

Do Equity and Adequacy Court Decisions and Policies Make a Difference for At-Risk Students Following Abbott, Rose, McDuffy, and Hancock?

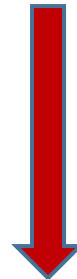
Longitudinal Evidence from New Jersey

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Problem and Purpose Statement

- ❖ Education has been termed the “the great equalizer” (Lee and Burkham 2002)
- ❖ “Schools serving low-income students receive fewer resources and face greater difficulties attracting qualified teachers... This inequality of school quality is widely recognized.” (Lee & Burkam, 2002)
- ❖ Abbott v. Burke in New Jersey; McDuffy v. Secretary of the Executive Office of Education, and Hancock v. Commissioner of Education in MA mandated:

Upper and middle class districts



Billions of dollars

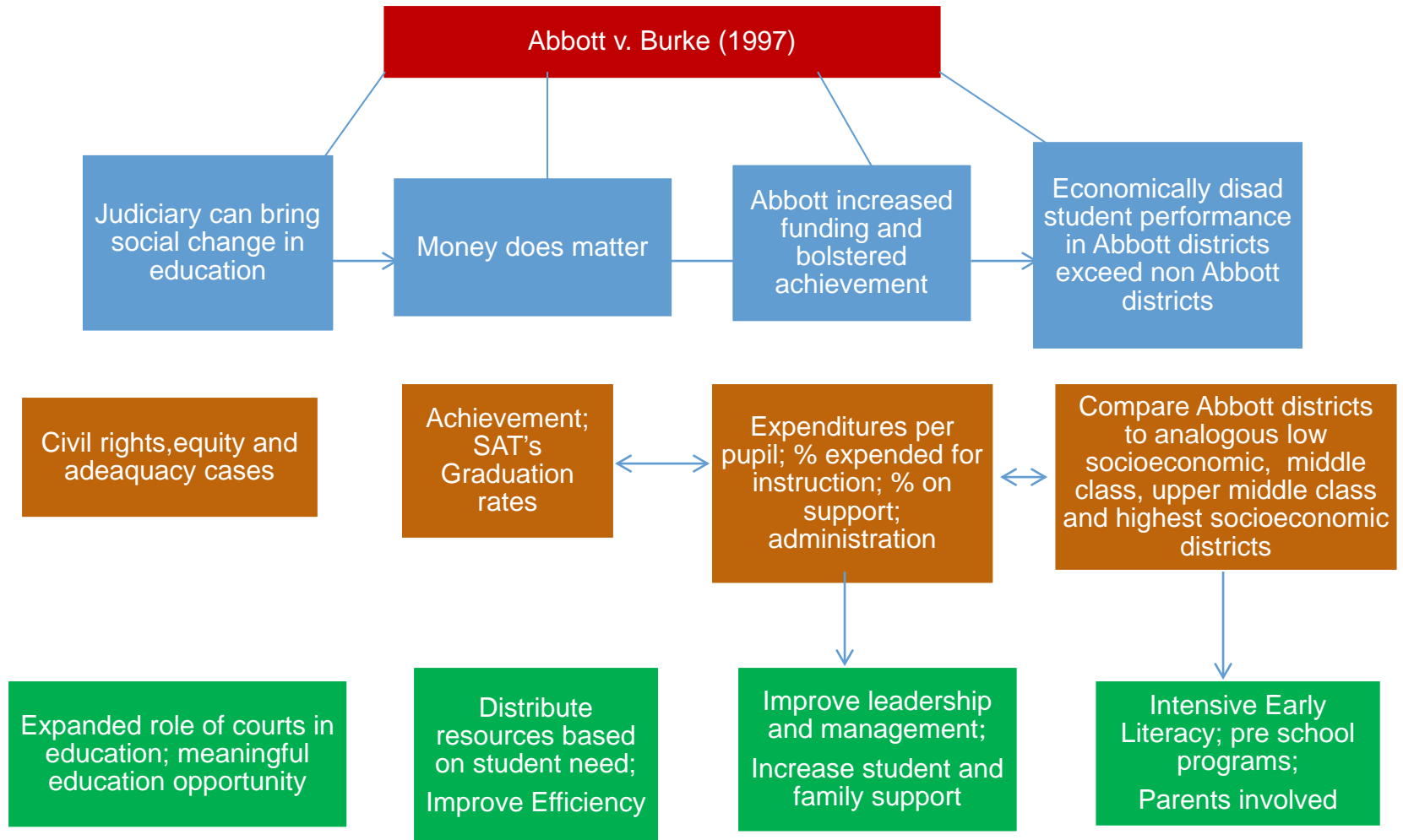
Economically disadvantaged districts

Problem and Purpose Statement

❖ Research Questions

- Have increased resources from the equity and adequacy court decisions reached the students in the classroom?
- Have equity and adequacy court decisions such as Abbott v. Burke and ensuing State reform policies improved the education of economically disadvantaged students?
- Has the academic performance of Abbott students improved as compared to student achievement from analogous low socioeconomic districts and middle class districts that are not covered by Abbott v. Burke?

