PUBLIC SCHOOL SPENDING AND STUDENT ACHIEVEMENT: THE CASE OF NEW JERSEY

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Schooling legislation in the United States predates independence. In 1647 Massachusetts Bay Colony officials passed legislation requiring towns of at least 50 families to hire a teacher and towns of at least 100 to establish a grammar school (Sparkman 1994). A tradition of state government oversight, but local financing and control, characterized public school education in the United States until recent years. In 1920, 80 percent of the revenue for public school operation came from county and local taxes, in 1950, 57 percent, and in 1996, 43 percent.[1] State governments now provide the funds for about half of the public school expenditures in the United States.

One reason for the increase in state financing of public education has been the concern over the inequality in per pupil expenditures across school districts. In some state legislatures this concern has been motivated by the courts. Most notable of the early school finance decisions was *Serrano v. Priest* in 1971, in which the California Supreme Court found unconstitutional school expenditure differentials that result from school district wealth disparities. The U.S. Supreme Court discouraged such challenges in 1973 in *San Antonio Independent School District v. Rodriguez*. In that decision, the Court recognized the right to local control of public schools ("each locality is free to tailor local programs to local needs") and the right to unequal school expenditures ("local control means . . . the freedom to devote more money to the education of one's children"). The Court found that "education is not among the rights afforded explicit or implicit protection under the Constitution."

Cato Journal, Vol. 19, No. 1 (Spring/Summer 1999).

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[1]The 1920 figures are from National Education Association (1996); the 1950 and 1991 figures are from the U.S. Bureau of the Census (1998).

Challenges to the local financing of public education and to educational expenditure inequalities have continued, however, based on state constitutional provisions. Since *Serrano* the local government financing of public education has been challenged in every state of the union.[2] In 1994, for example, the school finance systems in over half of the states were in litigation in state courts.[3] In New Jersey there has been a continuous history of legal challenges to local school financing since *Serrano* that parallels the activity in many other states. Our purpose in this paper is to review those legal proceedings and to use data from New Jersey public school districts to evaluate the effect of increased educational expenditures on student achievement—both in general and, in particular, for students in poor urban school districts. This research is important because increased state education funding, particularly to poorer local school districts, is the goal of probably all legal challenges to local school finance. If increased funding does not increase achievement, the inequalities in per pupil expenditures that characterize local government financing of public schools are less subject to challenge under the education clauses or equal protection clauses of state constitutions.

Given the amount of litigation over inequalities in public school expenditures, it is surprising that the literature on public school expenditures and student performance is not supportive of a strong relationship between the two. Hanushek's (1986, 1989, 1997) reviews of the expenditure-achievement literature are the most widely cited. He concludes that this research shows no systematic relationship between increased expenditures on public education and educational performance. Hanushek does not argue that all schools provide education of the same quality or that schools can provide good education with infinitesimal resources. His conclusion is that variations in student achievement between schools are not related to the expenditure levels that have characterized public school education in the United States in recent decades. He summarizes his case most dramatically by pointing out that student performance on achievement tests in the United States has been flat for 30 years while real expenditures per pupil have increased threefold.[4] Downes (1992) has completed research specific to the issue of school finance equalization that is

[2]Mcmillan (1998) and Jensen (1997) provide recent reviews of school finance litigation in state courts.

[3]Jensen (1997).

[4]Krueger (1998) takes issue with the conclusion that increases in school resources are not associated with improved academic performance and presents evidence and summarizes research to the contrary. Hanushek (1998), however, challenges this work.

consistent with Hanushek's conclusions. He finds that per pupil education expenditures in California since *Serrano* have converged, but student achievement has not. Peltzman's (1993, 1996) research is also relevant. He finds that the declines in student achievement in the 1960s and 1970s were most pronounced in those states that depend more heavily on state (rather than local) financing of public education.

