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Equal Educational Opportunity, Hollow Victories, and the Demise of School Finance Equity Theory: An Empirical Perspective and Alternative Explanation

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EQUAL EDUCATIONAL OPPORTUNITY, HOLLOW VICTORIES, AND THE DEMISE OF SCHOOL FINANCE EQUITY THEORY: AN EMPIRICAL PERSPECTIVE AND ALTERNATIVE EXPLANATION

*Michael Heise**

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INTRODUCTION

The ideal of equal educational opportunity resonates deeply in American legal and popular imagination.¹ Accordingly, few if any will be surprised to learn that courts think education is important, indeed crucial, to individuals and society. Issues surrounding the distribution of educational resources, especially funding, are increasingly central to the debate about equal educational opportunity. Increasingly central to debates surrounding the distribution of educational resources is school finance litigation. That modern school finance litigation has endured for almost three decades underscores part of its growing consequence.

While gaining in momentum and growing in importance, school finance litigation's theoretical base recently underwent a fundamental shift. After two decades of prominence, equity theory has given way to adequacy theory. These two distinct school finance litigation theories, equity and its successor, adequacy, reflect decidedly different approaches to school finance reform pursued by litigants. Plaintiffs that drew on equity theory typically sought reductions in educational disparities and focused on traditional input measures such as total educational and per-pupil spending levels.² In contrast, many plaintiffs pursuing school finance reform using an adequacy theory argue that "all children are entitled to an education of at least a certain quality and that more money is necessary to bring the worst school districts up to the minimum level mandated by the state education clause."³ Litigants advancing adequacy theory emphasize differences in the quality of educational services state or local governments provide to school districts rather than differences in the amount of resources.⁴ Adequacy lawsuits challenge state school finance systems not

¹ See generally ROSEMARY C. SALOMONE, *EQUAL EDUCATION UNDER LAW 1-2* (1986) (describing federal government's role in promoting equal educational opportunity); Peter Enrich, *Leaving Equality Behind: New Directions in School Finance Reform*, 48 VAND. L. REV. 101, 101 (1995) (identifying historical sources for nation's commitment to equal educational opportunity).

² William E. Thro, *Judicial Analysis During the Third Wave of School Finance Litigation: The Massachusetts Decision as a Model*, 35 B.C. L. REV. 597, 600-01 (1994).

³ *Id.* at 603.

⁴ Julie K. Underwood & William E. Sparkman, *School Finance Litigation: A New Wave of Reform*, 14 HARV. J.L. & PUB. POL'Y 517, 536-37 (1991).

because some fortunate districts benefit from more resources, better facilities, or more money than other school districts, but because the quality of the education in some districts is constitutionally inadequate.⁵ This theoretical shift is important not only because of its influence on school finance litigation, but also because school finance litigation accounts for one of the more important and current efforts of state court constitutional policymaking and implicates traditional and general notions about equal educational opportunity.

This shift in school finance litigation's underlying theoretical base already has attracted considerable and well-deserved academic comment.⁶ Much of this commentary, however, seeks to compare and contrast the two theoretical approaches to school finance litigation. The relative dearth of scholarship focusing on possible reasons for this shift from equity to adequacy is surprising. What little research does exist is largely theoretical and descriptive.⁷ Researchers have almost entirely ignored empirical efforts to explore possible reasons for the recent shift in school finance theory. Although reasons for the paucity of empirical legal scholarship are considered elsewhere,⁸ the relative absence of such

⁵ Thro, *supra* note 2, at 603.

⁶ See, e.g., Michael Heise, *State Constitutions, School Finance Litigation, and the "Third Wave": from Equity to Adequacy*, 68 TEMP. L. REV. 1151, 1162-66 (1995) (stating that third wave litigation concentrates on state education clauses instead of equal protection clauses); Thro, *supra* note 2, at 598 n.4 (citing several articles concerning litigation waves); Underwood & Sparkman, *supra* note 4, at 520-35 (discussing three litigation approaches used in school finance equity cases); Gail F. Levine, Note, *Meeting the Third Wave: Legislative Approaches to Recent Judicial School Finance Rulings*, 28 HARV. J. ON LEGIS. 507, 507-08 (1991) (discussing violations of state constitution education clauses as basis for "third wave" litigation).

⁷ For one recent example, see Enrich, *supra* note 1.

⁸ For possible explanations why many legal scholars typically avoid empirical research, see, for example, Peter H. Schuck, *Why Don't Law Professors Do Much Empirical Research?*, 39 J. LEGAL EDUC. 323, 323-36 (1989) (identifying possible reasons for dearth of empirical legal research and proposing possible remedy). Of course, many examples of important empirical legal scholarship already exist. Notable examples include PAUL T. HILL & DOREN L. MADEY, *THE INST. FOR CIVIL JUSTICE, EDUCATIONAL POLICYMAKING THROUGH THE CIVIL JUSTICE SYSTEM* (1982) (examining implementation of federal disability legislation through federal courts); DONALD L. HOROWITZ, *THE COURTS AND SOCIAL POLICY* (1977) (examining courts' ability to enact social policy); MICHAEL A. REBELL & ARTHUR R. BLOCK, *EDUCATIONAL POLICY MAKING AND THE COURTS: AN EMPIRICAL STUDY OF JUDICIAL ACTIVISM* (1982) (analyzing effects of non-desegregation courts' decisions on educational policy); GERALD N. ROSENBERG, *THE HOLLOW HOPE: CAN COURTS BRING ABOUT SOCIAL CHANGE?* (1991)

scholarship remains unfortunate and represents an important void in the literature that warrants attention.⁹ A better understanding of why adequacy replaced equity theory might increase our understanding of the latter's demise. Here, three research literatures—equal educational opportunity, judicial impact, and school finance—intersect. This Article explores this intersection.

More specifically, this Article, the second part of a multi-part, ongoing research project,¹⁰ explores the intersection of equal educational opportunity, judicial impact, and school finance by examining two particular dependent variables—centralization and total educational spending—from an empirical perspective. A systematic, empirical analysis of how court decisions influence these two crucial variables uncovers important clues that help explain the recent fundamental shift in school finance litigation theory from equity to adequacy. My general point, though narrow, is simple. One reason for the recent demise of equity theory stems from the inability of even successful state supreme court school finance decisions to exert independent influence on either centralization or total educational spending.¹¹ Put slightly differently, even successful school finance equity lawsuits do not appear to have altered centralization or spending levels in ways (or to the degree) most likely sought by litigants. This general finding may have contributed to frustration with equity as a legal theory and contributed to its demise.

A familiarity with our evolving notions about equal educational opportunity and, in particular, school finance litigation's position

(examining conditions under which courts produce significant social reform). Despite these and other helpful contributions, the legal impact literature remains decidedly underdeveloped.

