

Examining the Effects of School Finance Reform in Texas

A Report of The Texas Educational Excellence Project

One of the most salient issues in American politics today concerns the reform of America's public schools. Data from the International Association for the Evaluation of Educational Achievement reveal that U.S. students have generally lagged behind students from other nations in performance on standardized academic skills exams in science and mathematics (Hanushek 1994, 42-45). Concerns about the quality of America's public schools have stimulated the school choice movement, which advocates a market-based approach to education that would allow parents and students to flee low quality public schools and move to higher quality private schools (Chubb and Moe 1990).

Overturing the basic structure of America's public schools with a system based on school choice is viewed as a controversial fix that may produce a variety of undesirable policy consequences (Hening 1994, Smith and Meier 1995). A different approach to improving the performance of America's schools involves the strategic use of money to enhance performance. There are two major lines of thinking regarding the use of money to improve public schools: higher spending on educational "inputs" and funding equalization across school districts. The educational inputs approach involves raising the amount of money spent on educational resources that directly shape what goes on in the classroom. Popular proposals under this approach include raising teacher salaries, spending more money to hire more teachers and reduce class size, and raising instructional expenditures per pupil.

A second financial strategy for improving schools involves equalizing wealth across poor and wealthy school districts. There have been challenges to the constitutionality of public school finance systems in 43 states since the early 1970s (Evans et al. 1997, 10). Wealthy local districts with high property tax bases have a distinct advantage in raising funds for education over local districts where property tax bases are low. As a result, states have felt great pressure to move toward funding

systems where state monies are used to level the playing field between wealthy and poor school districts. As financial resources across school districts are equalized, low-performing “have-nots” should, in theory, be able to improve their performance and achieve performance in line with districts endowed with greater financial resources.

This study examines the effects finance equalization policies have had on the performance of students in Texas public schools from 1994 to 1997. Studies on school finance equalization typically examine how interventions such as court decisions or laws that mandate finance reforms alter state and local funding patterns across school districts (Evans et al 1997). Put another way, the dependent variable in much research on finance equalization is the change in the mix of state/local funding as a result of some sort of policy intervention. This research looks at finance equalization policies from a different perspective. *Rather than focusing on whether policy interventions result in finance equalization, this study examines whether funding equalization actually results in improved student performance.* Specifically, the goal of this study is to sort out the differential impacts (if any) state and local educational funds have on the performance of white, African-American, Hispanic, and low-income students on standardized academic skills exams.

School Finance Equalization Policies in Texas

The problem of wealth disparities across school districts has long been a matter of concern to state and local political officials. The issue of equalized school funding briefly hit the national agenda during the early 1970s with the Supreme Court’s decision in *San Antonio Independent School District v. Rodriguez*. While the Court accepted this case for review, it ultimately ruled that the issue of equalized funding was not a matter of national concern as the U.S. Constitution offers no protections

regarding the right to an education. As a result of the Court's ruling, battles over funding equalization have taken place primarily in state courts and legislatures.

In Texas, small moves toward equalization took place following *San Antonio v. Rodriguez* and *Serrano v. Priest*, a school finance equalization case decided by the California State Supreme Court in 1971. Serious efforts at school finance equalization in Texas, however, only began to take off in late 1980s. The decision handed down by the 205th District Court in *Edgewood v. Kirby* (1987) is recognized as one of the turning points in the debate over the structure of the school finance system in Texas. The ruling in *Edgewood* declared that the Texas school finance system was unconstitutional for two reasons. First, the system discriminated against students in poor school districts, thus violating the equal protection clause of the state constitution. Second, the court ruled that the existing school finance system did not meet the definition of an efficient educational system, as required by the state constitution. Although *Edgewood* was overturned by a Texas appeals court in 1989, the Texas Supreme Court upheld the lower court's ruling later that year. Specifically, the Court ordered the state legislature to develop a finance equalization system where all school districts would have "substantially equal access to similar revenues per pupil at similar levels of tax effort" (Lavine 1997, 150).