School Finance Litigation in New Jersey, 1973–98

The New Jersey Constitution requires the maintenance of a thorough and efficient system of free public schools for the instruction of all the children in the state between the ages of 5 and 18. In 1973 the New Jersey Supreme Court found the system of public school financing unconstitutional because heavy reliance on local property tax revenues resulted in substantial disparities in per pupil expenditures between districts (*Robinson v. Cahill*). The similarity to *Serrano,* decided two years earlier, is clear. The 1975 New Jersey Public School Education Act moderated to some extent the per pupil expenditure inequalities between school districts by increasing state aid to poorer school districts. However, the 1975 legislation was challenged in 1981 because of persistent inequalities in per pupil expenditures. This litigation culminated in the *Abbott* decision of 1990.

In that decision the New Jersey Supreme Court found the school finance system unconstitutional as applied to the poorest school districts and directed the state to guarantee the funding of education in property poor urban school districts as ''substantially equivalent'' to the funding of education in very affluent suburban districts. The court classified 28 of the state's school districts as both urban poor and failing to provide a thorough and efficient education. These districts provided education to 25 percent of the 1.1 million primary and secondary public school students in New Jersey and to 71 percent of the minority student population. The property-rich suburban school districts designated by the court provided education to 17 percent of the state's public school students. The court cited the high failure rates among ninth graders in the poor districts on the high school proficiency test as indicative of the failure to provide a thorough and efficient education. In the poorer districts the pass rate was less than 50 percent on each of the separate reading, mathematics, and writing tests.[5] In the richer districts the pass rate exceeded 90 percent on each test. Statewide, 83 percent of students passed the reading test,

[5]In Newark 41 percent of the ninth graders who took the test passed reading, 31 percent passed math, and 39 percent passed writing. In Camden the respective pass rates were 36 percent, 28 percent, and 44 percent.

72 percent the math test, and 77 percent the writing test. The court noted that school expenditures in the property-rich school districts were $4,029 per student (1984–85), 40 percent more than the $2,880 spent in the poorer districts. These figures are net of a substantial amount of federal aid that favors the poorer districts.[6] Property wealth per student averaged $63,066 in the poor districts and $360,101 in the affluent districts.[7]

The court-ordered public education system that funded certain poor school districts at the level of the wealthiest districts and, by implication, at a level substantially higher than the majority of New Jersey school districts was not without precedent in the United States. Court decisions mandating disproportionate funding in favor of poor school districts had been handed down in 1989 in Montana, Kentucky, and Texas—and at least one observer heralded a new wave in state court school finance decisions (Thro 1994). The New Jersey Supreme Court in *Abbott* emphasized that public school finance in New Jersey was a state, not a local, responsibility: "All of the money that supports education is public money . . . authorized and controlled, in terms of source, amount, distribution, and use, by the State."

The New Jersey state government responded to the *Abbott* decision with the Quality of Education Act of 1990, which substantially increased state aid to poor urban school districts designated by the New Jersey Supreme Court. The court ruled in 1994, however, that this legislation was also unconstitutional because it failed to *guarantee* substantial equivalence in expenditures per pupil between special needs school districts and the richer districts. The court ruled similarly in 1997 in response to 1996 state legislation that was drawn to meet the "thorough and efficient" constitutional standard by guaranteeing minimum educational standards in all school districts. In 1998, however, the court backed off its expenditure equalization requirement between poor and wealthy districts, but ordered the state to provide full-day kindergarten and half-day preschool for three and four year old children in the poor districts and to make substantial building repairs in these districts. Although the *Abbott* equalization mandate is not binding on the state government at this time, we make use of its division of New Jersey school districts into "special needs," "rich

[6] Federal aid to poorer districts was as high as $808 per student in Newark, $480 in Trenton, and $394 in Camden (1984–85). The figures are also net of transportation aid, categorical aid (special education, compensatory education, and bilingual education) and any other state aid other than equalization aid.

[7] All of the figures cited in this paragraph are from *Abbott v. Burke* (1990).

suburban,'' and ''other'' districts in analyzing the effect of expenditures on student achievement.