⁹ Judge Richard Posner chides legal scholars for avoiding empirically grounded scholarship and urges them to assume more of the task of conducting detailed empirical inquiries into legal doctrines' presuppositions. RICHARD A. POSNER, *OVERCOMING LAW* 210 (1995); see also Bryant G. Garth, *Observations on an Uncomfortable Relationship: Civil Procedure and Empirical Research*, 49 ALA. L. REV. 103 (1997) (arguing for more empirical legal research).

¹⁰ Preliminary analyses of one particular aspect, the relation between school finance litigation and educational spending, appear in Michael Heise, *State Constitutional Litigation, Educational Finance, and Legal Impact: An Empirical Analysis*, 63 U. CIN. L. REV. 1735 (1995).

¹¹ As Part IV, *infra*, makes clear, data on centralization are decidedly more mixed than data on total educational spending.

within a larger judicial project is crucial not only to help place these data and findings into some context, but also to better understand possible reasons for equity theory's demise. Accordingly, Part I provides a brief sketch of the major trends in the development of equal educational opportunity. Part II focuses on school finance litigation theory and explores two goals frequently sought by litigants employing equity theory: increased funding centralization and total education spending. Part III includes a review of the relevant research literature. Part IV contains discussions of the data, models, and methodology employed in this study, as well as a discussion of the results and their implications.

Although specific methodological factors that limit empirical research generally and empirical legal scholarship in particular are discussed thoroughly below,¹² it remains important to note at the outset particular aspects that limit this study and any implications reasonably drawn from it. Empirical assessments of judicial decisions, that is, judicial impact research—especially within the school finance context—occupy a comparatively underdeveloped sector of legal research. The analyses that follow, while not preliminary,¹³ nonetheless represent exploratory efforts to assess the admittedly complex, nuanced, and subtle relations between court decisions and school finance. Also, this study employs data aggregated at the state level. School funding data at the individual school district level would reveal helpful information, particularly about possible variations among school districts within a particular state. Regrettably, researchers cannot readily access reliable data disaggregated to the individual school district level for the 1970-93 academic years. Moreover, the limited number of states available for analysis limits the findings' generalizability. Finally, for both theoretical and practical data-related reasons, this study focuses exclusively on the older equity school finance lawsuits. Crucial differences separating equity and the more recent adequacy

¹² See *infra* Part IV.

¹³ Indeed, the data, models, and analyses in this study build upon prior empirical work in this field. See, e.g., Heise, *supra* note 10 (noting this author's previous empirical study on one particular aspect of this topic, the relation between school finance litigation and educational spending); G. Alan Hickrod et al., *The Effect of Constitutional Litigation on Education Finance: A Preliminary Analysis*, 18 J. EDUC. FN. 180 (1993) (comparing state financing of public education and outcome of state-level litigation of constitutional claims).

lawsuits, described in greater detail below,¹⁴ underscore the need for cautious interpretation.

I. EVOLVING CONCEPTIONS OF EQUAL EDUCATIONAL OPPORTUNITY

A. FROM RACE TO RESOURCES

In *Brown v. Board of Education*,¹⁵ a unanimous Supreme Court with nothing less than forceful elegance characterized providing education as perhaps state and local governments' most important function.¹⁶ Almost twenty years later in *San Antonio Independent School District v. Rodriguez*,¹⁷ the Court reaffirmed its "historic dedication to public education."¹⁸ The Court went on to concur with the conclusion that "the grave significance of education both to the individual and to society cannot be doubted."¹⁹ The Court has elsewhere noted education's centrality in maintaining our basic social and political institutions and the lasting impact of its deprivation on the life of a child.²⁰ Such sentiments are consistent with the Court's perception of widely-shared public values: "The American people have always regarded education and acquisition of knowledge as matters of supreme importance."²¹ The Court's recognition of such values, including an abiding respect for education's crucial role in our free society, emerges in many Court

¹⁴ See *infra* Part I.C.

¹⁵ 347 U.S. 483 (1954).

¹⁶ Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society. It is required in the performance of our most basic public responsibilities, even service in the armed forces. It is the very foundation of good citizenship. Today it is the principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education.

Id. at 493.

¹⁷ 411 U.S. 1 (1972).

¹⁸ *Id.* at 30.

¹⁹ *Id.* (citing *Rodriguez v. San Antonio Indep. Sch. Dist.*, 337 F. Supp. 280, 283 (W.D. Tex. 1972), *rev'd*, 411 U.S. 1 (1973)).

²⁰ *Plyler v. Doe*, 457 U.S. 202, 221-23 (1982).

²¹ *Meyer v. Nebraska*, 262 U.S. 390, 400 (1923).

opinions, even some that pre-date *Brown*.²²

State courts are equally effusive in their characterization of education's importance to individuals and society. In *Rose v. Council for a Better Education*,²³ the Kentucky Supreme Court remarked that it was "mindful of the immeasurable worth of education to our state and its citizens, especially to its young people."²⁴ The Wyoming Supreme Court construed elements of the Wyoming Constitution in a manner that emphasizes "the fundamental importance placed on education by the founders of our state."²⁵ Massachusetts' Supreme Judicial Court noted education's importance not only for children's immediate needs, but also (and more fundamentally) to prepare them to participate as citizens and serve the state's interests.²⁶ The New Jersey Supreme Court went even further. In *Abbott v. Burke*,²⁷ the New Jersey court recognized education's pivotal role in both discharging an individual's obligations as a citizen and enabling an individual to participate fully in society and the community.²⁸

Judicial notice of education's importance is not surprising given its key role in the economic, social, and political lives of individuals and society. Economically, robust links exist between educational

²² See, e.g., *Wisconsin v. Yoder*, 406 U.S. 205, 213 (1972) ("Providing public schools ranks at the very apex of the function of a state."); *id.* at 238-39 (White, J., concurring) (disagreeing that Amish children should attend school until age 16, but agreeing with importance of education in society); *School Dist. of Abington Township v. Schempp*, 374 U.S. 203, 230 (1963) (Brennan, J., concurring) ("Americans regard the public schools as a most vital civic institution for the preservation of a democratic system of government."); *McCullum v. Board of Educ.*, 333 U.S. 203, 212 (1952) (Frankfurter, J., writing separately) (discussing role of public school in democratic society as support for argument in favor of separation of church and state); *Pierce v. Society of Sisters*, 268 U.S. 510, 535 (1925) (recognizing role of schools and parents in education of children). It remains, however, important to note that although the Court has repeatedly recognized education's key role in our society, the right to education has not been deemed fundamental by the Court for Equal Protection Clause purposes. See, e.g., *Rodriguez*, 411 U.S. at 30 ("But the importance of a service performed by the state does not determine whether it must be regarded as fundamental for purposes of examination under the Equal Protection Clause."). *But see id.* at 98-110 (Marshall, J., dissenting) (rejecting majority's categorical approach to Equal Protection analysis).

²³ 790 S.W.2d 186 (Ky. 1989).

²⁴ *Id.* at 189.

²⁵ *Washakie County Sch. Dist. No. One v. Herschler*, 606 P.2d 310, 333 (Wyo. 1980).