Although the state legislature submitted an equalization plan by May 1990, it was declared unconstitutional by the Texas Supreme Court in *Edgewood II* in January 1991. A second plan passed by the legislature in April 1991 was declared unconstitutional by the Texas Supreme Court in *Edgewood III* in January 1992. In 1993, the legislature presented an equalization plan directly to the voters in the form of an amendment to the state constitution. As redistribution of resources from wealthy school districts to poorer school districts was a central component of the proposed amendment, many dubbed this policy measure the "Robin Hood" plan. Like earlier reform efforts, this

plan was also defeated, with 63 percent of the state's voters rejecting the plan (Halter 1997, 189).

After the failed attempt at placing a new finance equalization plan into the state constitution, the legislature drafted yet another finance reform bill in 1993, Senate bill seven. While legislative reform plans in 1990 and 1991 were found unconstitutional by the Texas Supreme Court, the Court declared that the plan proposed under Senate bill seven was "minimally acceptable" (Lavine 1997, 155). Senate bill seven called for equalized wealth levels of \$280,000 in property value per student across all school districts and gave wealthy school districts five options for meeting this new standard: 1) voluntary school district consolidation; 2) voluntary detachment and annexation of property from one school district to another; 3) purchase of "attendance credits" from the state to reduce wealth per pupil; 4) payments for education of students in other districts, and 5) tax base consolidation (Texas Education Agency 1995, 22). Under Senate bill seven, this new finance equalization system would be effective by the fall of 1993. This equalization plan went into effect at that time and remains in use at the present time.

Examining the Effects of School Finance Reform in Texas

School finance reform efforts in Texas have followed a tumultuous path. While several attempts at reform were made in the early 1990s, a wealth equalization system only came into place in 1993. To this point, little attention has been given to examining the extent to which wealth equalization efforts in Texas have shaped student performance. The remainder of this study examines how wealth equalization policies for Texas school districts have shaped the performance of white, African-American, Hispanic, and low-income students on standardized academic skills exams.

The time period of the study covers the years 1994 to 1997 and includes data on 1043 Texas

school districts. As the goal of this research is to isolate the impact of the finance equalization reforms passed in 1995, the four year time span allows for an examination of whether changes in student performance occurred from the pre- to post-reform periods. The strategy adopted here employs education “production function” models whereby student performance is explained as a function of inputs to the educational process, such as state and local funds, teacher salaries, student-teacher ratios, and other factors known to shape student performance. Two sets of educational production functions covering white, African-American, Hispanic, and Low-income students are developed - one covering the years 1994 and 1995, the other covering the years 1996 and 1997. The panel study format makes it possible to track student performance across the same 1043 school districts before and after new finance equalization policies took hold in 1993.

The 1994-95 period was treated as the “pre-reform” portion of the study, while the 1996-97 period was treated as the “post-reform” era. This may seem a bit confusing since equalization plans went into effect in fall 1993. The 1994-95 period was treated as the pre-reform time period because the effects of S.B. 7 were not felt instantaneously. Finance reform began in fall 1993, but S.B. 7 allowed for phase-ins where districts could come into compliance with its provisions over a three year period. Thus, we had little reason to expect finance reform would have an immediate impact on TAAS scores for the 1994-95 period. This is especially true for the 1994 TAAS exams since they were administered only months after S.B. 7 was first implemented. Another reason for expecting gradual impacts is that even after monies were reallocated from wealthier districts to poorer districts, poorer districts had to develop plans for allocating these new funds. It would be naive to suggest that the simple act of receiving money from wealthier districts would automatically lead to better student performance. Districts benefitting from wealth distribution had to establish plans for using this newfound wealth to improve student performance. Thus, we viewed the 1994-95 period as the time

in which districts were adjusting to the provisions of S.B. 7. Since wealth redistribution and policy adjustments as a result of redistribution occurred gradually, we took a conservative approach and did not expect to see any significant effects of S.B. & until the 1996-97 period.