Conceptual Framework



Four Propositions

- Proposition 1: The judiciary can bring about social and policy change in education.
- Proposition 2: Money does matter to improve the education of economically disadvantaged students
- Proposition 3: Abbott v. Burke increased funding and bolstered student achievement
- Proposition 4: Abbott v. Burke and specific policies such as the Intensive Early Literacy program, and Abbott pre-school initiatives have a positive association with the academic achievement of and learning development of economically disadvantaged students

Methodology: Money from equity cases reaching students in the classroom

- ❖ Expenditures per pupil since Abbott v. Burke (1997) compared to the following categories of districts:
 - 1. Abbott districts-31
 - 2. Low socioeconomic districts (A and B “DFG” group) that are not Abbott districts-68
 - 3. Middle-class districts (C, D, E, and F “DFG” group)-131
 - 4. Upper middle-class districts (G and H “DFG” group)-144
 - 5. Highest socioeconomic districts (I and J “DFG” group)-113
(districts are separated according to the District Factor Group (DFG) classification scheme)
- ❖ Instruction and instruction-related expenditures
 - Instruction (current exp.)
 - Support services for instructional staff (current exp.)
- ❖ Total support services (current exp.)
- ❖ Student support services current exp.)
- ❖ Administration expenditures
 - General administration (current exp.)
 - School administration (current exp.)

Methodology: Academic Performance of Abbott students since Abbott v. Burke compared to students from low socioeconomic, middle class, upper middle class, and highest socio-economic districts

- ❖ RQ: Has the academic performance of Abbott students improved as compared to student achievement from analogous low socioeconomic and middle class districts that are not covered by Abbott v. Burke?
- ❖ Compare aggregate standardized test scores of Abbott students on fourth and tenth grade Language Arts and Math scores prior and subsequent to the 1997 Abbott v. Burke decision to the standardized test scores of students from low socioeconomic, middle class, upper middle class, and highest socio-economic districts
- ❖ Compare aggregate SAT scores of Abbott students prior and subsequent to the 1997 Abbott v. Burke decision to SAT scores of students from low socioeconomic, middle class, upper middle class, and highest socio-economic districts