²⁶ *McDuffy v. Secretary of Executive Office of Educ.*, 615 N.E.2d 516, 548 (Mass. 1993).

²⁷ 575 A.2d 359 (N.J. 1990).

²⁸ *Id.* at 397.

attainment and personal income. Median annual income has been positively associated with levels of educational attainment for many years.²⁹ Moreover, this link between education and economic viability appears to be strengthening over time. The widely noted *A Nation at Risk* report³⁰ argues that “[l]earning is the indispensable investment required for success in the ‘information age’ we are entering.”³¹ Indeed, commentators describe education’s contribution to an individual’s economic well-being as vital.³²

Education addresses crucial social needs as well. Commentators note that schools have always struggled to perform their socialization functions—including communicating basic attitudes, skills, and knowledge to students³³—in a balanced manner.³⁴ Although important disagreements exist about the nature, shape, and contour of schools’ socialization tasks,³⁵ few argue that schools should perform no socialization roles, even if that were possible.³⁶

Ever since the Republic’s early years, especially since the mid-nineteenth century,³⁷ American society has recognized education’s

²⁹ NATIONAL CTR. FOR EDUC. STATISTICS, DIGEST OF EDUCATION STATISTICS 1995, at 406 tbls.372 & 373; see also Loretta C. Argrett, *Tax Treatment of Higher Education Expenditures: An Unfair Investment Disincentive*, 41 SYRACUSE L. REV. 621, 636 (1990) (noting higher median incomes for workers with five or more years of higher education); David S. Davenport, *Education and Human Capital: Pursuing an Ideal Income Tax and a Sensible Tax Policy*, 42 CASE W. RES. L. REV. 793, 798 (1992) (finding that higher education can purchase human capital that can be used to generate future earnings).

³⁰ NATIONAL COMM’N ON EXCELLENCE IN EDUC., *A NATION AT RISK: THE IMPERATIVE FOR EDUCATIONAL REFORM* (1983) [hereinafter *A NATION AT RISK*] (arguing that deficiencies in American educational system pose significant social, economic, and political risks).

³¹ *Id.* at 7.

³² See, e.g., Deborah C. Malamud, *Class-Based Affirmative Action: Lesson and Caveats*, 74 TEX. L. REV. 1847, 1880 (1996) (“Education is a vital component of economic well-being: for many, it is the cornerstone of middle class self-definition.”).

³³ *Id.* at 1881.

³⁴ MARK G. YUDOF ET AL., *EDUCATIONAL POLICY AND THE LAW* 143 (3d ed. 1992).

³⁵ See, e.g., Thomas James, *Totality in Private and Public Schooling*, 97 AM. J. EDUC. 1, 1 (1988) (arguing “that greater attention to democratic versus authoritarian aspects of socialization . . . is much needed in discussions of how to improve schools”); YUDOF ET AL., *supra* note 34, at 692-97 (noting teachers hear about their responsibility to perform socialization tasks, and because they have discretion in managing classroom activities it is their burden to organize class instruction depending upon students’ skill and ability level).

³⁶ For a discussion about the debate concerning whether transmission of knowledge can be disentangled from socialization, see, for example, Mark G. Yudof, *Personal Speech and Government Expression*, 38 CASE W. RES. L. REV. 671, 692-97 (1988).

³⁷ For one excellent account of the history of American education during the nineteenth century, see DAVID B. TYACK, *THE ONE BEST SYSTEM: A HISTORY OF AMERICAN URBAN EDUCATION* (1974).

essential contribution to our political system. Thomas Jefferson, in *A Bill for the More General Diffusion of Knowledge*,³⁸ argued that a democracy works best with educated citizens and public officials.³⁹ Indeed, the Court does not dispute the general proposition that enjoyment of certain fundamental liberties such as speech and political participation to some degree presuppose an educated citizenry.⁴⁰ The Court, however, has thus far avoided the decidedly more difficult task of determining what level of education, if any, is a federally constitutionally protected prerequisite to the meaningful exercise of those rights deemed fundamental and related to political participation.⁴¹

Given the enormity of the stakes involved, one would expect a substantial public investment in education. Indeed, educational spending in this country does not disappoint. During the 1992-93 school year, for example, the United States spent more than \$250 billion for public elementary and secondary education alone.⁴² The figure rises by an additional \$100 billion once public spending on higher education is included.⁴³ Cumulatively, such public spending during the 1992-93 school year accounted for approximately six percent of the 1992 United States Gross Domestic Product (GDP).⁴⁴

Partly because of education's well recognized and intuitively understood importance, underscored by the substantial public investment in education, courts and citizens, especially parents, take threats to our educational system quite seriously. Unequal educational opportunity poses one such vexing, profound, and

³⁸ Thomas Jefferson, *A Bill for the More General Diffusion of Knowledge*, in *THE COMPLETE JEFFERSON* (Saul K. Pandover ed., 1943).

³⁹ *Id.* at 1048.

⁴⁰ See, e.g., *San Antonio Indep. Sch. Dist. v. Rodriguez*, 411 U.S. 1, 35 (1972) (agreeing "that education . . . is essential to the effective exercise of First Amendment freedoms and to intelligent utilization of the right to vote").

⁴¹ See, e.g., *id.* at 36-37 ("Even if it were conceded that some identifiable quantum of education is a constitutionally protected prerequisite to the meaningful exercise of either right, we have no indication that the present levels of educational expenditures in Texas provide an education that falls short.").

⁴² NATIONAL CTR. FOR EDUC. STATISTICS, *supra* note 29, at 35 tbl.31.

⁴³ *Id.*

⁴⁴ *Id.* at 34-35 tbls.30 & 31. GDP is one common measure of the total output of goods and services produced within a given country during a particular time period. *DICTIONARY OF ECONOMICS* 198 (Donald Rutherford ed., 1992).

obvious threat. Assertions that access to education in this country is unequally distributed challenge deeply held ideals and rightfully raise serious concerns.

Regrettably, assertions that educational opportunity in this country is unequally distributed are far too common.⁴⁵ During much of the latter part of this century, race typically moored such assertions. Many past and present (and most likely future as well) legal and policy discussions about equal educational opportunity since *Brown* have been shaped by the lens of race and expressed through school desegregation litigation.⁴⁶ Although it is difficult, if not impossible, to overestimate *Brown's* impact on our nation's schools,⁴⁷ it is plausible to suggest that the importance of race in today's debates over educational reform is waning. The generation-long struggle either assigned to or assumed by the courts over what equal educational opportunity means in terms of race is broadening to include other concerns about education and equal opportunity. Specifically, the nation's current quest for more equitably and adequately financed and better (or "reformed") schools now appears to be eclipsing, if not engulfing, the school desegregation movement *Brown* catapulted.

⁴⁵ For one recent and notable example, see generally JONATHAN KOZOL, *SAVAGE INEQUALITIES: CHILDREN IN AMERICA'S SCHOOLS* (1991) (describing vast differences in resources that distinguish wealthy and non-wealthy schools).