Dependent Variable

State law in Texas mandates that public school students in grades three through eight as well as grade ten must take standardized reading and mathematics tests every year. These skills exams are administered and scored by the Texas Education Agency (TEA) under the Texas Assessment of Academic Skills (TAAS) program. While results from standardized skills tests clearly cannot measure something as broad as the overall learning experience, they do assess whether students are picking up basic academic skills from grade to grade. Thus, the dependent variable in the analysis is the percentage of students in each school district who passed all standardized reading and mathematics skills tests each year. For both the pre- (1994-95) and post-reform (1996-97) panels, TAAS pass rates are available for white, African-American, Hispanic, and low-income students. Throughout the analysis, separate models were constructed using test data for each student group to gain a precise understanding of the impact of school finance reforms on traditionally disadvantaged student groups.

Independent Variables - Controlling for District Background Characteristics

The makeup of student populations can vary widely across school districts. Urban school

districts tend to have larger numbers of African-American, Hispanic, and low-income students than suburban school districts. Minority students tend to score lower on standardized tests than Anglo students (Rong and Grant 1992). The probability of low-income students having difficulties performing well on standardized tests is also high (Coleman 1966; Chubb and Moe 1990, 106-7). Three variables were used to control for district student makeup. The first was the percentage of African American students per district. The second was the percentage of Hispanic students per district. The third environmental diversity variable was the percentage of low income students per district. Specifically, this variable is defined as students who are eligible for free or reduced price meals through school lunch programs.

Another issue involving student makeup concerns threshold effects. For instance, in districts where African-American students make up a very small percentage of the total student body, any inferences or generalizations about the effects of finance equalization policies on African-American students may be misleading. Accordingly, the models for African-American, Hispanic, and low-income student performance included only those districts with at least ten percent African-American, Hispanic, and low-income students, respectively.

School districts vary widely in terms of socioeconomic characteristics. Thus, several controls for district socioeconomic characteristics were included in the analysis. The first control variable was the percentage of adults in each district (over the age of 25) with high school educations. Minority students who come from districts with large numbers of educated adults generally perform better than students who come from districts where parental educational attainment levels are low (Meier and Stewart 1991). The second district background variable was the percentage of foreign born citizens in each district. A high immigrant presence coupled with language barriers and cultural differences concerning the importance of education may play a role in dragging down the performance

of Latino students. The final district background variable was a measure of overall district poverty for white, African-American, and Hispanic residents.

Controlling for Classroom Resources

Aside from differing on demographic characteristics, school districts differ in terms of levels of inputs directed to the classroom. Several variables were included to control for differences in classroom resources across school districts. The first variable was the average teacher salary for each school district. The presence of well-educated teachers hinges on teacher salaries (Hanushek and Pace 1995). Districts with higher teacher salaries can presumably attract better quality teachers than those with low teacher salaries. The second classroom resource variable was the student-teacher ratio for each school district. Smaller classes create opportunities for more individualized attention to students and more manageable classroom environments for teachers (Mosteller 1995). The final classroom resource variable was a measure of teacher experience, coded as the percentage of teachers in each district with masters or doctoral degrees.

Independent Variables - Financial Measures

One of the primary concerns of this analysis is sorting out the degree to which the school finance equalization policies adopted in 1993 affected district wealth. Several variables are used to address this issue.

1. State and Local Revenues Per Pupil. The funding measures used in the analysis consisted of two district level measures (in dollars): state revenue per pupil, and local revenue per pupil. Variables based on revenues rather than expenditures were used because data limitations prevent the disaggregation of data on expenditures per pupil into separate state and local components. Put another way, these variables measure how district *wealth*, rather than direct district *expenditures* affect student performance. As inequalities in wealth were present across Texas school districts before 1996, the relative impact of local revenue on student performance should have been lessened following the implementation of school finance reforms in late 1993.

