districts not fully offset by its higher-performing suburban districts.



Figures 7-10: Regional Distribution of Districts by MEAP Passing Rates

Standard & Poor's calculates the state percentile rank for each district's MEAP passing rate. Based on this percentile, each district can be placed into one of four performance quartiles. For example, a MEAP passing rate of 71.0% is in the state's 94th percentile, placing the district in the highest quartile, while a passing rate of 53.0% is in the state's 33rd percentile, placing it in the second-lowest quartile. To expand the analysis of regional performance comparisons, the following bar graphs represent the distribution of school districts within each MEAP performance quartile by region. The distributions are based on unweighted school district averages.

Figure 7

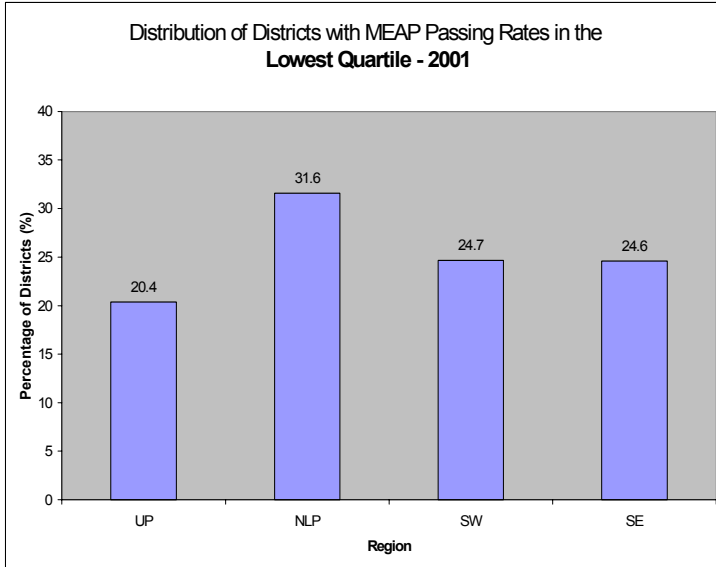


Figure 8

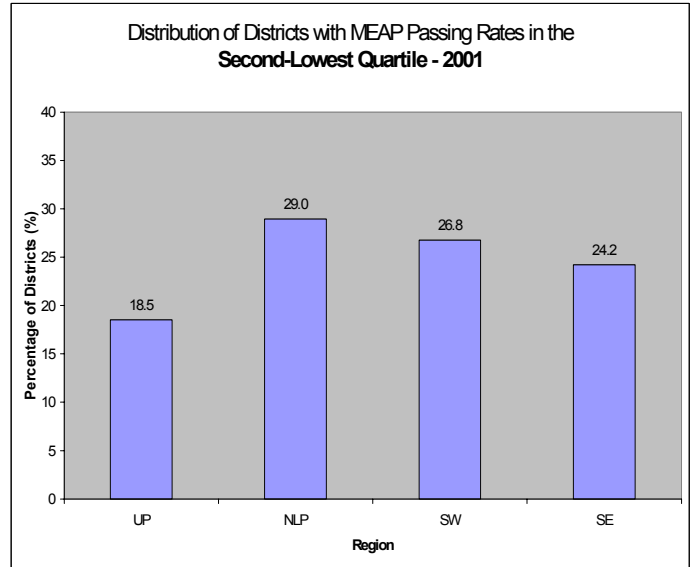


Figure 9

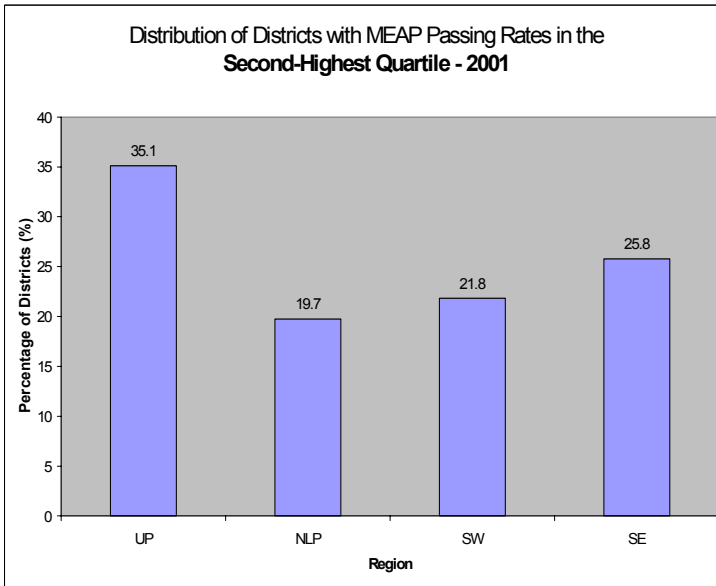
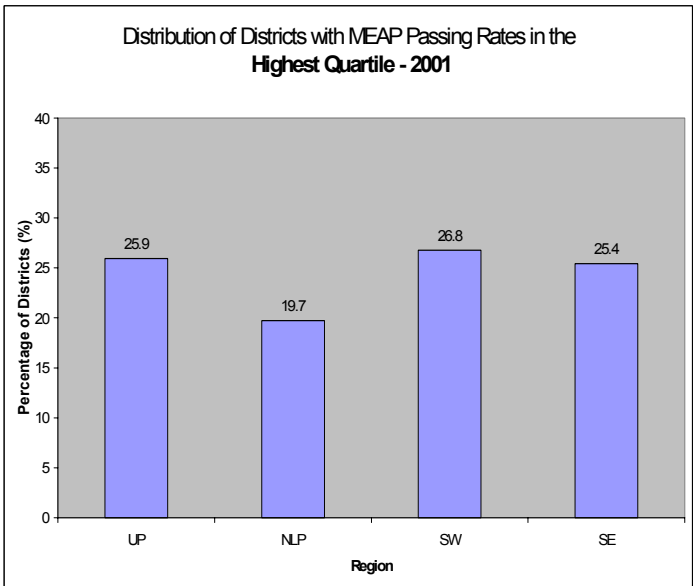


Figure 10



- The South West has the largest percentage of districts (26.8%) in the highest performance quartile, slightly greater than the Upper Peninsula (25.9%) and South East (25.4%).
- The Upper Peninsula has a noticeably higher percentage of districts (61.1%) in the two highest quartiles (i.e., performing above the state median) than the South West (48.6%) and the South East (51.2%).
- The Northern Lower Peninsula has the highest proportion of school districts (60.5%) in the two lowest quartiles. It is interesting to note that this region's MEAP performance ranks second highest among the four regions when based on individual test results (i.e., weighted average basis – see figure 5). This suggests that the school districts in this region with larger enrollments are outperforming the smaller ones.

Return on Resources™