⁴⁶ The literature on equal educational opportunity and school desegregation, already considerable, continues to grow. Prominent works include ALEXANDER BICKEL, *THE LEAST DANGEROUS BRANCH* (Yale Univ. Press 1986) (1962) (describing Supreme Court involvement in political issues); JAMES S. COLEMAN ET AL., *EQUALITY OF EDUCATIONAL OPPORTUNITY* (1966) (describing education equalization, focusing on minority education); LINO A. GRAGLIA, *DISASTER BY DECREE: THE SUPREME COURT DECISIONS ON RACE AND THE SCHOOLS* (1976) (discussing effect of legislation and Supreme Court on school discrimination); RICHARD KLUGER, *SIMPLE JUSTICE: THE HISTORY OF BROWN V. BOARD OF EDUCATION AND BLACK AMERICANS' STRUGGLE FOR EQUALITY* (1976) (recounting history and law of segregation in education); GARY ORFIELD, *MUST WE BUS?: SEGREGATED SCHOOLS AND NATIONAL POLICY* (1978) (describing U.S. school integration process); SALOMONE, *supra* note 1 (discussing federal government's role in promoting equal educational opportunity); Paul Gerwitz, *Remedies and Resistance*, 92 *YALE L.J.* 585 (1983) (discussing difficulty of creating judicial remedies for racial segregation). The recent fortieth anniversary of *Brown* gave rise to another round of scholarly attention. For special symposium law review issues, see, for example, 4 *TEMP. POL. & CIV. RTS. L. REV.* (1995), reviewing *Brown* and its impact forty years later, and 20 *S. ILL. U. L.J.* (1995), reviewing *Brown's* history and noting persistence of race-related problems.

⁴⁷ For example, Professor Salomone characterizes the *Brown* decision as "cataclysmic." SALOMONE, *supra* note 1, at 3.

Though subtle and gradual, implications from equal educational opportunity doctrine's reorientation from race to resources are profound and reasons for it are only beginning to emerge. When this shift began is far from clear. In many important respects, the dual lens of race and resources conflate in critical ways. One point of overlap can be traced to the Court's second *Milliken v. Bradley*⁴⁸ decision. In *Milliken II*, the Court addressed the question of the appropriate scope of court-ordered school desegregation remedies. Years earlier the Court struck down a court-ordered, multidistrict, metropolitan school desegregation plan.⁴⁹ The constitutionally ill-fated metropolitan plan involved numerous independent, suburban school districts that, unlike the Detroit School Board, were not found to have engaged in segregative activities.⁵⁰ Without the participation of the suburban school districts, however, court-ordered integration for the Detroit Public Schools was all but impossible given the Detroit metropolitan area's racial, housing, and school district boundaries' demographic compositions.⁵¹

In response to *Milliken I*, the district court ordered⁵² an array of compensatory educational programs designed to "restore the victims (students) of discriminatory conduct to the position they would have enjoyed in terms of education. . . ."⁵³ The compensatory educational programs included "remedial reading, in-service training of teachers, testing, and counseling."⁵⁴ As Justice Powell notes, the major complaining party was the State of Michigan and its complaint pivoted on money, not desegregation.⁵⁵ Specifically, in lieu of providing Detroit public school children with a racially integrated school setting, the district court ordered compensatory educational programs costing the State \$5.8 million. The State of Michigan argued that since the constitutional violation was racially discriminatory assignments of pupils to public schools, any court-ordered remedy must restrict itself to the re-assignment of pupils.

⁴⁸ 433 U.S. 267 (1976) [hereinafter *Milliken II*].

⁴⁹ *Milliken v. Bradley*, 418 U.S. 717 (1974) [hereinafter *Milliken I*].

⁵⁰ *Id.* at 730.

⁵¹ *Id.* at 739.

⁵² *Milliken v. Bradley*, 402 F. Supp. 1096 (E.D. Mich. 1975), *aff'd*, 433 U.S. 267 (1977).

⁵³ *Milliken II*, 433 U.S. at 282.

⁵⁴ *Id.* at 294 (Powell, J., concurring).

⁵⁵ *Id.* at 293 (Powell, J., concurring).

In *Milliken II*, the Court disagreed and concluded that the compensatory educational programs mandated by the district court to blunt the vestiges of desegregation were aptly tailored to address and remedy the educational consequences of the constitutional violation.⁵⁶ Unfortunately, however, the Court's decision in *Milliken II* implicitly conflates race and resources, at least within the confines of litigation fleshing out the contours of constitutionally permissible court-ordered remedies.

The recent educational reform movement, launched in the 1980s, also contributed to the broadening of equal educational opportunity doctrine's focus to include such other factors as educational excellence and quality. The *A Nation at Risk* report alerted many Americans to the crisis facing the nation's educational system.⁵⁷ That report and the numerous other reports and studies it prompted⁵⁸ elevated excellence and quality over desegregation in many subsequent reform efforts.⁵⁹ Recent school reform efforts are more likely to address such issues as school standards, governance, and resources rather than a school's racial composition.⁶⁰

Finally, school finance litigation helped further dislodge equal educational opportunity doctrine from its traditional mooring in

⁵⁶ *Id.* at 290.

⁵⁷ A NATION AT RISK, *supra* note 30.

⁵⁸ See, e.g., CARNEGIE FORUM ON EDUC. AND THE ECON., A NATION PREPARED: TEACHERS FOR THE TWENTY-FIRST CENTURY 2-3 (1986) (proposing new requirements for teachers that would generally improve education); EDUCATION COMM'N OF THE STATES, ACTION FOR EXCELLENCE 11 (1983) (arguing that states should continue developing finance measures to insure that educational resources are distributed fairly); EDUCATION COMM'N OF THE STATES, THE NEXT WAVE: A SYNOPSIS OF RECENT EDUCATION REFORM REPORTS (1987) (outlining several different reports exploring how to increase excellence and quality in education). For a review of these reports and others, see Joseph Murphy, *The Educational Reform Movement of the 1980s: A Comprehensive Analysis*, in THE EDUCATIONAL REFORM MOVEMENT OF THE 1980S, PERSPECTIVES & CASES (Joseph Murphy ed., 1990).

⁵⁹ Evidence mounts on educational excellence concerns' displacement of traditional school desegregation interests. See 42 EMORY L.J. (1993) for a symposium issue focusing on current school desegregation issues. School desegregation's relative decline is suggested by Chris Hansen, *Are the Courts Giving Up?: Current Issues in School Desegregation*, 42 EMORY L.J. 863 (1993).