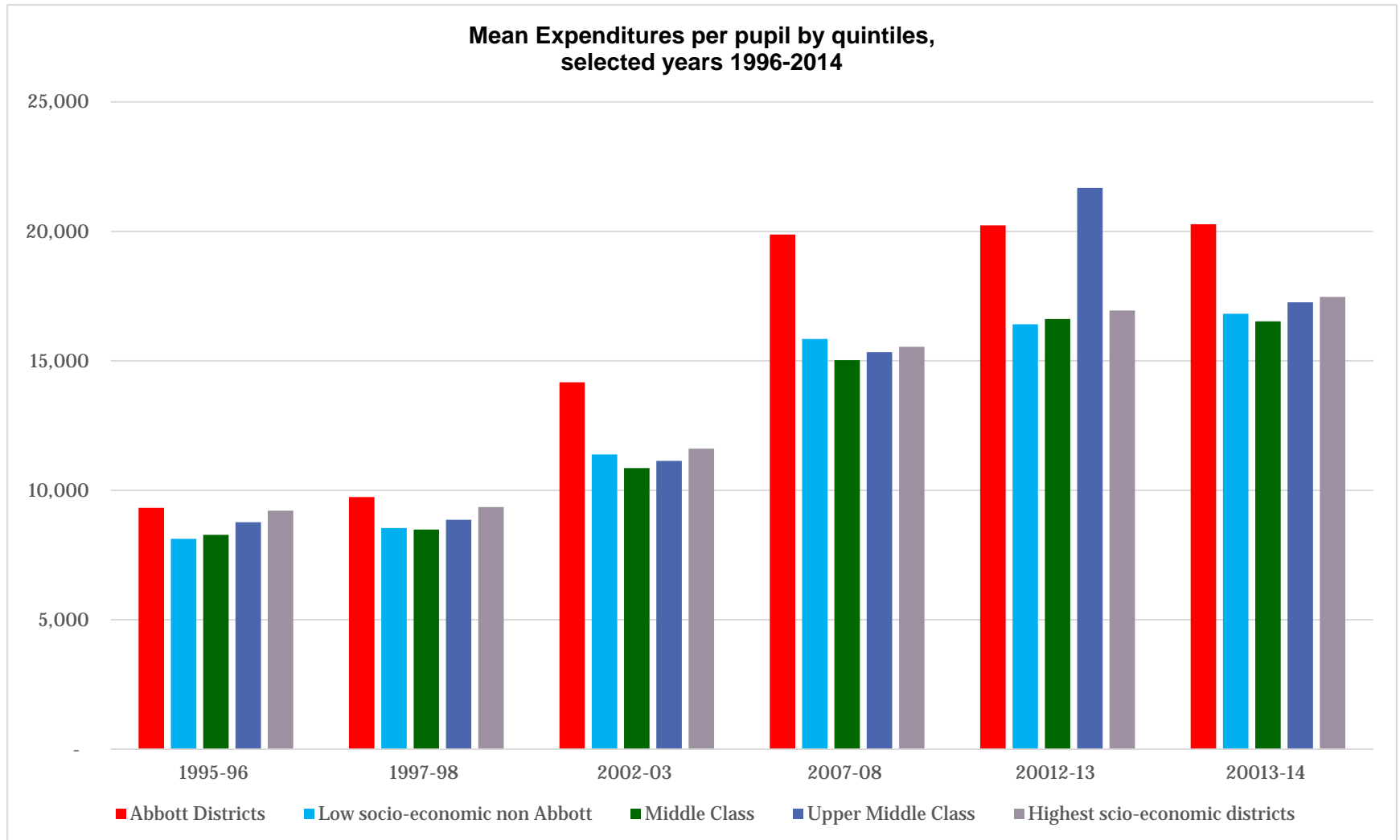
Regression Models

	Dep. Var. Aggregate Achievement Tests: 4th and 8TH grade reading/math (Z scores)	Dep. Var. Aggregate Achievement Tests: 4th and 8th grade reading/math (Z scores)	Dep. Var. SAT scores	Dep. Var. SAT scores
Independent variables				
Abbott District 0=No; 1=Yes	X	X	X	X
Low socioeconomic non Abbott 0=No; 1=Yes	X	X	X	X
Upper Middle Class 0=No; 1=Yes	X	X	X	X
Highest Socioeconomic Districts 0=No; 1=Yes	X	X	X	X
High Minority (>60% minority) 0=No; 1=Yes		X		X
Median Income Level in Districts from ACS		X		X
City locale code 0=No; 1=Yes		X		X
Rural local code 0=No; 1=Yes		X		X
Town locale code 0=No; 1=Yes		X		X
Percentage of women with BA in districts from ACS		X		X