Standard & Poor's has introduced the Performance Cost Index™ (PCI™), an analytical tool to gain a better understanding of the educational "return on resources" and the relationship between spending and academic performance. The PCI reflects the relationship between a given measure of student results (such as the MEAP passing rate), the associated test participation rate, and per-student operating expenditures. In other words, the PCI, expressed in dollars, reflects how much is spent, on average, for a certain amount of achievement. Because the PCI is a cost indicator represented in dollars, the lower the PCI, generally the more favorable the return. On its own, the PCI reveals little about an overall return on resources; rather, its value lies in its change over time and in comparison with benchmark PCIs.

In addition to deriving PCIs using unadjusted data, Standard & Poor's calculates an adjusted PCI to account for differences in the costs of providing educational services that may arise from district to district, whether as a result of geographic location, special student circumstances (reflecting the presence of special education, economically disadvantaged, or limited English proficient students), or a combination of these factors.

Regional Returns by Metropolitan Area

The following tables display Michigan's nine metropolitan areas, as defined by the U.S. Bureau of the Census. Each metropolitan area consists of at least one county and ranges in size from the Jackson metropolitan area, which contains Jackson County, to the six-county Detroit metropolitan area. In addition, for the purposes of this analysis, all school districts not located within a metropolitan area have been aggregated into a single region designated "non-urban."

MEAP Performance Cost Index by Metropolitan Area

PCIs based on the MEAP passing rate vary by metropolitan area. School districts in the Lansing-East Lansing metropolitan area yielded the lowest (most favorable) average MEAP PCI on both an unadjusted and an adjusted basis. Meanwhile, school districts in the Flint metropolitan area have experienced the strongest improvement (decrease) in their MEAP PCI between 1997 and 2001, due mainly to rising MEAP scores and participation rates.