2. Taxable Value Per Pupil. Taxable value per pupil is possibly the most direct measure of district wealth. The State Comptroller's Property Tax Division provides an annual calculation of this figure for each school district in the state of Texas. For the 1994-95 period, taxable value per pupil should have played a significant role in shaping student performance since the rationale for funding equalization was that districts with high levels of local wealth outperformed districts with low levels of local wealth. Recall that the equalization plan adopted in 1993 called for an equalized wealth level of \$280,000 per pupil in each school district. If the reforms outlined in Senate bill seven were effective in dampening the effects of local wealth, the role of district wealth (i.e., taxable value per pupil) in shaping student performance should be greatly reduced in the 1996-97 period.

Summary of Modeling Strategy

To clarify the approach used in this analysis, the effects of the revenue and wealth variables

on student performance were assessed in separate models. There were a total of 16 production function models in the analysis. All models included the classroom resource, student composition, and district demographic control variables discussed earlier. The modeling strategy is as follows:

- 8 Pre-intervention (1994-95) and 8 Post-intervention (1996-97) models

- Separate models for White, African-American, Hispanic, Low-Income student test performance

- Four Pre- and Four Post-Intervention Models - The Effects of State and Local Revenues Per Pupil on Student Performance

- Four Pre- and Four Post-Intervention Models - The Effects of Taxable Value Per Pupil (district wealth) on Student Performance

Findings

Across all models, results for the control variables were generally in line with hypothesized expectations. Teacher salaries and teacher experience were positively related to student performance. Increases in class size were negatively related to student performance. The variables for student body composition (percentage African-American, Hispanic, low-income) were negatively related to student performance, which is consistent with the finding that minority and disadvantaged student groups often perform poorly on standardized skills tests. Among the district demographic variables, overall district poverty was negatively related to student performance while the percentage of adults with high school degrees was positively related to student performance.

Tables One and Two present results from all sixteen models which assess the impact of district wealth and finance measures on student performance for the pre-intervention (1994-95) and post-intervention (1996-97) time periods. The numbers presented in Table One are unstandardized

slope coefficients for the state and local revenue variables from the white, African-American, Hispanic, and low-income student models. Table Two presents coefficients on the taxable value per pupil variable for all student groups. Complete results for all sixteen models can be found in the appendix.

Results for the state and local revenue variables reveal clear changes following the school finance equalization plans adopted in late 1993. In the 1994-95 time period, state revenue per pupil had no effect on the performance of white students on standardized skills exams. In the 1996-97 period, however, there was a weak negative relationship between state revenue per pupil and white test scores. A likely explanation for this finding is that after new finance equalization policies were adopted in 1993, an increased share of state funds were directed to districts with high populations of African-American, Hispanic, and low-income students rather than districts with white students. In the case of African-American students, state revenue was not a significant predictor of student performance in the 1994-95 period, but had a marginally significant positive relationship to student performance in the 1996-97 period. State revenue per pupil was positively related to the performance of Hispanic and Low-Income students in both the pre- and post-reform periods.

Results for the local revenue coefficients reveal a substantial change in the impact of local revenue on student performance from the pre- to post-reform periods. In the 1994-95 period, local revenue per pupil had a significant positive effect on white, Hispanic, and low-income student performance. In the 1996-97 period, however, there were no statistically significant relationships between local revenue and the performance of any student group. As the primary goal of school finance equalization was to eliminate extreme disparities in wealth across school districts, the policy changes adopted in 1993 seem to have muted the influence of local revenues on student performance.

Table Two presents results for the impact of district wealth, measured as taxable value per pupil, on the performance of white, African-American, Hispanic, and Low-Income student for the 1994-95 and 1996-97 periods. District wealth was a significant predictor of student performance for all student groups in the 1994-95 period. However, in the 1996-97 period, district wealth had no effect on the performance of any student group. The effects of resource redistribution are most noticeable among white students. White students typically make up a large share of the student body in wealthy suburban school districts and have the most to gain from high levels of local wealth. The 1994-95 period reveals a strong positive relationship between district wealth and the performance of white students on standardized skills exams. After the implementation of finance reforms, there was no relationship between district wealth and the performance of white students on standardized skills exams. A weak negative relationship existed between district wealth and the exam performance of African-American students during the 1994-95 period; however, results for the 1996-97 period reveal no relationship between district wealth and the exam performance of African-American students. District wealth had a significant effect on both Hispanic and low-income student exam performance in the 1994-95 period, but had no effect on performance in the 1996-97 period.