Methodology: Graduation Rates, Student Teacher ratio and School Climate Analysis

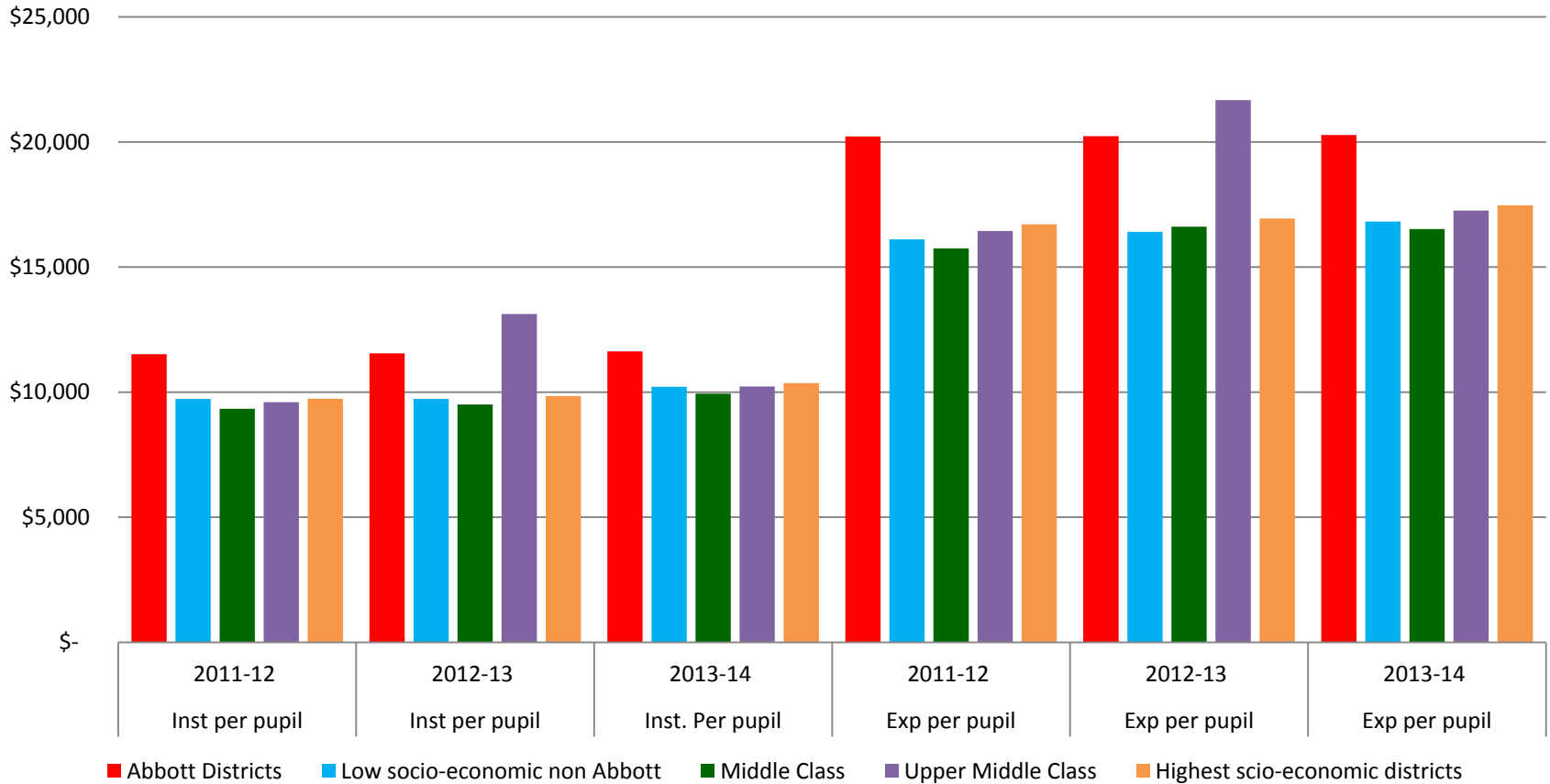
- ❖ Compare graduation rates of Abbott students prior and subsequent to Abbott v. Burke (1997) to the graduation rates of students from low socioeconomic, middle class, upper middle class, and highest socio-economic districts
- ❖ Compare Student-Teacher Ratio prior and subsequent to Abbott v. Burke (1997) to the Student-Teacher Ratio of students from low socioeconomic, middle class, upper middle class, and highest socio-economic districts
- ❖ Compare School Climate variables such as:
 - Algebra I enrollment and passing by grade 7 or 8,9; or 10,11,12
 - AP Courses, test taking, and test passing
 - Suspensions: in school and out-of-school
 - Expulsions
 - Bullying/harassment on the basis of sex, national origin, and disability

Mean Expenditures per Pupil by Quintiles



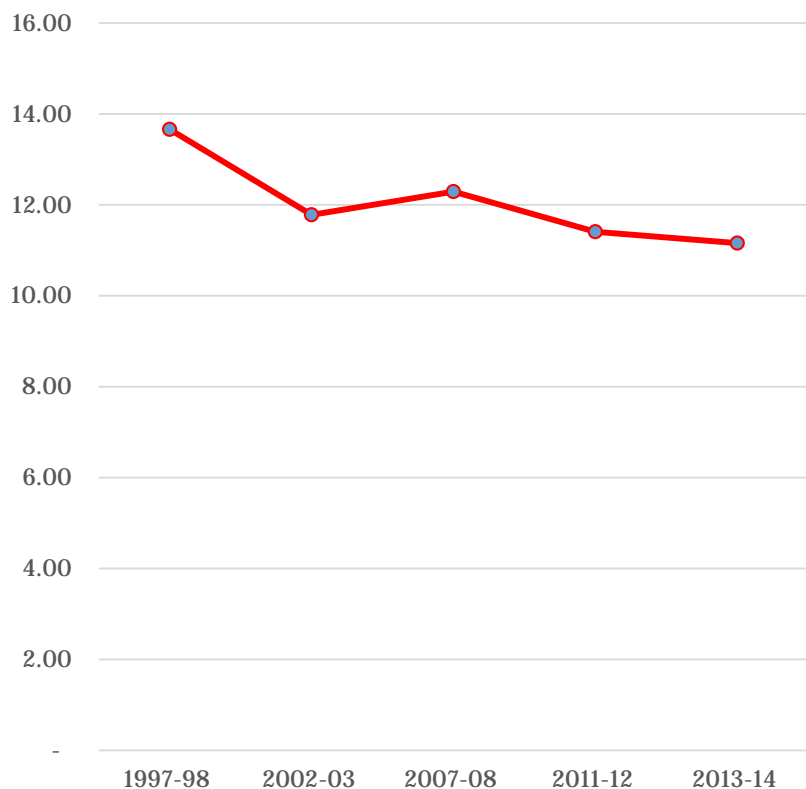
Mean Instruction Expenditures per pupil by Quintiles