Data and Methods

The New Jersey Department of Education has been releasing data on New Jersey public schools since the 1988–89 school year as part of a report card system to hold ''educators, parents and communities accountable for student academic achievement and fiscal efficiency'' (New Jersey Dept. of Education 1996:1). We use data from the 1988–89, 1992–93, and 1994–95 report cards to analyze the impact of school expenditures on the performance of New Jersey high school students. Our research strategy is to relate measures of achievement to per pupil expenditures, to student characteristics (race and ethnic composition, mobility) and community characteristics (median family income, percent of individuals over 25 with four-year college degree). Some of the models are of the value-added form, with cohort specific school achievement measures from previous years as right-hand-side variables. Our unit of observation is the individual high school.[8] We allow for the simultaneous determination of school achievement and school expenditures in our estimates. That is, we recognize that levels of school achievement may influence funding decisions as well as vice versa.[9]

Definitions and summary statistics for important variables used in this study are presented in Tables 1 and 2. Report card data for the 1988–89 and 1994–95 school years are emphasized. The summary statistics show a per pupil expenditure advantage for the court designated rich suburban high schools in 1988–89. Rich suburban spending was $6,044 per student as compared to $5,098 in the special needs high schools and $5,322 in the remaining high schools. By 1994–95 per pupil spending in the special needs districts ($9,146) exceeded the category of remaining high schools ($8,960) but was short of

[8]Because per pupil expenditure data are reported at the school district level in the report card data, each high school in a multiple high school district is assigned the district expenditure average. About 25 percent of our observations (high schools) are from multiple high school districts.

[9]We assume exogenous determinants of school district expenditures include the aforementioned measures of community income and education levels and the race and ethnic composition variables. We assume further that the property tax base is positively associated with school expenditures and that the proportion of the tax base that is residential is negatively related to expenditures because local resident support of school budgets should increase with the share of the tax base accounted for by nonresidential property owners. These last two variables identify the school achievement structural relationships.

TABLE 1

VARIABLE DEFINITIONS

Exp	Total expenditures per pupil in the school district in the school year excepting transportation costs.
HSP	Percent of grade 9 district students passing all three components (reading, mathematics, writing) of the high school proficiency test in 1988–89; percent of grade 11 students passing the three components in 1994–95.
SAT	Mean SAT score (math + verbal) for high school seniors taking the test.
PctSAT	Percent of high school seniors taking SAT.
Notengl	Percent of high school students where English is not spoken in the home.
Arrive	Percent of new students entering the high school during the school year.
Leave	Percent of students leaving the high school during the school year.
Black	Percent of high school students that are black, 1992–93 school year.
Asian	Percent of high school students that are Asian, 1992–93 school year.
Hispanic	Percent of high school students that are Hispanic, 1992–93 school year.
Medinc	Median family income for the school district municipalities, from 1990 Census.
Collgrad	Percent of persons 25 years and older in the school district municipalities with a four-year college degree, from 1990 Census.
PctHS	Percent of district students that are high school students.
Mathtest, Readtest	Competence rates for 1991 eighth grade early warning tests in mathematics and reading.
Propval	State equalized value of propery tax base per capita of the school district municipalities, 1991.
PctRes	Percentage of the property tax base of the school district municipalities that is residential, 1991.

TABLE 2

MEANS (AND STANDARD DEVIATIONS) OF IMPORTANT VARIABLES BY COURT DESIGNATED CATEGORIES, NEW JERSEY SCHOOL DISTRICTS, 1988 AND 1994