Discussion

The findings presented above suggest that finance equalization policies adopted by the state of Texas in 1993 played a role in dampening the effects of local wealth on the performance of white, African-American, Hispanic, and low-income students on standardized academic skills exams. As the analysis included a total of sixteen separate education production-function models, there are a variety of findings to discuss.

The results for Hispanic and Low-Income student models indicate that local revenues and local wealth actually had a positive effect on student performance prior to the finance equalization reforms enacted in 1993. Yet after the reforms were implemented, there was no statistically significant relationship between local revenues and wealth on student performance. On the surface this seems to indicate that equalization efforts actually harmed Hispanic and low-income students. However, an alternative explanation for this finding is that local revenue and wealth in the 1994-95 period mostly benefitted those Hispanic and low-income students in wealthy school districts, rather than those in poorer school districts.

Although the impact of local revenue and local wealth disappeared after the implementation of finance equalization, state revenue per pupil was positively related to Hispanic and low-income student exam performance in both the pre- and post-reform periods. This suggests that state, rather than local, funding has consistently played a more important role in shaping the performance of Hispanic and low-income students.

The fact that local revenue and wealth were not significant predictors of student performance across the models for **all** student groups following the adoption of new finance equalization plans in 1993 suggests that equalization is a strategy targeted toward wiping out the advantages of local wealth to all students, even those from disadvantaged backgrounds. Hispanic and low-income students clearly benefitted from local wealth prior to equalization, and it may seem troubling that these advantages were wiped out after equalization plans were adopted. Yet if finance equalization is supposed to level the playing field across rich and poor school districts, it is not unreasonable to expect that leveling the playing field will result in a system that does not provide special advantages to any particular student group. Put another way, it may be impossible for policymakers to design a wealth equalization system that only eliminates advantages that generally flow to white students while

also preserving benefits that flow to Hispanic and low-income students. Wealth equalization not only implies equality in local wealth, but equality in how local wealth affects different student groups across school districts.

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Appendix One

School Finance Reform in Texas 1987 to 1995 - Chronology of Key Events

- April 1987 *Edgewood v. Kirby*. 205th District Court in Austin rules Texas School Finance System Unconstitutional.
- Dec. 1988 Third Court of Appeals in Austin reverses lower court ruling in *Edgewood*.
- Oct. 1989 *Edgewood I*. Texas Supreme Court reverses decision handed down by Third Court of Appeals.
- June 1990 Legislature respond to *Edgewood I*. Enacts new school finance equalization plans (S.B. 1).
- Jan. 1991 *Edgewood II*. Texas Supreme Court rules finance system established under S.B. 1 unconstitutional.
- April 1991 Legislature adopts new finance equalization plan (S.B. 351).
- Jan. 1992 *Edgewood III*. Texas Supreme Court rules finance system established under S.B. 351 unconstitutional.
- May 1993 Constitutional Amendment on new finance equalization plan rejected by voters.
- May 1993 Legislature enacts new finance equalization plan (S.B. 7). Plans to take effect by fall 1993.
- Jan. 1995 *Edgewood IV*. Texas Supreme Court rules plans outlined under S.B. 7 “minimally acceptable.”

