Michigan's Recent School Finance Reforms: A Preliminary Report

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Historically, Michigan has relied more heavily than most other states on local taxes and property taxes as sources of education finance. In the 1990–1991 school year, Michigan was third among states in the share of school spending financed locally (65.2 percent).[1] Over the past two decades there have been more than ten property-tax-cut initiatives placed on statewide ballots.

In the summer of 1993 the legislature passed a bill that abolished, with no source of revenue replacement specified, all use of local property taxes (at the time, over $6 billion) for school operating expenditures. In late December, both houses passed, and the governor signed, a financing bill that contained two options for voters to choose from, either of which would have replaced approximately all of the lost revenue.

Here are the main provisions of the new system, as passed by the voters in March, 1994: (i) a combination of an increased state sales tax, a statewide property tax on all property, a (nearly) required local property tax on nonhomestead property,[2] a sharp increase in the tobacco tax, and a real-estate transfer tax; (ii) a system of state foundation grants to school districts that would, when fully implemented, put a floor under spending of $5,000 per pupil in 1994–1995, while preserving nominal differences in spending per pupil among districts that currently spend $5,000 per pupil or more; (iii) strengthened requirements for an academic core curriculum, pupil performance standards, and minimum numbers of school days; (iv) provisions for authorizing charter schools, schools of choice that would be subject to the statewide curriculum and testing requirements but would not have to use certified teachers. (A Michigan court ruled these schools unconstitutional, but the legislature has since rewritten the law to meet the court's objections.) Thus, the new law switched Michigan from a modified power-equalization system to a modified foundation system.

I. Power Equalization in Michigan: The Ancien Régime

Under the power-equalization system that was in effect through the 1993–1994 school year, the state permitted local school districts to assess whatever property-tax millage rates they wanted, then supplemented

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[1]*Source:* U.S. Department of Education, National Center for Education Statistics, Common Core of Data Survey.

[2]Districts that do not levy this tax, which must be the lesser of 18 mills or the 1993–1994 millage rate, may not raise any other local revenue.

the revenue raised by low-wealth districts, moving the system toward wealth neutrality across districts. Districts whose state equalized value (SEV—by law, one-half of market value) per pupil exceeded a target amount had their state grants taxed away, according to a formula. Once the net grant was zero, there was no further grant or tax.

About one-third of the richest districts were thus "out of formula" and became powerful lobbyists against the system of state aid. Because the wealth elasticity of demand for education exceeds the price elasticity in absolute value (see e.g., Andrew Reschovsky, 1994), power equalization did not lead to equal spending per pupil across districts, even among districts that were "in-formula."

II. The Foundation Grant System: Brave New World

In the new system, local districts (with a few exceptions) have almost no control over their spending. The allocation formulas derive from two numbers: the *basic foundation allowance*, which is $5,000 per pupil in 1994–1995, and the school aid fund index (SAFI), which determines the basic foundation allowance in future years. The SAFI for year t is computed as total statewide revenues per pupil for all taxes that are earmarked for the school-aid fund, divided by the 1994–1995 level of this ratio.

There are three different types of districts in the new scheme. The first group contains the 365 districts (786,994 students) that spent less than $4,772 per student in 1993–1994. These will be brought up to the basic foundation allowance over the next few years. Second, there are 122 districts (713,285 students) that spent between $4,772 and $6,500 per pupil in 1993–1994. Districts in this group will be allowed to increase their spending by from $228 (for the lowest-spending) to $160 (for the highest-spending). State grants will cover all spending up to $6,500 per pupil. After 1994–1995, both allowed spending and the state grant will increase by the same dollar amount as the basic foundation allowance. A third group of 37 districts (162,202 pupils) spent $6,500 or more in 1993–1994. These districts each get $6,500 per student in 1994–1995, increased by the same absolute amount as the basic foundation allowance in subsequent years. These high-spending districts are allowed to supplement their foundation grant by levying local taxes on homestead property, provided that their revenue per pupil does not exceed the 1994–1995 level plus the dollar increase in the basic foundation allowance in future years or twice the basic foundation allowance.

Despite some state-imposed requirements that districts fund a portion of what had been state spending, the changes will sharply increase the spending of the lowest-spending districts. The changes also will freeze the nominal dollar differences in spending per pupil for all of the districts currently spending between $5,000 and $6,500, and, as we shall see, will reduce real spending in districts currently spending above $6,500 per student.

III. Variance of Per Pupil Spending Under the Old System

In the old power-equalization regime, Michigan fell far short of wealth neutrality. While there was a great deal of noise in the relationship, there was a clear positive association between spending per pupil and wealth per pupil (the univariate regression coefficient of 1992–1993 spending per pupil on SEV per pupil is 0.0083 with a t ratio of 21).