Mean instruction per pupil and exp per pupil
by quintiles FY12-FY14

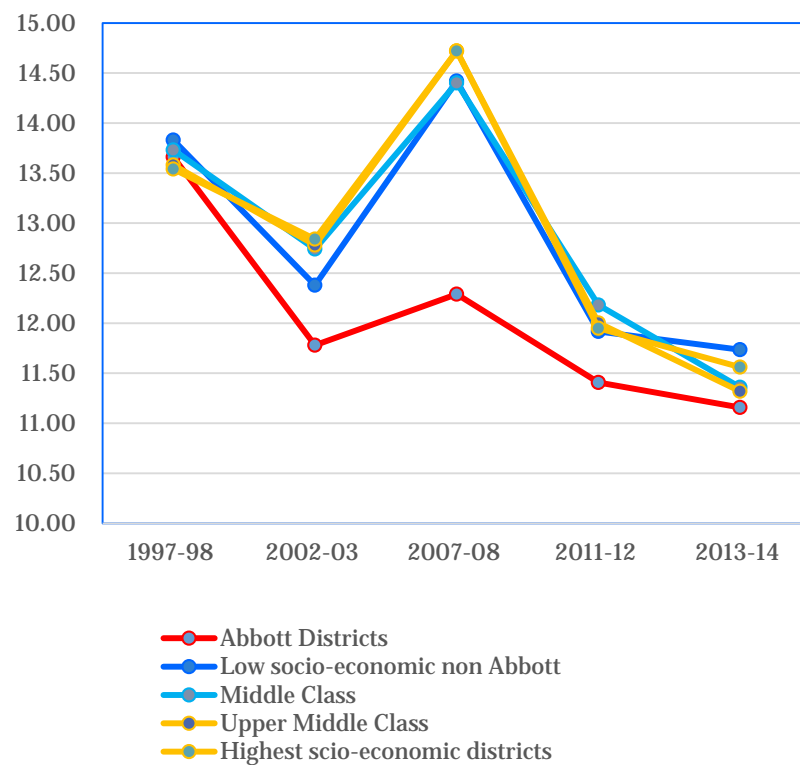


Pupil Teacher Ratio in Abbott Districts and Quintiles Selected Years 1997=2014

Mean Pupil Teacher Ratio in Abbott Districts selected years 1997-2014