Table 1 - State and Local Revenue Per Pupil and Student Performance

Student Group	Pre-Reform	Post-Reform	Pre-Reform	Post-Reform
	(94-95)	(96-97)	(94-95)	(96-97)
	State Revenue	State Revenue	Local Revenue	Local Revenue
White	-.095 (-.31)	-.399** (-1.61)	.54* (2.73)	-.116 (-.71)
African-American	.31 (.33)	1.55** (1.62)	.086 (-1.17)	.329 (.41)
Hispanic	1.23* (3.12)	1.11* (2.76)	1.02* (3.99)	.281 (1.06)
Low Income	1.60* (4.79)	1.0* (3.08)	1.07* (5.05)	.185 (.88)

Note: Numbers in cells are unstandardized regression coefficients. Coefficients multiplied by 1000 for ease of interpretation. t-statistics in parentheses; * p < .05 ** p < .10

Table 2 - Taxable Value Per Pupil and Student Performance

Student Group	Pre-Reform (94-95)	Post-Reform (96-97)
White	.003* (3.32)	.0007 (1.0)
African-American	-.005** (-1.71)	-.001 (-.37)
Hispanic	.002** (1.63)	-.001 (-1.05)
Low Income	.003* (3.26)	.0003 (-.42)

Note: Numbers in cells are unstandardized regression coefficients. Coefficients multiplied by 1000 for ease of interpretation. t-statistics in parentheses; * p < .05 ** p < .10

Appendix II - Results for Individual Models

Table 1 - State and Local Revenue Per Pupil and Student Performance - White Students
(Dependent Variable = Percentage of Students Passing Exams - 1994-1995 Model)

Independent Variable	Parameter	Standard Error	t statistic
Local Revenue	.00054	.00019	2.73*
State Revenue	-.000095	.0003	-.31
teacher salaries	.00017	.00017	.96
teacher experience	.663	.142	4.67*
student-teacher ratio	-.339	.119	-2.84*
% Low Income	-.245	.022	-10.74*
% African-American	-.009	.023	-.40
% Hispanic	.105	.017	6.05*
% Foreign Born	.146	.061	2.43*
% Adult H.S. Deg.	.089	.022	4.0*
Poverty Rate	.089	.026	3.38*
Constant = 60.33	R2 = .24	F = 45.99	
	Adj. R2 = .23	N of Cases = 1788	
		* p < .05 ** < .10	

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 2 - State and Local Revenue Per Pupil and Student Performance - African-American Students
 (Dependent Variable = Percentage of Students Passing Exams - 1994-1995 Model)

Independent Variable	Parameter	Standard Error	t statistic
Local Revenue	-.0009	.0007	-1.17
State Revenue	.0003	.0009	.33
teacher salaries	.0007	.00037	1.78**
teacher experience	-.596	.339	-1.75**
student-teacher ratio	.0102	.374	.003
% Low Income	-.015	.059	-.25
% African-American	-.033	.047	-.72
% Hispanic	.019	.050	.38
% Foreign Born	.022	.202	.11
% Adult H.S. Deg.	.015	.057	.25
Poverty Rate	-.287	.082	-3.49*
Constant = 26.79	R2 = .14	F = 6.64	
	Adj. R2 = .12	N of Cases = 501	
		* p < .05 ** < .10	

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 3 - State and Local Revenue Per Pupil and Student Performance - Hispanic Students
 (Dependent Variable = Percentage of Students Passing Exams - 1994-1995 Model)

Independent Variable	Parameter	Standard Error	t statistic
Local Revenue	.001	.0003	3.99*
State Revenue	.001	.0004	3.12*
teacher salaries	.0007	.0002	2.70*
teacher experience	.231	.212	1.09
student-teacher ratio	-.004	.161	-.03
% Low Income	-.096	.033	-2.92*
% African-American	-.184	.037	-4.91*
% Hispanic	-.115	.026	-4.45*
% Foreign Born	.123	.072	1.72**
% Adult H.S. Deg.	.047	.029	1.60
Poverty Rate	-.074	.037	-2.21*
Constant = 26.19	R2 = .23	F = 27.73	
	Adj. R2 = .22	N of Cases = 1151	
		* p < .05 ** < .10	

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 4 - State and Local Revenue Per Pupil and Student Performance - Low-Income Students
 (Dependent Variable = Percentage of Students Passing Exams - 1994-1995 Model)