⁶⁰ See, e.g., Goals 2000: Educate America Act, Pub. L. No. 103-227, 108 Stat. 125 (1994) (codified as amended at 20 U.S.C. §§ 5801-6804 (1994)) (providing framework for meeting national education goals by increasing school standards, better allocating resources, and improving school governance).

race. Even before the recent school reform wave, concerns about the distribution of educational funds surfaced as an important piece of the equal educational opportunity puzzle. Beginning in the early 1970s, a struggle strikingly similar to the struggle involving race emerged over what equal educational opportunity means in terms of resources.⁶¹ Owing partly to school finance issues' increasingly pivotal role in the evolving debate about equal educational opportunity, charges that school finance mechanisms inequitably distribute resources endure as a pressing challenge to equal educational opportunity. Challenges to state and local governments' distribution of educational funds among school districts continue.⁶² During the past two decades, litigants filed more than sixty lawsuits in forty-one states.⁶³ Despite decades of sustained legal activity, school finance litigation appears to be gaining momentum. Since 1989, fifteen state supreme courts have considered the constitutionality of school finance systems.⁶⁴ Unfortunately, this litigation appears to have resolved relatively few issues. If anything, the number and complexity of questions concerning school finance have increased over time. The resultant uncertainty fuels further school finance litigation that undoubtedly will continue well into the next century. Not surprisingly, many legal issues surrounding school finance debates are attracting increased attention from lawmakers⁶⁵ and academics.⁶⁶ Few

⁶¹ See generally Michael Heise, *The Courts vs. Educational Standards*, PUB. INTEREST, Summer 1995, at 55, 58-60 (arguing that legal construction of equal educational opportunity is in transition). For a helpful account of the shift in litigation focus from race to wealth for many civil rights organizations, see, for example, Enrich, *supra* note 1, at 122-26.

⁶² See, e.g., Tricia E. Bevelock, *Public School Financing Reform: Renewed Interest in the Courthouse, But Will the Statehouse Follow Suit?*, 65 ST. JOHN'S L. REV. 467 (1991) (exploring public school financing reform litigation trends); G. Alan Hickrod et al., *The Effect of Constitutional Litigation on Education Finance: A Preliminary Analysis*, 18 J. EDUC. FIN. 180 (1992) (analyzing effect of public school finance litigation).

⁶³ Hickrod et al., *supra* note 62, at 180; see also Michael A. Rebell & Robert L. Hughes, *Efficacy and Engagement: The Remedies Problem Posed by Sheff v. O'Neill—and a Proposed Solution*, 29 CONN. L. REV. 1115, 1136-37 nn.82-85 (1997) (noting that plaintiffs have prevailed in majority of post-1989 school finance lawsuits).

⁶⁴ Enrich, *supra* note 1, at 109-10 n.35.

⁶⁵ For example, school finance concerns are reflected in the recently enacted federal educational reform legislation, Goals 2000: Educate America Act, 20 U.S.C. § 6031(g)(2)(K).

commentators dispute the importance of school finance issues or their centrality to this latest iteration of a perhaps never-ending debate over equal educational opportunity.⁶⁷

The school finance litigation movement has emerged as the current and future legal battleground for equal educational opportunity. Two other important general trends have also emerged within the school finance litigation movement during roughly the same period of time. First, state governments' relative and absolute contribution to overall school funding generally increased. That is to say, school funding centralization levels increased.⁶⁸ Many proponents of increased funding centralization argue that it will ameliorate the inequitable results stemming from school districts' present heavy reliance on local property tax bases for school funding.⁶⁹ Indeed, states' increased financial role in school funding is a consistent, yet not unbroken, trend that spans more than two decades. Observers describe as "pronounced"⁷⁰ the

⁶⁶ For example, the *Journal of Education Finance* and the *Journal of Law & Education*, peer-reviewed and faculty-edited scholarly journals, respectively, devote considerable attention to school finance and related issues. Also, special or symposium law review issues, such as 35 B.C. L. REV. 543 (1994); 28 HARV. J. ON LEGIS. 293 (1991); and 28 U. MICH. J.L. REFORM 481 (1995), focus on school finance or law and educational policy issues. Finally, the number of individual law review articles, notes, and comments addressing school finance issues is large.

⁶⁷ Indeed, as Professor Clune notes, "School finance is the vehicle through which society makes its critical decisions about investment in education." William H. Clune, *New Answers to Hard Questions Posed by Rodriguez: Ending the Separation of School Finance and Educational Policy by Bridging the Gap Between Wrong and Remedy*, 24 CONN. L. REV. 721, 755 (1992).

⁶⁸ See *infra* Part I.B.1.a fig.1 (displaying percentage of school funding from State sources).

⁶⁹ See, e.g., Paul N. Courant & Susanna Loeb, *Centralization of School Finance in Michigan*, 16 J. POLY ANALYSIS & MGMT. 114, 122-23 (1997) (exploring property taxes in Michigan and education funding); Richard G. Salmon, *State/Local Fiscal Support of Public Elementary and Secondary Education: A Look Backward and Prospects for the Future*, 12 J. EDUC. FIN. 549, 559 (1987) (explaining factors contributing to increasing state funding for education); Martin W. Schoppmeyer, *Full State Assumption in Arkansas*, 13 J. EDUC. FIN. 174, 180 (1987) (discussing effects of varying property tax in Arkansas); John A. Thompson, *Notes on the Centralization of the Funding and Governance of Education in Hawaii*, 17 J. EDUC. FIN. 286, 286 (1992) (stating that in Hawaii, property is neither taxed for school purposes nor used as basis for distributing state educational funds).

⁷⁰ See, e.g., Roy Bahl et al., *School Finance Reform and Impact on Property Taxes*, 83 PROC. OF THE EIGHTY-THIRD ANN. CONF. ON TAX'N 163, 163 (1991) (examining school funding and effects of school financing litigation); see also *id.* at 164 tbl.1 (presenting sources of public school revenues); NATIONAL CTR. FOR EDUC. STATISTICS, 120 YEARS OF AMERICAN EDUCATION: A STATISTICAL PORTRAIT 31-32 (1993) (discussing school funding trends in

velocity of the shift away from local revenue sources and towards state revenue sources. Interestingly, increased school funding centralization is most pronounced in states that have pursued educational reforms.⁷¹

A second crucial trend is that the overall level of school funding has increased steadily over time, even after adjusting for inflation.⁷² With equity lawsuits (to a lesser extent) and adequacy school finance lawsuits (to a far greater extent), it remains reasonable to assume that one goal or remedy sought by litigants is, at bottom, more (or more equal) funding for the school districts they represent.⁷³ For example, the lead attorney representing the plaintiff school district in a challenge to Connecticut's school finance system in *Horton v. Meskill*⁷⁴ wrote that the lawsuit was designed to amend the state's school aid formula in a manner that would "justify increased state support for Canton (Connecticut)."⁷⁵

That both trends, increased centralization and increased educational spending levels, emerged at roughly the same time as modern school finance litigation gives rise to one obvious inference: that these trends relate, perhaps in important and instructive ways. Simple correlation between and among these trends is not, however, enough to establish whatever *independent* influence these trends may have exerted on one another, if any. Yet possible interactions between and among these trends are provocative and warrant careful study. A carefully designed empirical study can assist an effort to isolate and assess the independent influence of key variables.

twentieth-century United States).