	Special Needs	Rich Suburban	All Other
Exp88	5,098 (737)	6,044 (840)	5,322 (976)
Exp94	9,146 (1,155)	10,428 (2,027)	8,960 (1,657)
HSP88	62.8 (20.3)	96.3 (2.8)	89.7 (9.2)
HSP94	45.4 (24.5)	90.9 (5.0)	78.1 (10.9)
SAT88	723 (94)	981 (41)	881 (56)
SAT94	732 (102)	1,007 (42)	885 (62)
PctSAT94	56.9 (16.1)	90.1 (5.8)	71.8 (12.2)
Black	47.7 (36.2)	3.4 (5.3)	10.2 (14.9)
Asian	2.4 (4.2)	9.0 (7.2)	4.8 (5.3)
Hispanic	24.6 (25.0)	2.2 (2.1)	7.2 (11.3)
Notengl94	5.8 (7.8)	1.5 (1.3)	1.9 (2.6)
Arrive94	14.5 (12.9)	2.5 (2.0)	5.9 (12.1)
Leave94	24.4 (20.5)	3.2 (2.6)	7.8 (8.5)
Medinc	31,663 (5,581)	74,673 (12,434)	49,445 (8,924)
Collgrad	8.0 (4.3)	31.6 (5.8)	15.8 (6.1)
Mathtest	25.0 (15.9)	77.8 (8.0)	58.4 (13.5)
Readtest	37.8 (18.0)	87.4 (5.0)	72.7 (11.2)
PctRes	53.3 (15.4)	75.1 (11.9)	70.4 (12.1)
Propval	31,958 (15,194)	112,045 (42,812)	65,113 (29,873)

affluent suburban spending ($10,428). All of the figures are inclusive of federal aid and most state aid.

Student achievement variables collected in the report cards for high school students are SAT scores and pass rates on the high school proficiency test (HSP). Recall that low scores on the HSP tests in the urban poor districts was cited by the New Jersey Supreme Court in *Abbott* as an indicator of educational failure. The HSP variables differ in the 1988–89 and 1994–95 report cards. Ninth graders took the HSP exam in 1988–89, and their pass rate is reported in the 1988–89 report card. The HSP exam was not taken until the eleventh grade after 1993–94 and, thus, the HSP pass rate is reported at grade eleven in the 1994–95 report card. Furthermore, the HSP exam was made more demanding in the 1993–94 revision, so the eleventh grade pass rates are lower than the ninth grade pass rates on the earlier exam.

The data base constructed for this research is one of the richest that has been used in the analysis of school expenditures on school achievement at the high school level. Junior year achievement mea-

sures are available for individual high schools in New Jersey as are eighth grade achievement measures for the 1994 junior year cohort. Student mobility and student race and ethnicity are also available at the high school level. Expenditures are at the district level, but three-quarters of our observations are from districts with only one high school. Municipal finance data that include residential and nonresidential property tax bases have been matched to the school districts, and the simultaneous determination of achievement and expenditures can be considered.

Regression Results

The first four regressions in Table 3 show the results of regressing the four achievement variables (HSP pass rates and SAT scores in 1988–89 and in 1994–95) on variables measuring the race and ethnic composition of the student body,[10] student mobility, and the median income and college graduation rate for the school district municipality. It is noteworthy that these variables largely outside the influence of public school policy explain between 67 and 83 percent of the variation in the school achievement variables. Adding per pupil expenditures to these models in regressions 5–8 as an exogenous variable, and to regressions 9–12 as an endogenous variable,[11] does not increase the explanatory power of the models and does not narrow the race and ethnic achievement gaps. Moreover, in none of the specifications are per pupil expenditures positively related to achievement.[12] The

[10] Race and ethnic composition of the student body by school is only available for the 1992–93 school year and these proportions are assumed to hold for the 1988–89 and 1994–95 school years.

[11] Exogenous variables used to generate the predicted values for the per pupil expenditure variables in a two-stage least squares approach are Black, Hispanic, Asian, Medinc, Collgrad, Notengl, Arrive, Leave, PctHS, Propval, and PctRes. The school district enrollment mix (PctHS) is controlled for when expenditures is an independent variable because high school education is more costly than primary school education. The Hausmen-Wu test for per pupil expenditures as an endogenous variable in model specifications 5–8 gives F values that approach but do not reach critical values for statistical significance. The per pupil expenditure reduced forms are available from the authors on request. The t statistics of the property tax base and the residential share of the tax base, the exogenous variables excluded from the achievement equations, are 4.0 and −1.8 for 1988 per pupil expenditures and 2.6 and −2.8 for 1994 per pupil expenditures.