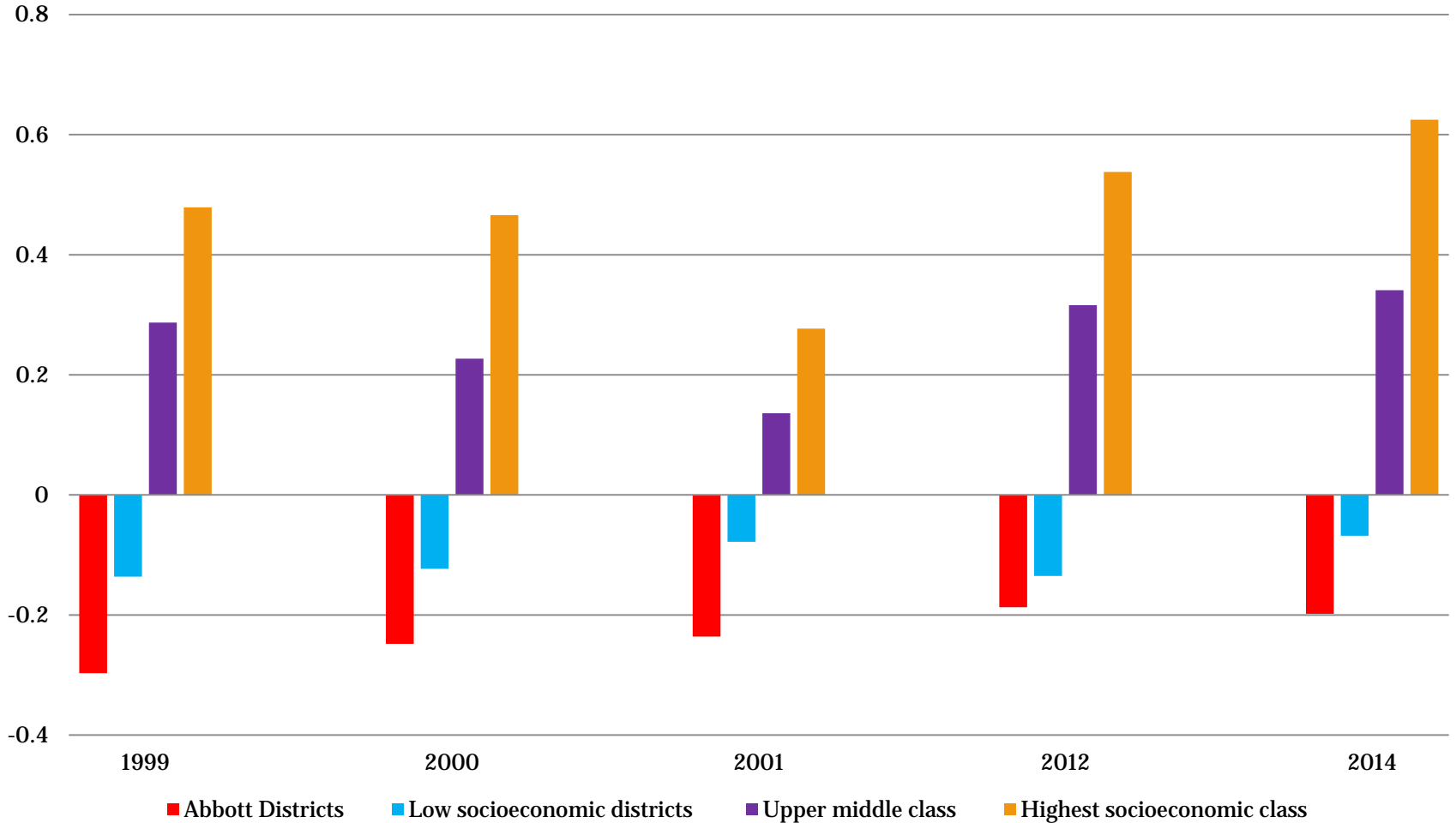


Mean Pupil/Teacher Ratio by Quintiles Selected Years 1997-2014



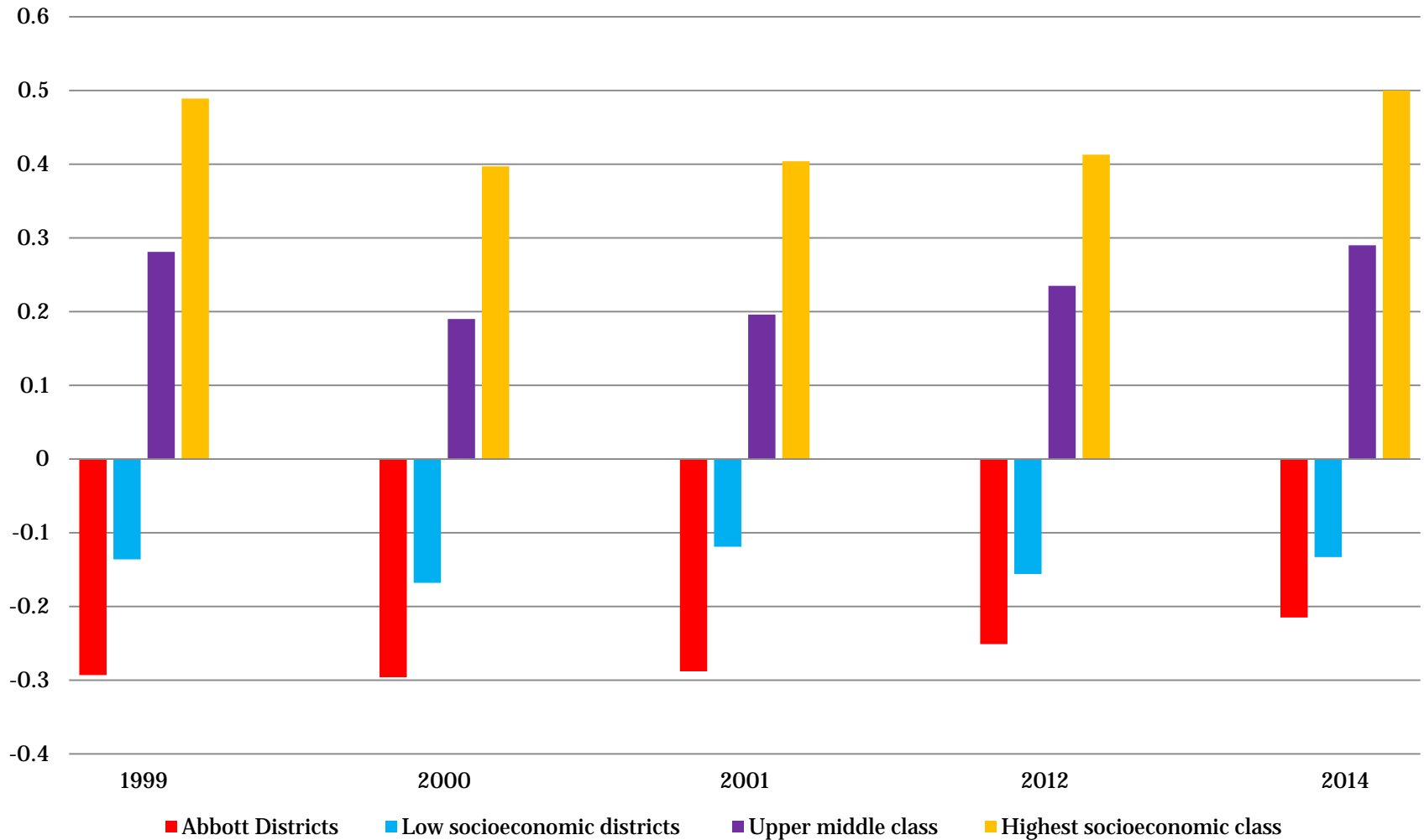
Coefficients for Grade 4 ELA Pct. Proficient Plus AP