⁷¹ See generally L. Dean Webb, *New Revenues for Education at the State Level*, in *THE IMPACTS OF LITIGATION AND LEGISLATION ON PUBLIC SCHOOL FINANCE* 27 (Julie K. Underwood & Deborah A. Verstegen eds., 1990) (arguing that states' role in and financial contribution to education increased markedly during 1980s).

⁷² NATIONAL CTR. FOR EDUC. STATISTICS, *supra* note 70, at 33; Michael Heise, *Goals 2000: Educate America Act: The Federalization and Legalization of Educational Policy*, 63 *FORDHAM L. REV.* 345, 350-51 tbl.2 (1994).

⁷³ See, e.g., Wesley W. Horton, *Memoirs of a Connecticut School Finance Lawyer*, 24 *CONN. L. REV.* 703, 706 (1992) (describing Horton's effort to bring lawsuit with goal of increasing state support for local school district).

⁷⁴ 376 A.2d 359 (Conn. 1977).

⁷⁵ Horton, *supra* note 73, at 706.

B. HOW CENTRALIZATION AND EDUCATIONAL SPENDING LEVELS MIGHT FIT INTO NEW CONCEPTIONS OF EQUAL EDUCATIONAL OPPORTUNITY

1. *Centralization.* The asserted link between increased centralization and funding equity or adequacy helps to place school funding centralization into an emerging conception of equal educational opportunity. Specifically, some scholars argue that greater centralization will ameliorate the inequitable results stemming from school districts' present heavy reliance on local property tax bases for funds.⁷⁶ Given centralization's possible role in equal educational opportunity, the relative paucity of related research is curious. It is not that researchers have ignored this trend, indeed far from it. Notwithstanding important work by many researchers,⁷⁷ most commentators would agree that issues surrounding centralization remain relatively underdeveloped, particularly as they might relate to successful school finance lawsuits.

Two factors in particular heighten this peculiarity. First, school funding centralization has increased nationally during the past two decades.⁷⁸ Second, the experiences of a few states, notably Hawaii and Michigan, provide helpful insight into the relation between school funding centralization and school finance reform. Evidence from these states also sheds light on important assumptions about

⁷⁶ See, e.g., Bahl et al., *supra* note 70, at 163 (discussing effect of state case law and legislation on property tax reliance in school funding); Courant & Loeb, *supra* note 69, at 122 (discussing Michigan's experience with greater funds centralization); Salmon, *supra* note 69, at 559 (discussing "long-term pattern of state assumption of a larger percentage of the funding of public . . . education . . . during the past decade"); Schoppmeyer, *supra* note 69, at 180 (discussing effect of state spending on school financial equity); Thompson, *supra* note 69, at 286 (discussing Hawaii's centralized school financing and its effect on school equality).

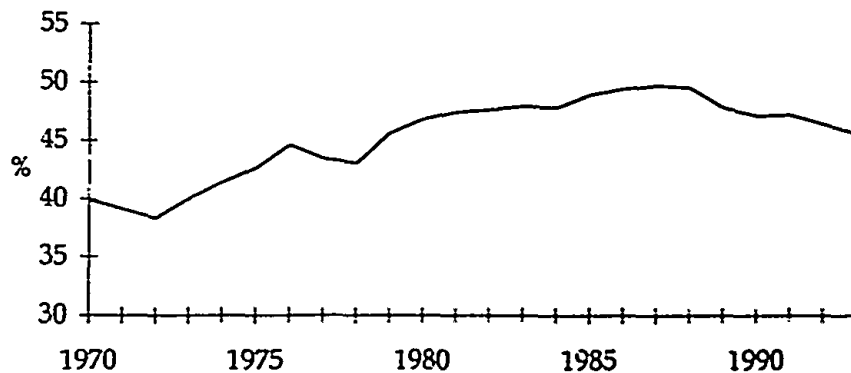
⁷⁷ See, e.g., Courant & Loeb, *supra* note 69, at 122 (discussing Michigan's experience with greater school funds centralization); William A. Fischel, *Did Serrano Cause Proposition 13?*, 42 NAT'L TAX J. 465, 466 (1989) [hereinafter Fischel, *Did Serrano Cause?*] (discussing funding centralization in California in wake of *Serrano*); Lawrence O. Picus, *Cadillacs or Chevrolets?: The Evolution of State Control over School Finance in California*, 17 J. EDUC. FIN. 33, 34 (1991) (discussing California's shift in school finance control from local districts to state); Salmon, *supra* note 69, at 559 (discussing long-term trend of state assumption of school finance from local districts); Neil D. Theobald & Faith Hanna, *Ample Provision for Whom?: The Evolution of State Control over School Finance in Washington*, 17 J. EDUC. FIN. 7, 22-25 (1991) (discussing centralizing effect of school finance reform in Washington).

⁷⁸ See *infra* Part I.B.1.a. fig.1 (displaying percentage of school funding from state sources).

centralized school funding systems' advantages over more decentralized school funding systems in equitably distributing educational funds.

a. National Centralization Trend. School districts' reliance on state funds increased during the past two decades, notwithstanding a slight decline since the late 1980s (Figure 1). Between 1970 and 1990, for example, states' contribution to total educational spending (as a percentage of total educational spending) grew by more than eighteen percent. Figure 1 illustrates a general trend toward greater school centralization at the state level.

FIGURE 1
PERCENTAGE OF REVENUE OF U.S. PUBLIC ELEMENTARY AND
SECONDARY SCHOOLS FROM STATE SOURCES



This national trend, however, masks important variations among states.⁷⁹ During much of the 1980s, for example, Professor Salmon notes dramatic increases in state financial support in the Western region, one that notably includes California.⁸⁰ The experiences of other states and regions differed. In the Great Lakes region, Michigan recorded a decline in percentage of state support for school funding.⁸¹ These and other state and regional variations, however, do not fundamentally detract from the overall

⁷⁹ For an excellent discussion of this and related points, see Salmon, *supra* note 69, at 549-52.

⁸⁰ *Id.* at 550.

⁸¹ *Id.* at 551.

national trend toward increased centralized school funding. This trend reflects a shift in school districts' reliance from local to state revenue sources. Federal contributions to educational spending have remained essentially flat and therefore do not dilute states' growing financial importance to public schools.⁸²

b. *Hawaii and Michigan.* Evidence of a national trend toward increased school funding centralization underscores the importance of understanding how more centralized school systems influence school finance. Of particular interest is how more centralized school systems distribute scarce education funds. The experiences of two states, Hawaii and Michigan, which reside at one end of the centralization continuum, provide helpful insights into centralization policy's ramifications.