[12] This remains the case when the percent of eligible seniors taking the SAT exams is added to the SAT models as an endogenous variable. Powell and Steelman (1996) have shown that estimates of the relationship between SAT performance and school expenditures at the state level are sensitive to the proportion of eligible students taking the exam. The high SAT score states of Iowa and North Dakota, for example, have low proportions of test takers which are, presumably, the better students. Powell and Steelman report 1993 average combined SAT scores for Iowa and North Dakota to be 1103 and 1101, but with only 5% and 6% of high school seniors taking the exam. The relationship is more complicated, however, with high schools of the densely populated and geographically small state of New

TABLE 3

RESULTS OF REGRESSING MEASURES OF SCHOOL ACHIEVEMENT ON STUDENT AND COMMUNITY CHARACTERISTICS AND PER PUPIL EXPENDITURES, NEW JERSEY HIGH SCHOOLS, 1988–89 AND 1994–95

Model	1 HSP88	2 SAT88	3 HSP94	4 SAT94
Black	−.3 (−10.0)	−1.5 (−11.5)	−.4 (−16.0)	−1.8 (−14.0)
Hispanic	−.1 (−.7)	−1.2 (−4.1)	−.3 (−5.9)	−2.1 (−9.3)
Asian	.2 (1.5)	1.4 (2.1)	−.003 (−0.1)	1.0 (2.2)
Medinc	.00001 (1.2)	.0004 (1.1)	.00005 (.8)	.0006 (1.8)
Collgrad	.1 (.6)	4.0 (6.9)	.4 (3.2)	4.0 (6.7)
Notengl*	−.9 (−3.5)	−5.2 (−3.9)	−.5 (−3.2)	−2.1 (−2.7)
Arrive*	−.07 (−.3)	−1.0 (−1.0)	−.1 (−1.6)	.2 (.6)
Leave*	−.6 (−4.6)	−1.4 (−2.4)	−.3 (−5.4)	−.2 (−.7)
Constant	91.3 (31.0)	838.3 (63.4)	78.9 (29.0)	822.5 (59.8)
R-squared	.67	.83	.78	.83

(continued)

evidence in Table 3 is not consistent with a role for expenditures in explaining the substantial differences in school achievement between school districts in New Jersey.[13] Furthermore, this result is not due to strong correlations between the expenditure variable and other

Jersey as the unit of observation. Many parents with college plans for their children can choose to reside in municipalities with high SAT high schools. These high schools, then, will have higher, not lower, percentages of eligible students taking the SATs and the proportion of eligible seniors taking the exam would be mutually determined with the exam score.

[13]The two-stage least squares approach should purge measurement error from the expenditure variable in the achievement equations that results from assigning district averages in

TABLE 3 (continued)

Model	5 HSP88	6 SAT88	7 HSP94	8 SAT94
Black	−.3 (−9.3)	−1.9 (−9.9)	−.4 (−13.9)	−1.6 (−11.6)
Hispanic	−.05 (−.7)	−1.1 (−4.0)	−.3 (−5.5)	−2.0 (−8.7)
Asian	.2 (1.6)	1.7 (2.6)	.01 (.1)	1.2 (2.5)
Medinc	.00009 (1.2)	.0004 (1.1)	.00006 (.7)	.0006 (1.8)
Collgrad	.08 (.6)	4.3 (7.5)	.4 (3.3)	4.2 (7.0)
Notengl*	1.0 (−3.4)	−4.8 (−3.6)	−.5 (−3.0)	−1.8 (−2.3)
Arrive*	−.06 (−.3)	−.9 (−1.0)	−.1 (−1.6)	.1 (.3)
Leave*	−.6 (−4.6)	−1.6 (−2.7)	−.3 (−5.4)	−.2 (−.7)
Exp*	−.0003 (−.7)	−.009 (−3.1)	−.0003 (−.7)	−.003 (−1.7)
PctHS	.9 (.4)	31.4 (3.4)	3.9 (1.4)	41.2 (2.9)
Constant	92.5 (24.5)	863.0 (51.6)	79.5 (22.6)	829.3 (47.1)
R-squared	.66	.83	.81	.84