Controlling for Cost Differences.—Because the cost of providing education varies across districts, we use a variety of methods (Kerri Ratcliffe et al., 1990; Thomas Downes and Thomas Pogue, 1994) to adjust for cost. The results are summarized in the first panel of Table 1. (For discussion of these methods, including an explanation of why Real3 is our preferred adjustment, see Courant et al., 1995.)

Because costs tend to be low in low-spending districts in Michigan's northern regions, correcting for cost differences

TABLE 1—PREDICTED PER-PUPIL SPENDING IN 1994 DOLLARS

Measure	Mean	SD	CV	Coefficient (t ratio)
A. *Old System:*				
Money terms	4,948.04	1036.40	0.209	0.0083 (20.79)
Real1	4,948.04	825.72	0.167	0.0073 (25.36)
Real2	4,948.04	652.34	0.132	0.0073 (60.77)
Real3	4,948.04	802.28	0.162	0.0064 (20.33)
Real4	4,948.04	796.60	0.161	0.0067 (22.11)
B. *New System, Assuming Richer Districts Spend Maximum Allowed:*				
Money terms	5,668.07	683.23	0.121	0.0056 (21.46)
Real1	5,668.07	575.07	0.101	0.0047 (21.78)
Real2	5,668.07	529.22	0.093	0.0047 (25.43)
Real3	5,668.07	720.33	0.127	0.0040 (11.87)
Real4	5,668.07	935.20	0.165	0.0043 (9.43)
C. *New System, Assuming a − 0.5 Price Elasticity of Demand for Education:*				
Money terms	5,603.96	459.46	0.082	0.0033 (17.29)
Real1	5,603.96	417.57	0.075	0.0026 (13.64)
Real2	5,603.96	464.52	0.083	0.0025 (11.63)
Real3	5,603.96	667.50	0.119	0.0019 (5.61)
Real4	5,603.96	958.36	0.171	0.0023 (4.77)

greatly reduces the standard deviation of per-pupil spending. The cost corrections change the coefficient of variation from 0.21 to 0.16, and also lower the regression coefficient by about one-quarter. Both the spread of school spending and the deviation from wealth neutrality under the pre-reform system are not as large in real terms as they appear in money terms.

IV. Real Spending Differences Under the New Law

To predict cross-sectional variance in per-pupil spending under the new system, we look at the distribution of spending that can be expected in 1999–2000, by which time all districts will be spending at least the basic foundation allowance. We present all of the analysis in 1994 dollars, and we adopt the assumptions used by the Congressional Budget Office (CBO), (1994) that nominal income will grow at 5.1 percent per year for the next five years and that the CPI will grow at an annual rate of 2.6 percent.

A. *Static Effects, Assuming No Behavioral Response*

Assuming that current law stays in effect, changes in the levels and distribution of real spending will be determined almost entirely by the relationships among SAFI, changes in the student population, and inflation. Extrapolating from the period 1979–1992, the taxes used to compute SAFI have an elasticity of 0.937 with respect to nominal income. Using the CBO projections, and adjusting for growth in the student population,[3] we project the basic foundation allowance in 1999 to be $5,385 in 1994 dollars. The allowance grows more slowly than real income (1.5 percent per year vs. 2.6 percent per year) over this period. During a recession, given any inflation and any population growth at all, the elasticity of 0.937 with respect to nominal income implies that real spending per pupil would fall. Summary statistics on the distribution of spending are given in panel B of Table 1.

The plan reduces the variance of spending per pupil, largely by increasing the spending of low-spending districts, in some cases by nearly $2,000 per pupil. Because

[3]Estimates of student population growth come from *Enrollment Projects For Michigan Public School Based on 1982–83 through 1992–93 Membership Data* (College of Education, Michigan State University).

this change in revenue is so great, we expect that many of these districts will be forced off their demand curves, and we expect them to find ways to spend money on activities other than schools. We also expect the emergence of purveyors of educational products competing for the extra funds of these newly rich districts.

B. *Dynamic Effects, Pressure to Reduce Supplemental Millages in High Spending Districts*

The new financing rules generally increase the tax price facing voters in the districts that are now above $6,500 per pupil. In the old days, these districts could change their spending by levies on *all* taxable property in their districts. Now the margin is entirely homestead property. For 23 of the 37 districts, the share of homestead property is less than 50 percent, implying more than a doubling of the apparent tax price for education facing homeowners. (Unless homeowners can be be persuaded that only fixed factors can bear local taxes.)

In order to estimate the effect of these increases in tax prices, we assume that the price elasticity of demand for public education is -0.5 and that the reform package has no net effect on real incomes, so we are moving along districts' demand curves, up to a kink point. For spending above the SAFI-adjusted $6,500, the price of education for homeowners changes by a factor equal to the reciprocal of the share of owner-occupied housing in total property. For spending below SAFI-adjusted $6,500, for these districts, the price is zero. Taking the static spending estimates for 1999 as a starting place, we apply the estimated price change and assumed price elasticity of demand. Then we predict each district's spending to be either the resulting amount or SAFI-adjusted $6,500 ($7,045), whichever is more.