**Coefficients for Grade 4 ELA Pct. Proficient PLUS Adv Proficient
(compared to middle class)**



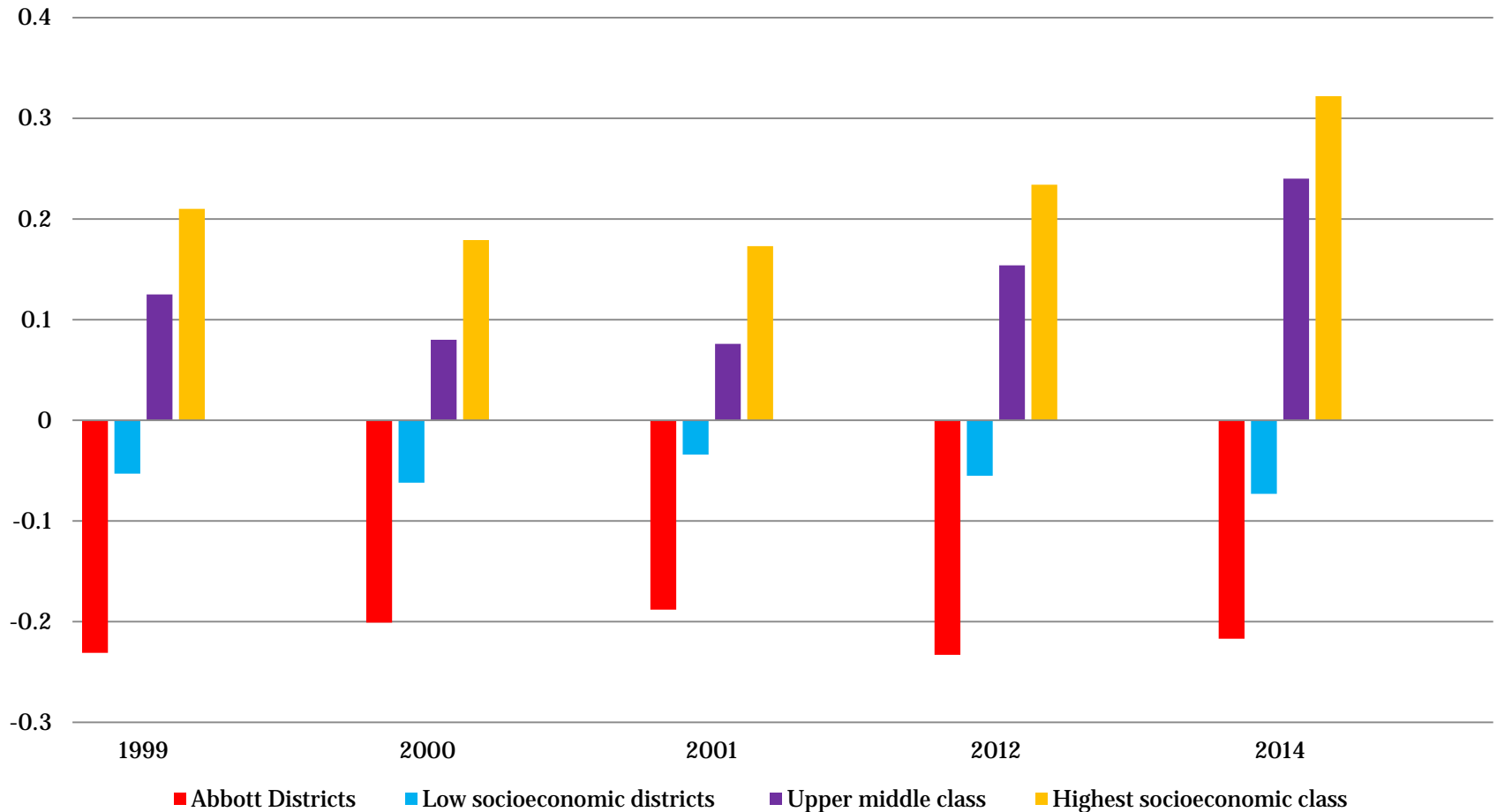
Coefficients for Grade 4 Math Pct. Proficient Plus AP