Table 1

Metropolitan Area	2001 MEAP PCI-- Unadjusted (\$)	Average Annual Change 1997- 2001 (%)	2001 MEAP PCI-- Adjusted for Student Circumstances & Geographic Cost of Living (\$)	Average Annual Change 1997- 2001 (%)
Lansing - East Lansing	147.5	0.64	128.8	0.41
Grand Rapids - Muskegon - Holland	160.3	1.00	138.1	0.63
Flint	163.3	-1.91	145.7	-2.10
Ann Arbor	166.5	2.05	143.6	1.85
Jackson	166.4	-0.53	153.8	-0.8
Non-Urban	172.6	2.89	157.3	2.65
Benton Harbor	179.5	1.73	155.7	1.45
Saginaw - Bay City - Midland	177.6	0.44	151.2	0.12
Kalamazoo - Battle Creek	181.8	2.11	159.9	1.82

Detroit	191.3	1.78	166.2	1.54
Average District (statewide)	174.1	1.91	154.5	1.66

MEAP Results, Spending, and Student Poverty by Metropolitan Area

The formula for the Lansing-East Lansing area’s high return on resources—top MEAP passing rates and moderate spending levels. It should be noted that school districts in the Lansing-East Lansing metropolitan area have the lowest proportion of economically disadvantaged students.