Independent Variable	Parameter	Standard Error	t statistic
Local Revenue	.001	.0002	5.05*
State Revenue	.002	.0003	4.79*
teacher salaries	.0007	.0002	3.78*
teacher experience	.182	.150	1.21
student-teacher ratio	-.353	.128	-2.76*
% Low Income	.006	.027	.22*
% African-American	-.442	.025	-17.57*
% Hispanic	-.249	.019	-13.27*
% Foreign Born	.229	.061	3.78*
% Adult H.S. Deg.	.059	.023	2.52*
Poverty Rate	-.042	.027	-1.54
Constant = 26.19	R2 = .39	F = 95.97	
	Adj. R2 = .39	N of Cases = 1775	
		* p < .05 ** < .10	

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 5 - State and Local Revenue Per Pupil and Student Performance - White Students
 (Dependent Variable = Percentage of Students Passing Exams - 1996-1997 Model)

Independent Variable	Parameter	Standard Error	t statistic
Local Revenue	-.0001	.0002	-.71
State Revenue	-.0004	.0002	-1.61**
teacher salaries	.0004	.0001	3.09*
teacher experience	.372	.116	3.21*
student-teacher ratio	-.635	.118	-5.38*
% Low Income	-.235	.019	-12.42*
% African-American	.023	.019	1.26
% Hispanic	.107	.014	7.75*
% Foreign Born	.159	.048	3.29*
% Adult H.S. Deg.	.064	.018	3.55*
Poverty Rate	.059	.022	2.74*
Constant = 74.25	R2 = .26	F = 52.25	
	Adj. R2 = .26	N of Cases = 1791	
		* p < .05 ** < .10	

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 6 - State and Local Revenue Per Pupil and Student Performance - African-American Students
 (Dependent Variable = Percentage of Students Passing Exams - 1996-1997 Model)

Independent Variable	Parameter	Standard Error	t statistic
Local Revenue	.0003	.0008	.41
State Revenue	.002	.0009	1.62**
teacher salaries	.0009	.0003	2.96*
teacher experience	-.833	.340	-2.45*
student-teacher ratio	.014	.399	.03
% Low Income	-.112	.067	-1.67**
% African-American	-.039	.051	-.76
% Hispanic	.069	.056	1.25
% Foreign Born	.079	.236	.33
% Adult H.S. Deg.	.038	.063	.61
Poverty Rate	-.198	.092	-2.15*
Constant = 29.06	R2 = .21	F = 11.01	
	Adj. R2 = .20	N of Cases = 491	
		* p < .05 ** < .10	

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 7 - State and Local Revenue Per Pupil and Student Performance - Hispanic Students
 (Dependent Variable = Percentage of Students Passing Exams - 1996-1997 Model)

Independent Variable	Parameter	Standard Error	t statistic
Local Revenue	.0003	.0003	1.06
State Revenue	.001	.0004	2.76*
teacher salaries	.001	.0002	5.60*
teacher experience	-.044	.210	-.21
student-teacher ratio	-.423	.205	-2.06*
% Low Income	-.075	.034	-2.22*
% African-American	-.123	.035	-3.53*
% Hispanic	-.076	.025	-3.0*
% Foreign Born	.027	.069	.39
% Adult H.S. Deg.	.070	.028	2.52*
Poverty Rate	-.075	.033	-2.31*
Constant = 26.09	R2 = .23	F = 30.26	
	Adj. R2 = .22	N of Cases = 1215	
		* p < .05 ** < .10	

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 8 - State and Local Revenue Per Pupil and Student Performance - Low-Income Students
(Dependent Variable = Percentage of Students Passing Exams - 1996-1997 Model)