**Coefficients for Grade 4 Math Pct. Proficient PLUS Adv Proficient
(compared to middle class)**



Coefficients for Grade 4 Science Pct. Proficient Plus AP

**Coefficients for Grade 4 Science Pct. Proficient PLUS Adv Proficient
(compared to middle class)**



Regression Results: Standardized Tests ASK 8th Grade

	Dep. Var. 2012 ASK: 8 th grade ELA (Z scores)		Dep. Var. 2012 ASK 8 th grade Math (Z scores)		Dep. Var. 2014 ASK 8 th grade ELA (Z scores)		Dep. Var. 2014 ASK Math (Z scores)	
Abbott districts	-.189	***	-.186	***	-.185	***	-.199	***
Low socio- economic non- Abbott districts	-.095	**	-.090	*	-.074	*	-.067	
Upper middle class	.148	***	.124	**	.139	***	.121	**
Highest socio- economic districts	.356	***	.351	***	.314	***	.297	***
High minority	-.205	***	-.187	***	-.230	***	-.202	***
Median Income	.173	**	.075		.126	*	.091	
City	-.004		.003		-.009		.007	
Rural	.027		.025		.003		-.011	
Town	-.011		-.023		-.030		-.003	
Percentage of female with BA	.159	**	.257	***	.220	***	.211	**

*** p<.001

** p<.01

* p<.05

Regression Results: Standardized Tests HSPA

	Dep. Var. 2012 HSPA: ELA (Z scores)	Dep. Var. 2012 HSPA Math (Z scores)	Dep. Var. 2014 HSPA ELA (Z scores)	Dep. Var. 2014 HSPA Math (Z scores)
Abbott districts	-0.254 **	-0.252 ***	-0.234 ***	-0.184 ***
Low socio-economic non-Abbott districts	-0.107	-0.004	-0.018	0.055
Upper middle class	0.275 **	0.204 *	0.106 *	0.072 **
Highest socio-economic districts	0.279 *	0.236 *	0.209 **	0.221 **
High minority	-0.142	-0.331 ***	-0.23 ***	-0.22 ***
Median Income	.020 *	-0.016	0.148	0.196 *
City	0.099	-0.037	-0.021	-0.005
Rural	.054	.021	.012 *	.015 *
Town	.090	.068	.037	.285
Percentage of female with BA	0.003	0.150	.292 ***	0.285 **

*** p<.001

** p<.01

* p<.05

Regression Results: SAT Scores

	Dep. Var. 2012 SAT scores critical reading (Z scores)		Dep. Var. 2012 SAT scores math (Z scores)		Dep. Var. 2012 SAT scores writing	
Abbott districts	-0.186**		-0.182**		-.111	
Low socio-economic non-Abbott districts	0.026		0.049		-.072	
Upper middle class	0.117		0.136**		.108	
Highest socio-economic districts	0.297***		0.31***		.037	
High Minority	-0.254*		-0.231**		-.054	
Medium Income	-0.229*		-0.201		-.232	
City	.023		-0.021		-.190**	
Rural	-.019		-.026		.039	
Town	.01		-.02		-.03	
Percentage of female with BA	0.123		0.134		.238	

*** p<.001

** p<.01

* p<.05

Regression Results: Graduation Rates

	Dep. Var. Graduation Rate 2012	Dep. Var. Graduation Rate 2015
Abbott districts	-0.319***	-0.284***
Low socio-economic non-Abbott districts	-0.053	-0.057
Upper middle class	-.104	0.088
Highest socio-economic districts	-0.117	0.114
High Minority	-0.32***	-0.253***
Median Income	0.27	-0.161
City	-0.027*	-0.155
Rural	.015	.041
Town	.023	.048
Percentage of female with BA	0.361	0.515

*** <.001

** <.01

* <.05

Discussion

- ❖ Abbott v. Burke has increased resources for students in Abbott districts, but this increase in expenditures per pupil has not flowed directly to increase instruction expenditures per student.
- ❖ Student performance in Abbott districts improved over time in 4th grade ELA, math, and science standardized test scores, as compared to middle class districts.
- ❖ Student performance in Abbott districts remained level in ELA and math 8th grade standardized test scores between 2012 and 2014.
- ❖ Student performance in Abbott districts improved over time in ELA and math high school in between 2012 and 2014.
- ❖ High and medium implementers of Intensive Early Literature (IEL) scored higher than their counterparts in ELA, Math, and Science.