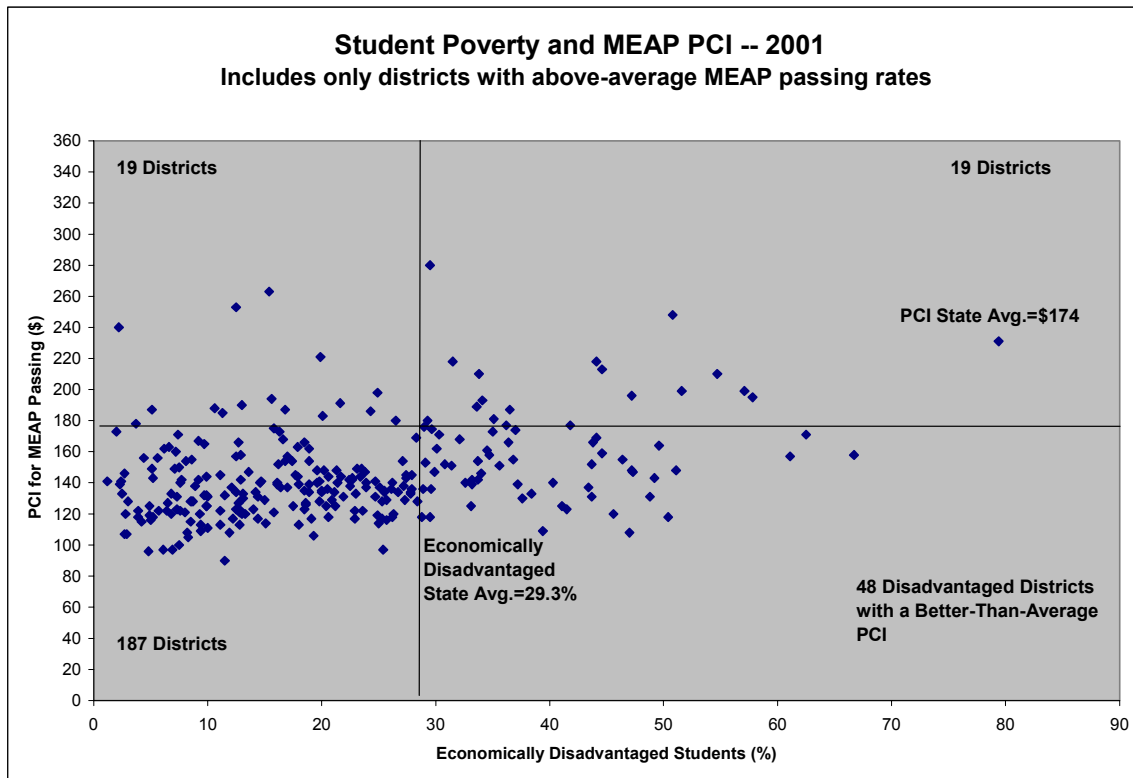
Table 2

Metropolitan Area	Corresponding Counties	2001 MEAP Passing Rate (%)	2001 Operating Expenditures (\$ Per Student)	Economically Disadvantaged Students (%)
Lansing - East Lansing	Clinton, Eaton, Ingham	62.0	7,248	17.4
Grand Rapids - Muskegon - Holland	Allegan, Kent, Muskegon, Ottawa	60.3	7,314	25.0
Flint	Genesee	57.1	7,222	27.2
Ann Arbor	Lenawee, Livingston, Washtenaw	56.6	7,177	17.6
Jackson	Jackson	51.9	6,783	25.9
Non-Urban	Various	55.4	7,273	36.3
Benton Harbor	Berrien	55.9	7,352	35.4
Saginaw - Bay City - Midland	Bay, Midland, Saginaw	57.0	7,308	28.8
Kalamazoo - Battle Creek	Calhoun, Kalamazoo, Van Buren	54.4	7,270	34.1
Detroit	Lapeer, Macomb, Monroe, Oakland, St.Clair, Wayne	56.7	7,877	21.6
Average District (statewide)		56.5	7,379	29.5

MEAP PCIs and Student Poverty

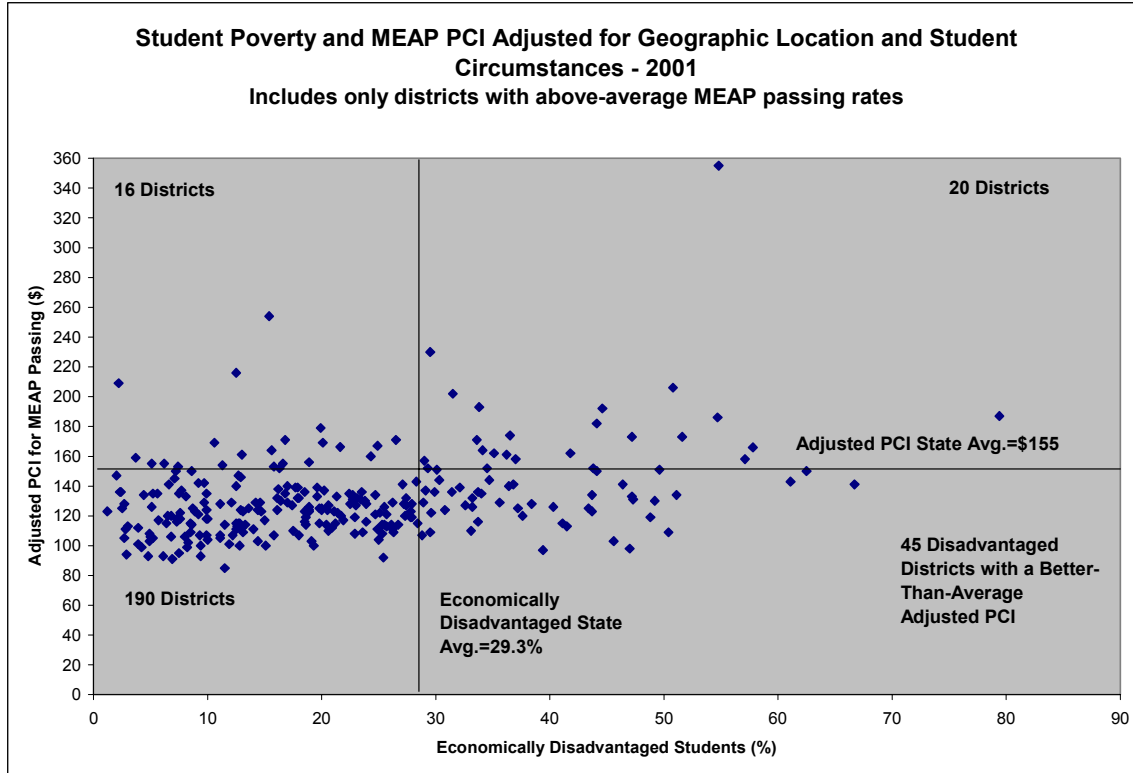
Even within metropolitan areas, PCIs vary significantly. *Figure 3* presents the PCIs of the 273 school districts with above-average MEAP passing rates (each dot on the scatter plot represents a district). As can be seen by the number of districts in the lower left-hand quadrant of the scatter plot, districts with below-average levels of economically disadvantaged students tend to have lower (more favorable) PCIs. Of the districts with below-average PCIs, 187, or 72%, also enrolled below-average levels of economically disadvantaged students. However, the 48 districts in the lower right-hand quadrant demonstrated favorable PCIs in 2001 while serving above-average proportions of economically disadvantaged students.