Independent Variable	Parameter	Standard Error	t statistic
Local Revenue	.0002	.0002	.88
State Revenue	.001	.0003	3.08*
teacher salaries	.001	.0002	6.59*
teacher experience	-.046	.147	-.31
student-teacher ratio	-.556	.149	-3.72*
% Low Income	.029	.025	1.14
% African-American	-.385	.024	-15.90*
% Hispanic	-.212	.018	-11.93*
% Foreign Born	.129	.059	2.20*
% Adult H.S. Deg.	.083	.023	3.62*
Poverty Rate	-.053	.027	-1.97*
Constant = 36.08	R2 = .36	F = 84.12	
	Adj. R2 = .36	N of Cases = 1774	
		* p < .05 ** < .10	

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 9 - Taxable Value Per Pupil and Student Performance - White Students
 (Dependent Variable = Percentage of Students Passing Exams - 1994-1995 Model)

Independent Variable	Parameter	Standard Error	t statistic
Taxable Value Per Pupil	.000003	.0000008	3.32*
teacher salaries	.0003	.0002	1.55
teacher experience	.664	.141	4.71*
student-teacher ratio	-.410	.096	-4.28*
% Low Income	-.254	.023	-11.23*
% African-American	-.006	.023	-.26
% Hispanic	.107	.018	6.12*
% Foreign Born	.139	.060	2.30*
% Adult H.S. Deg.	.091	.022	4.06*
Poverty Rate	.862	.026	3.26*
Constant = 59.47	R2 = .23 Adj. R2 = .23	F = 49.43 N of Cases = 1788	* p < .05 ** < .10

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 10 - Taxable Value Per Pupil and Student Performance - African-American Students
(Dependent Variable = Percentage of Students Passing Exams - 1994-1995 Model)

Independent Variable	Parameter	Standard Error	t statistic
Taxable Value Per Pupil	-.000005	.000003	-1.71**
teacher salaries	.0005	.0004	1.60**
teacher experience	-.639	.334	-1.91**
student-teacher ratio	-.006	.290	-.02
% Low Income	.002	.058	.03
% African-American	-.042	.047	-.89
% Hispanic	.012	.051	.24
% Foreign Born	-.001	.202	-.01
% Adult H.S. Deg.	.011	.058	.20
Poverty Rate	-.281	.082	-3.41*
Constant = 28.91	R2 = .13 Adj. R2 = .11	F = 6.82 N of Cases = 501	* p < .05 ** < .10

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 11 - Taxable Value Per Pupil and Student Performance - Hispanic Students
 (Dependent Variable = Percentage of Students Passing Exams - 1994-1995 Model)

Independent Variable	Parameter	Standard Error	t statistic
Taxable Value Per Pupil	-.000002	.000001	1.63**
teacher salaries	.0007	.0002	3.13*
teacher experience	.171	.212	.81
student-teacher ratio	-.346	.132	-2.61*
% Low Income	-.095	.033	-2.88*
% African-American	-.186	.038	-4.91*
% Hispanic	-.109	.026	-4.19*
% Foreign Born	.110	.072	1.53
% Adult H.S. Deg.	.042	.029	1.43
Poverty Rate	-.076	.034	-2.24*
Constant = 34.33	R2 = .22 Adj. R2 = .21	F = 28.70 N of Cases = 1151	* p < .05 ** < .10

Notes: Dummy variables used to control for autocorrelation are not reported.

Table 12 - Taxable Value Per Pupil and Student Performance - Low-Income Students
 (Dependent Variable = Percentage of Students Passing Exams - 1994-1995 Model)

Independent Variable	Parameter	Standard Error	t statistic
Taxable Value Per Pupil	.000003	.0000009	3.26*
teacher salaries	.0007	.0002	3.82*
teacher experience	.109	.150	.73
student-teacher ratio	-.662	.104	-6.36*
% Low Income	.025	.026	.94
% African-American	-.446	.025	-17.58*
% Hispanic	-.247	.189	-13.03*
% Foreign Born	.210	.061	3.45*
% Adult H.S. Deg.	.057	.024	2.44*
Poverty Rate	-.048	.027	-1.75**
Constant = 40.53	R2 = .39 Adj. R2 = .39	F = 102.13 N of Cases = 1775	* p < .05 ** < .10

Notes: Dummy variables used to control for autocorrelation are not reported.