independent variables that work to mask an expenditure effect on achievement. When expenditures is the only independent variable in these models, it is never statistically significant and often negatively related to achievement. The results in Table 3 also hold when models for HSP94 and SAT94 are estimated with per pupil expenditures measured as an average of the 1988–89, 1992–93, and 1994–95 expenditure variables (these estimates are not presented). These specifica-

multiple high school districts. Nevertheless, we reestimate models 9–12 after deleting observations from multiple high school districts. About one-half of the high schools in the special needs districts are from single high school districts. These results also show no direct relationship between achievement and expenditures and are available on request.

TABLE 3 (continued)

Model	9 HSP88	10 SAT88	11 HSP94	12 SAT94
Black	−.3 (−7.1)	−1.2 (−7.3)	−.3 (−6.4)	−1.5 (−6.6)
Hispanic	−.04 (−.7)	−1.1 (−3.9)	−.2 (−3.9)	−2.0 (−7.6)
Asian	.2 (1.7)	1.7 (2.8)	.03 (.3)	1.2 (2.5)
Medinc	.0001 (1.3)	.0004 (1.1)	.0001 (1.5)	.0008 (2.1)
Collgrad	.1 (.8)	4.3 (7.0)	.4 (3.4)	4.3 (6.7)
Notengl*	−1.0 (−3.1)	−4.8 (−3.6)	−.3 (−2.0)	−1.6 (−2.0)
Arrive*	−.1 (−.3)	−.9 (−1.0)	−.1 (−2.0)	.1 (.2)
Leave*	−.6 (−4.6)	−1.8 (−2.7)	−.3 (−5.1)	−.2 (−.7)
Predicted Exp*	−.0004 (−.7)	−.01 (−1.5)	−.003 (−1.4)	−.007 (−.8)
PctHS	2.2 (.7)	42.2 (2.6)	17.7 (2.4)	58.3 (1.8)
Constant	96.2 (11.8)	884.9 (23.4)	93.5 (11.6)	847.1 (19.4)
R-squared	.66	.83	.78	.84

NOTE: t statistics are in parentheses. n = 285 in models 1, 5, 9; n = 300 in models 2, 6, 10; and n = 306 in models 3, 4, 7, 8, 11, 12.
*Variables take 1988 values in the 1988 school achievement models and 1994 values in the 1994 school achievement models.

tions recognize that expenditures in previous years as well as current year expenditures might be important in determining academic achievement.[14] Per pupil expenditure levels remain unimportant when achievement differences between students in the special needs high

[14]Pairwise correlations between per pupil expenditures for the three years are around .8. In the computation of the average expenditure, 1988–89 and 1992–93 expenditures are converted to 1994–95 dollars by use of the New York–northern New Jersey CPI.

schools, the rich suburban high schools, and other high schools in the state are analyzed. When dummy variables are used to identify these school categories in achievement models, the achievement differences between these schools do not narrow when per pupil expenditures is added as an exogenous or endogenous variable.