Figure 11



Because districts with above-average MEAP performance tend to be non-urban, adjusting the PCI for geographic location and student circumstances does not have a significant impact on the relative distribution of district PCIs (see Figure 12). In non-urban areas with higher proportions of economically disadvantaged students, adjusting the PCI for geographic location often offsets the effects of the adjustment for student circumstances.

Figure 12



Districts That Achieve More with Less

Standard & Poor’s recognizes the 39 districts in Michigan that generated favorable PCIs for five successive years. These districts have maintained PCIs that are among the lowest (most favorable) 20% statewide, while achieving MEAP results that exceeded state averages between 1997 and 2001. Of these districts, 28.2% are located in the Grand Rapids - Muskegon - Holland metropolitan area, whose four counties comprise less than 10% of the districts statewide. These districts may shed light on effective practices (e.g., curricular programs, instructional practices, managerial policies) that might be documented and replicated in other settings.

Table 3

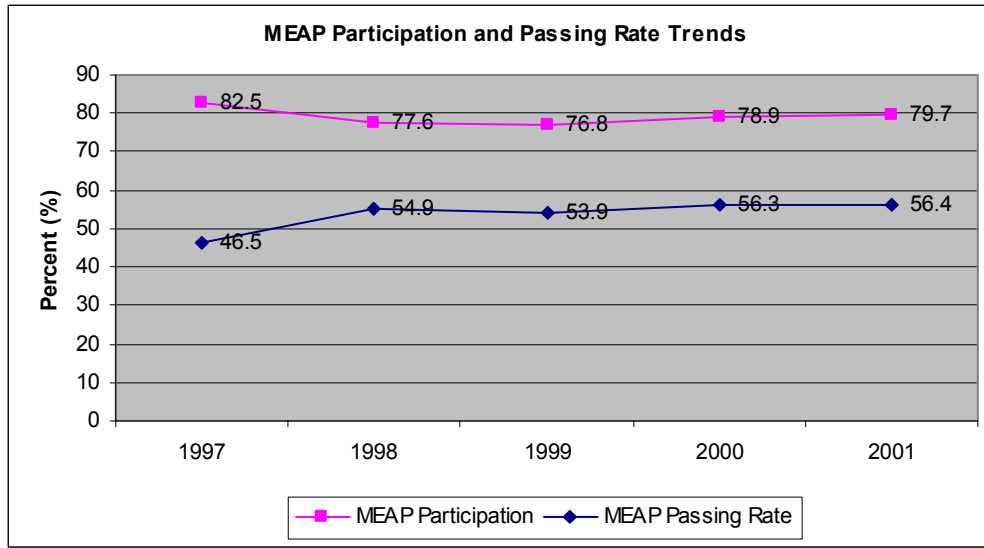
District	Superintendent	Metropolitan Area
Calumet-Laurium-Keweenaw Public Schools	Raymond Tiberg	None
Davison Community Schools	R. Clay Perkins	Flint
DeWitt Public Schools	Gerald Jennings	Lansing - East Lansing
East Grand Rapids Public Schools	James E. Morse	Grand Rapids - Muskegon - Holland
Flushing Community Schools	Barbara A. Goebel	Flint
Forest Hills Public Schools	J. Michael Washburn	Grand Rapids - Muskegon - Holland
Fowler Public Schools	Scott Koenigsknecht	Lansing - East Lansing
Frankenmuth School District	Michael Murphy	Saginaw - Bay City - Midland
Freeland Community School District	Linda L. Sanborn	Saginaw - Bay City - Midland
Goodrich Area Schools	Raymond C. Green	Flint
Grand Blanc Community Schools	Gary P. Lipe	Flint
Grandville Public Schools	Darlene Dongvillo	Grand Rapids - Muskegon - Holland