Due to their particular history and geography, Hawaii schools have received funding from the state legislature, subject to release by the governor, since even before Hawaii became the nation's fiftieth state in 1959.⁸³ In Hawaii local property is not taxed for school purposes, nor is property wealth used to determine the distribution of educational funds. The Hawaiian legislature appropriates public education funds and thereby distinguishes Hawaii as the nation's most centralized school system. Indeed, Hawaii essentially operates as a single school district, thus minimizing per-pupil spending disparities.⁸⁴ Commentators draw three tentative conclusions from Hawaii's experience as the nation's most highly centralized school system. First, an inverse relation exists between centralization and local policy control. Because it lacks authority to levy taxes, Hawaii's Board of Education is considered to have "very little genuine power to make major [education policy] decisions."⁸⁵ In contrast, the entity with the funding power, the Hawaii General Assembly, exerts enormous control over education policy and governance matters.⁸⁶ Given the public's desire for accountability over the use of public funds, it is not surprising to find the existence of a link between funding and policy control in Hawaii (or elsewhere).

⁸² NATIONAL CTR. FOR EDUC. STATISTICS, *supra* note 29, at 37-38 tbls.33 & 34.

⁸³ For a more detailed description of factors which culminated in the nation's most centralized school system, see Thompson, *supra* note 69, at 286-88.

⁸⁴ *Id.* at 286.

⁸⁵ *Id.* at 301.

⁸⁶ *Id.*

Second, Hawaii's centralized school funding system has not resulted in a "cornucopia for providing money for public education."⁸⁷ While this finding might dismay centralization proponents, it is important to note that Hawaii's centralized school funding system did not stem from a school finance lawsuit. Therefore, Hawaii's experience on this point differs slightly, and perhaps importantly, from states where successful school finance litigation may have stimulated further school funding centralization.

Third, by linking Hawaiian school funding to state tax revenues rather than to the more common local property tax base, Hawaii's economic health exerts considerable influence over school funding. While schools presumably raise fewer complaints during robust economic times, during tighter economic times Hawaiian schools have experienced "occasionally severe reductions in the amount of funds actually spent for educational purposes."⁸⁸

One final aspect of Hawaii's school governance system warrants comment. Interestingly (perhaps even paradoxically), as many states contemplate making school funding more centralized, the one state where almost complete centralization exists, Hawaii, now seeks to become less centralized. Hawaii's new education code, which became effective on June 7, 1996, carried over earlier legislation that facilitated decentralization.⁸⁹

Michigan, on the other hand, sharply increased school funding centralization. In what commentators have described as a radical⁹⁰ legislative move resembling a "high wire act,"⁹¹ Michigan lawmakers recently centralized school funding and simultaneously dramatically reduced school districts' reliance on local property taxes. Although considerable per-pupil spending disparities existed within Michigan prior to the reform, there was no school finance litigation on the Michigan Supreme Court's docket at the time the legislation was enacted. Thus, unlike many more

⁸⁷ *Id.* at 297.

⁸⁸ *Id.* at 300.

⁸⁹ See HAW. REV. STAT. ch. 302A (Supp. 1996) (carrying over decentralizing legislation).

⁹⁰ Courant & Loeb, *supra* note 69, at 114.

⁹¹ Michael F. Addonizio et al., *Michigan's High Wire Act*, 20 J. EDUC. FIN. 235, 235 (1995).

clearly litigation-induced school finance reform efforts,⁹² Michigan's legislation appears more political in its impetus.⁹³

Although it is too early to draw any firm conclusions from Michigan's experience, initial evidence suggests two positive themes. First, in terms of per-pupil spending, no district is worse off than it was before the reform legislation and, indeed, most districts appear to have benefitted.⁹⁴ Of course, the new school finance statute guaranteed as much. Specifically, a grandfather clause incorporated into the school finance reform statute ensured that no school district was made financially worse off due to the new school funding system, at least in the short run.⁹⁵ That no school district was financially disadvantaged by the new funding mechanism made it more politically palatable to more districts. At the same time, though, the new legislation that dramatically increased school funding centralization did not eradicate per-pupil spending discrepancies among Michigan school districts.⁹⁶

Second, although per-pupil spending discrepancies endure, Michigan's present school finance system makes it more difficult to exacerbate them. To ameliorate the growth in per-pupil spending disparities, Michigan limits a district's ability to use local funds to supplement state foundation grants. Districts inclined to spend more than their allowed supplementation are given incentive to advocate for increases to the state-funded foundation grant. Increases to the state foundation grant will benefit all Michigan school districts, thereby helping to guard against exacerbation of per-pupil spending discrepancies.

Commentators note two potential problems that cast a shadow over the possible gains achieved by Michigan's recent school finance reform. First, the state-funded foundation grant reduces local

⁹² See, e.g., 1990 Ky. Acts 476 (codified as amended in scattered sections of KY. REV. STAT. ANN. §§ 156-168 (Banks-Baldwin 1995)) (illustrating school finance reform legislation arising from judicial intervention in Kentucky); Kern Alexander, *The Common School Ideal and the Limits of Legislative Authority: The Kentucky Case*, 28 HARV. J. ON LEGIS. 341 (1991) (discussing Kentucky school finance legislation).

⁹³ For a helpful description of the political history surrounding Michigan's school finance reform, see Addonizio et al., *supra* note 91, at 235-42; Courant & Loeb, *supra* note 69, at 115-17.

⁹⁴ Courant & Loeb, *supra* note 69, at 131.

⁹⁵ *Id.*

⁹⁶ *Id.* at 133.

control over school district spending.⁹⁷ By severing local control and school spending, Michigan's legislation may well achieve greater equity, but in exchange for a looser fit between communities and their demands for educational services. To the extent that Michigan school districts' appetites for educational spending vary, this exchange could prove costly. A second and more important concern is educational spending's reliance on state revenues.⁹⁸ Such reliance exposes school spending to greater competition with other worthy demands upon state resources. Thus far, Michigan school reform's implementation has enjoyed relatively "robust" state economic growth.⁹⁹ This economic growth might mask underlying problems latent in the reform legislation. Any latent problems might arise when Michigan enters its next economic recession.

2. *Educational Spending.* Even more direct than the asserted relation between school funding centralization and equal educational opportunity is the asserted relation between total educational spending and equal educational opportunity. The relation between school spending and opportunity rests somewhat uneasily upon narrow and mechanical conceptions of educational opportunity which are frequently cast predominately in terms of spending levels or resources. Many commentators argue that equal educational opportunity can exist if, and perhaps only if, educational spending is either equitable or adequate or both.¹⁰⁰ Unlike centralization, educational spending's role in the enduring equal educational opportunity debate is secure and has been the subject of sustained commentary. Indeed, in the historical evolution of the equal educational opportunity doctrine, perhaps only race rivals spending

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *Id.* at 131.