Results of this exercise are shown in panel C of Table 1. There is somewhat lower mean spending ($5,604 vs. $5,668, 1994 dollars) and substantially lower maximum spending ($8,836 vs. $10,376) than under the static assumptions. Moreover, the reduction in spending at the top reduces the coefficients of variation: 0.08 for nominal spending and 0.12 for Real3. A lower assumed elasticity (which is plausible) would imply smaller cuts at the top, but still cuts.

C. *Pressures for Change in the Basic Foundation Allowance*

So far, our analysis has assumed that the reforms stay in place indefinitely. This may not happen. The basic foundation allowance is a statutory creation of the state legislature, and the taxes earmarked for schools account for only about 82 percent of state grants to local districts. Every year, the state will have to appropriate extra money, out of general revenues, in order to fully fund the 1993 formula. The unidentified revenue needed amounts to about $1.5 billion. In 1994–1995 the main source of these funds is accumulated surpluses, which will be exhausted by next fiscal year. The legislature can meet the future shortfall, which is basically a structural deficit of 5–10 percent of state revenues, in any of a number of ways. The basic grant could grow by less than SAFI, nominal spending differences across districts could be reduced, or the state-mandated millages could rise. This last possibility, like any other tax increase, seems implausible in the current political climate.

In California, which preceded Michigan by 15 years in going to a foundation plan for financing elementary and secondary education, Fabio Silva and Jon Sonstelie (1993) have observed that per-pupil education spending rose much less rapidly than in the rest of the country. Silva and Sonstelie's explanation for the relative decline in California spending depends mostly on the fact that a uniform foundation plan forces high-income taxpayers off their demand curves for public education. In contrast, the Michigan reform, at least in prospect, preserves a great deal of the existing inequality in spending per pupil, especially at the upper end of the spending distribution. This weakens the Silva-Sonstelie mechanism. Still, it remains interesting to ask what is likely to

happen to the basic foundation level, given the rules that permit ongoing inequality of spending in Michigan. In a median-voter model, this reduces to figuring out the educational demand of the statewide median voter for the *minimum* level of education spending per pupil, with the added complication that a dollar change in the minimum leads to the same dollar change in all districts. We also note that the relevant voting population is likely to be quite different at the state level than it was in (low-turnout) school millage elections. We have not modeled the social choice process, as yet. We mean to do so, and to make predictions about the overall level of state spending over time.

D. *The Formula Itself*

Over time, as some districts get richer and others poorer, richer districts will likely press to be able to increase spending, and poorer ones may press to substitute other activities, public and private, for schools. To the extent that these pressures induce the legislature to permit local financing (and unfinancing) at the margin, the basic foundation system itself could tend to unravel.

V. Other Economic Effects of the Reforms

The finance reforms change the incidence of the state tax system in complicated ways. Here we briefly address only two points. First, tax effects on business location figured prominently in the governor's rhetoric regarding finance reform. The reforms will probably have only modest effects on interstate decisions (the average cut is small, given the state tax on nonhomestead property), although they clearly reduce the amount of intrastate variation in taxes that would affect the spatial allocation of business capital.

The second issue involves the standard public-finance result that taxes on mobile capital exceeding the level consistent with benefit taxation must fall on immobile factors. Arguably, local schools are not of much direct benefit to mobile capital, so the taxes on mobile capital in the new law are probably too high. Even to the extent that good schools permit firms to recruit employees who value good schools, there are important spillover effects across jurisdictions. The schools in a high-income suburb can be good, even as the schools across the street from the factory are not. From this perspective, by cutting taxes on homesteads to six mills while mandating 24 mills for businesses, the Michigan reforms got it exactly backwards.

VI. Conclusion

The reforms will reduce the variance in education spending, both by increasing the revenues of low-spending districts and by decreasing the spending of richer districts. By substituting slowly growing state taxes for local taxes, they may reduce overall state spending on education in the long run, as seems to have happened in California. However, unlike California's foundation-grant system, the Michigan system preserves substantial interdistrict variation in school financing which allowed the law to be politically feasible and may reduce the extent to which overall school spending is reduced. The charter-school provisions may also become important over time, by increasing flexibility and in ways that remain to be seen.

The rigidity built into the system—in particular, the preservation of nominal spending differences in spending per pupil across districts—will surely require some adjustment over the long term. For the time being, however, the new system decreases inequality and provides the promise, after 20 years of failed reform efforts, that policymakers might focus on what schools do rather than on how they are financed.

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