Gull Lake Community Schools	Robert H. Duke	Kalamazoo - Battle Creek
Hamilton Community Schools	James Kos	Grand Rapids - Muskegon - Holland
Hartland Consolidated Schools	Peter Caroselli	Ann Arbor
Haslett Public Schools	Robert Regan	Lansing - East Lansing
Hudsonville Public School District	Roxanne De Weerd	Grand Rapids - Muskegon - Holland
Ishpeming Public School District	Stephen Piereson	None
Laingsburg Community School District	Halsted R. Beatty	None
Lake Shore Public Schools (Macomb County)	John R. Brackett	Detroit
Linden Community Schools	Thomas Riutta	Flint
Lowell Area Schools	Jim White	Grand Rapids - Muskegon - Holland
Mattawan Consolidated School	James A. Weeldreyer	Kalamazoo - Battle Creek
McBain Rural Agricultural Schools	Daniel H. Bachman	None
Menominee Area Public Schools	Richard Daoust	None
Mona Shores Public School District	Terry L. Babbitt	Grand Rapids - Muskegon - Holland
New Lothrop Area Public Schools	Terence Lunger	None
North Muskegon Public Schools	Barbara Gowell	Grand Rapids - Muskegon - Holland
Norway-Vulcan Area Schools	Randall Van Gasse	None
Portage Public Schools	Pete McFarlane	Kalamazoo - Battle Creek
Portland Public School District	Charles V. Dumas	None
Rockford Public Schools	Michael Shibley	Grand Rapids - Muskegon - Holland
South Lyon Community Schools	William Pearson	Detroit
Spring Lake Public Schools	Larry Mason	Grand Rapids - Muskegon - Holland
St. Johns Public Schools	Richard Tait	Lansing - East Lansing
St. Joseph Public Schools	Jack Mansfield	Benton Harbor
Swan Valley School District	Richard Syrek	Saginaw - Bay City - Midland
Vicksburg Community Schools	Patricia Reeves	Kalamazoo - Battle Creek
West Ottawa Public School District	Rosemary Ervine	Grand Rapids - Muskegon - Holland
Williamston Community Schools	Gerald Stinnett	Lansing - East Lansing

Participation Rates on Standardized Tests

Consideration of participation rates when examining standardized test results provides a more complete understanding of performance than test scores alone. The proportion of students taking exams also indicates the degree to which students are excluded from or opt out of the exam, or are absent from taking the exam for other reasons. Moreover, participation rates on college preparatory measures indicate the extent to which students are being prepared for and expect to pursue higher education.

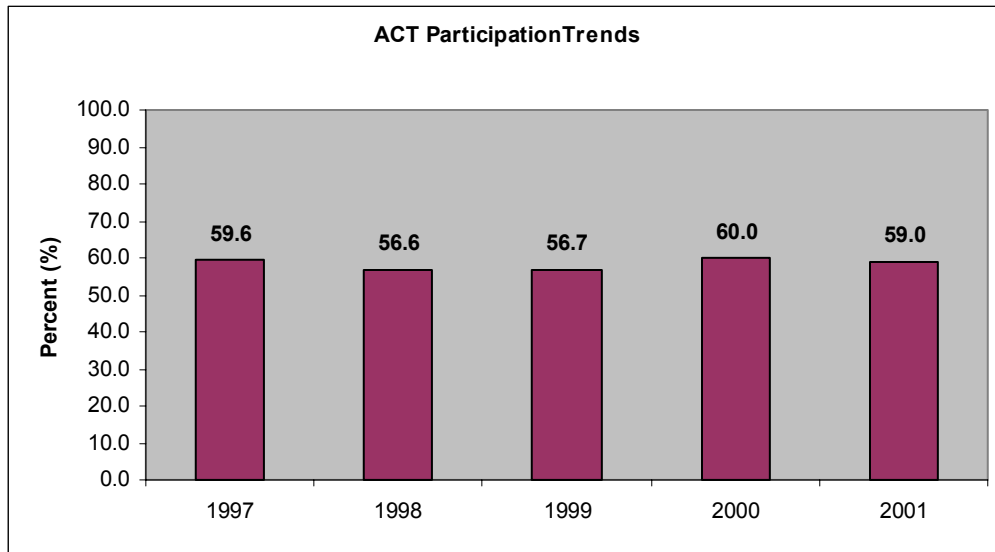
Figure 13



Statewide participation in the MEAP² has increased three consecutive years, to the 2001 average rate of 79.7% from 76.8% in 1999. However, MEAP participation remains below the five-year high of 82.5% in 1997. During the same period, MEAP passing rates increased by an average of 2.5 percentage points per year to 56.4% in 2001, from 46.5% in 1997—concurrent with the peak participation rate.