In Table 4, models 1 and 3, the eleventh grade pass rate on the HSP exam (HSP94) is the dependent variable and the "competence" rates for 1991 eighth grade early warning exams in reading and in mathematics from the feeder schools (grade schools or junior highs) of each high school appear as independent variables. With student mobility constant, the eleventh grade HSP test takers are being matched with their eighth grade scores from three years before, and this achievement model is of the value-added form. A similar specification with SAT94 as the dependent variable is presented in models 2 and 4. Since SATs are reported for seniors, the match with eighth grade scores misses by one year. Seniors in 1994–95 would be in the ninth grade in 1991–92. There is a match in the SAT specification to the extent the 1991–92 early warning scores of eighth graders correlate with the 1990–91 eighth grade scores from the same feeder schools. Results for the first two models show the early warning scores to be powerful predictors of SAT and HSP performance. Results for the last two models shows a negative relationship between per pupil expenditures and HSP94 and SAT94. These results are unchanged when the average expenditure variable is substituted for Exp94 and the percent of eligible seniors taking the SAT exams is added to the SAT94 model as an endogenous variable.[15]

Conclusion

The United States Supreme Court found in *Rodriguez* that education is not a right afforded protection under the Constitution and that local governments are free to choose the levels of educational expenditures in their jurisdictions. State constitutions, however, contain education clauses and these clauses have been the basis for legal challenges to local public school finance in every state in the last two decades. In this litigation increases in state funding to school districts with smaller property tax bases and a reduction in or end to local school finance has been a primary goal. We have shown that this goal

[15]Generalized least squares estimates of the student achievement relationship also indicate that per pupil expenditures are not positively related to student achievement. The data set for these models is the 1988–89, 1992–93, and 1994–95 samples combined. Observations are weighted by the standard deviation of the residual for each high school. These results are available on request.

TABLE 4

RESULTS OF REGRESSING MEASURES OF SCHOOL ACHIEVEMENT ON STUDENT AND COMMUNITY CHARACTERISTICS, PER PUPIL EXPENDITURES, AND PASS RATES ON EIGHTH GRADE EARLY WARNING TESTS, NEW JERSEY HIGH SCHOOLS, 1994–95

Model	1 HSP94	2 SAT94	3 HSP94	4 SAT94
Mathtest	.1 (1.2)	2.7 (5.9)	.0005 (−.1)	.8 (2.1)
Readtest	.7 (7.7)	2.0 (4.3)	.2 (1.6)	.12 (.3)
Black			−.3 (−5.2)	−1.3 (−6.5)
Hispanic			−.2 (−2.8)	−1.6 (−6.1)
Asian			.06 (.6)	1.2 (2.6)
Medinc			.00001 (.6)	.0004 (1.2)
Collgrad			.4 (2.7)	3.8 (6.2)
Notengl			−.4 (−2.5)	−1.9 (−2.4)
Arrive94			−.1 (−2.0)	.01 (.1)
Leave94			−.3 (−5.2)	−.02 (−.07)
Predicted			−.002	−.003
Exp			(−1.1)	(−1.6)
PctHS			9.8 (1.3)	34.1 (2.4)
Constant	17.9 (6.7)	591.7 (45.1)	75.8 (7.4)	787.3 (27.6)
R-squared	.71	.75	.81	.85

NOTE: t statistics in parentheses; n = 306 for all models.

is short-sighted, at least in the case of New Jersey. We find no evidence of a positive effect of expenditures on student performance in New Jersey public high schools in urban school districts with smaller per capita tax bases. We also find no evidence of expenditure effects in the other New Jersey school districts. These findings are consistent with most previous research on school expenditures and school achievement.

The legal challenges to local school finance have been partly responsible for the shift from local to state government financing of public education in the United States and partly responsible for the threefold increase in inflation adjusted public school expenditures per pupil in the last three decades. In many states the courts have become public education administrators. But student achievement has been lackluster in the United States during this period of costly litigation and soaring expenditures. The equalization battles have diverted attention from the central issue of whether our public school systems, which are sheltered from competition, use resources efficiently. The evidence in New Jersey and elsewhere is that they do not. A more competitive education system where schools compete for students, students compete for schools, and a third party does not pick up (all of) the bill would provide greater incentives for the efficient delivery of educational services than does the present system of local monopolies. The success of charter schools and school voucher programs in Milwaukee and other cities (Peterson and Hassel 1998) is supportive of this proposition.

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