² MEAP participation and passing rates are based on MEAP tests that have been administered in the same grade levels and subject areas over the period analyzed.

Figure 14

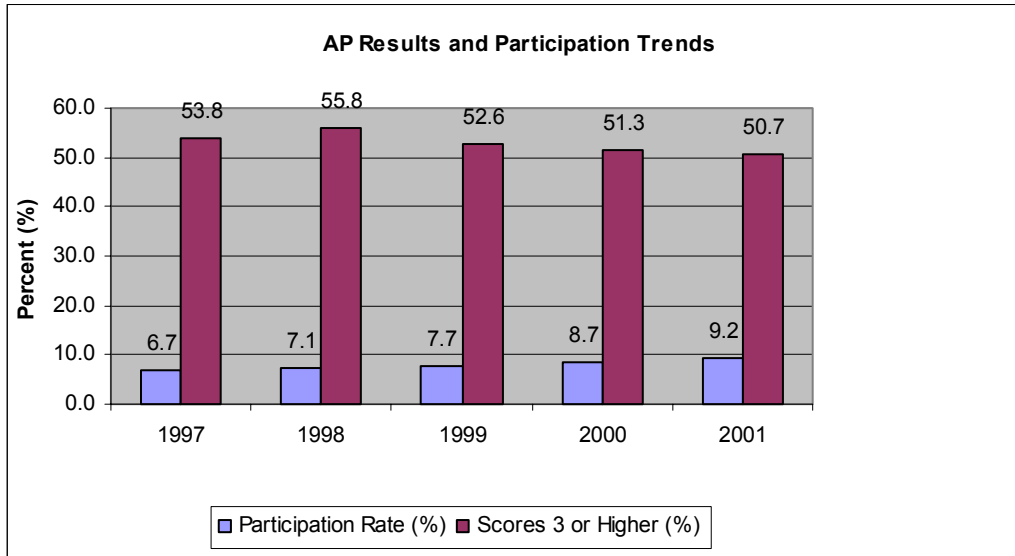


There has been relative stability in the average performance and participation of the state's school districts on the ACT Assessments. Over the five-year period analyzed, ACT participation averaged 58.5%, ranging from 60.0% in 2000 to 56.6% in 1998. Over the same time period, Michigan's ACT scores have remained relatively constant, with no net change in the average score of 21.0 between 1997 and 2001, a performance level consistent with the national³ average.

Like many midwestern states, Michigan school districts do not widely participate in the SAT. In fact, SAT participation rates decreased in Michigan to 4.6% in 2001 from 6.5% in 1997. As a point of reference, the highest average SAT participation rate among school districts in the state was 79.3% in 2001, while the lowest was 0.0%.

³ National scores for the ACT and SAT should be interpreted with caution, as states differ significantly in their participation on these standardized tests.

Figure 15



Michigan's participation rates on Advanced Placement (AP) exams increased steadily over the period examined, to a high of 9.2% in 2001 from 6.7% in 1997. At the same time, the percentage of AP exams receiving a score of three or higher⁴ decreased slightly in 2001 to 50.7%.

Reflecting higher statewide participation in AP exams, the proportion of districts reporting AP participation rates of 0.0% declined during the five-year period, to 27.9% in 2001 from 37.9% in 1997. Additionally, the proportion of districts reporting participation rates of 20.0% or greater increased to a high of 14.4% in 2001 from a low of 6.5% in 1997. As a point of reference, the highest AP participation rate among Michigan's school districts in 2001 was 50.0%.

Generally, more students in Michigan are taking more standardized tests. MEAP participation has risen for a third consecutive year, ACT participation remains above-average from a national and regional perspective, and AP participation is at a five-year high.

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⁴ A minimum score of 3 is required by most colleges in order to receive college credit and/or advanced placement for the course. Many highly selective colleges require scores of 4 or 5.