¹⁰⁰ *Adequate* educational spending is frequently understood to mean *more* spending. For one prominent articulation of this understanding, see, for example, KOZOL, *supra* note 45. The operationalization of equal educational opportunity in terms of educational spending and resources is problematic, at best. Even so, it is within this world of imperfect knowledge that courts and judges must make decisions. Examples of courts construing equal educational opportunity in terms of spending and resources are numerous and include, for example, *Washakie County Sch. Dist. No. One v. Herschler*, 606 P.2d 310, 332-34 (Wyo. 1980) (arguing that although factors other than money influence education, educational spending is, for judicial purposes, a viable proxy for educational equity).

in terms of influence.¹⁰¹ Most discussions about links between educational spending and opportunity involve three crucial and perhaps related factors. One factor is the overall real growth in educational spending in the United States. A second factor includes the uncertainties within the social science literature on the nature and contour of the particular relation between educational resources and student achievement, a crucial component of the equal educational opportunity doctrine. The third factor is the courts' struggle with the uncertain social science evidence on the link between educational resources and student achievement. Particularly notable are divisions between the federal and state courts on these issues as well as growing conflicts within the federal courts.

If raw dollars spent on education were positively correlated with equal educational opportunity, the United States would fare relatively well from an array of perspectives. For the 1992-93 school year, the United States spent more than \$250 billion on public elementary and secondary schools alone.¹⁰² Such spending's significance is amplified when cast as a percentage of the United States Gross Domestic Product.¹⁰³ Moreover, as Figure 2 illustrates, educational spending in the United States has consistently risen over the years, even after adjusting for inflation. Indeed, one important theme that unifies much of modern American education history is the persistent and real rise in educational spending.¹⁰⁴ Finally, America's commitment to educational

¹⁰¹ See, e.g., Heise, *supra* note 61, at 62 (noting that 40 years after *Brown v. Board of Education* "federal courts remain embroiled in the desegregation effort" and costs associated with such effort continually increase); Rebell & Hughes, *supra* note 63 (discussing recent Connecticut Supreme Court decision ordering other branches of government to implement remedial solution to problem of de facto racial segregation).

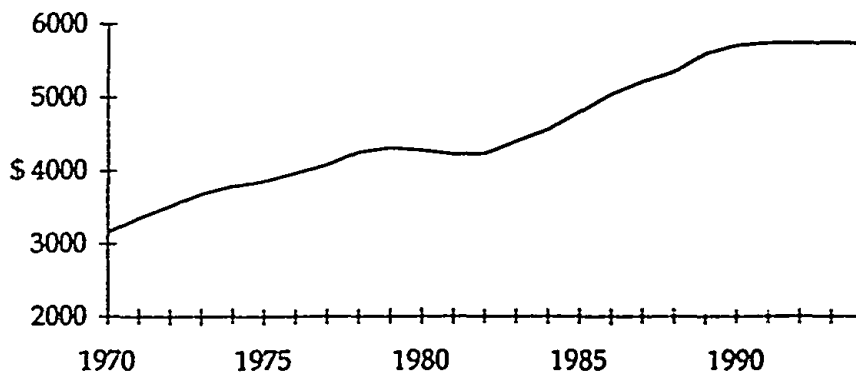
¹⁰² NATIONAL CTR. FOR EDUC. STATISTICS, *supra* note 29, at 35 tbl.31.

¹⁰³ For example, during the 1992-93 school year, American public elementary, secondary, and post-secondary school spending totaled more than \$350 billion and accounted for 6% of the 1992 U.S. Gross Domestic Product. ORGANIZATION FOR ECON. CO-OPERATION AND DEV., EDUCATION AT A GLANCE: OECD INDICATORS 73 (1995). By way of one albeit imperfect comparison, for the 1990-91 school year the U.S. spent more than \$200 billion on public elementary and secondary schools. This spending accounted for 3.8% of the American 1991 GDP. Japan, in contrast, spent 2.8% of its GDP on elementary and secondary education. ORGANIZATION FOR ECON. CO-OPERATION AND DEV., EDUCATION AT A GLANCE: OECD INDICATORS 66 (1993) [hereinafter 1993 OECD INDICATORS].

¹⁰⁴ Although Figure 2, *infra* p. 566, reports only data between 1970-93, the trend Figure 2 illustrates began decades earlier. For data on early decades in the twentieth century, see Heise, *supra* note 72, at 351 tbl.2.

spending fares well from an international perspective. Specifically, the United States outspends almost all of its western industrialized counterparts from an absolute and per-capita perspective.¹⁰⁵

FIGURE 2
U.S. PUBLIC ELEMENTARY AND SECONDARY SCHOOL
ANNUAL SPENDING, PER-PUPIL (1994-\$s)



A second factor that arises in discussions ignited by school finance litigation relates to an assumption implicit in the assertion that educational spending correlates positively with educational opportunity. The assumption, simply put, is that "money matters" to equal educational opportunity in general and to student achievement in particular. Although many school finance lawsuits embody such an assumption and it presents enormous policy implications, school finance equity theory might not need to advance such an assumption. That is, even if it were established that money (specifically educational spending levels) does not positively correlate with educational opportunity (frequently operationalized in terms of student achievement), logical room still exists for school finance litigants pursuing an equity theory to argue that, nevertheless, state constitutions require more equitable distributions of public educational funding.

¹⁰⁵ See, e.g., 1993 OECD INDICATORS, *supra* note 103, at 66, 92; Heise, *supra* note 72, at 350-51.

Whether necessary or not, many school finance lawsuits implicitly or explicitly embody the assumption that money does matter when it comes to student achievement and equal educational opportunity. This assumption quickly bumps into a long-standing debate that endures both inside and out of the social science community. Much of this debate was framed, indeed, perhaps, prompted, by the publication of Professor Coleman's seminal report, *Equality of Educational Opportunity*.¹⁰⁶ The *Coleman Report* was the product of Congress's request for the nation's first comprehensive, large-scale empirical study of the relation between student spending and achievement. The thrust of the *Coleman Report's* conclusions, that no clear links exist between educational resources and student achievement, startled the nation and the research community.¹⁰⁷ Given its implications and because it challenged widely-held assumptions concerning the relations between educational resources and student achievement, the *Coleman Report* attracted and sustained considerable attention within the academic community.¹⁰⁸ Regrettably, despite serious and sustained research attention, social scientists remain in disagreement about the assumption's viability. Specifically, it remains unclear whether increased school spending contributes to a corresponding increase in student achievement.¹⁰⁹ Moreover, even if the assumption was

¹⁰⁶ JAMES S. COLEMAN ET AL., *EQUALITY OF EDUCATIONAL OPPORTUNITY* (1966) [hereinafter *Coleman Report*].

¹⁰⁷ For an early comprehensive collection of papers responding to the *Coleman Report*, see *ON EQUALITY OF EDUCATIONAL OPPORTUNITY* (Frederick Mosteller & Daniel P. Moynihan eds., 1972).

¹⁰⁸ See, e.g., *id.*; Larry V. Hedges et al., *Does Money Matter? A Meta-Analysis of Studies of the Effects of Differential School Inputs on Student Outcomes*, *EDUC. RESEARCHER*, Apr. 1994, at 5, 6 (arguing that no consensus yet exists within academic community on issues raised initially in *Coleman Report*).

¹⁰⁹ For articles generally skeptical of a correlation between educational spending and educational opportunity, see ERIC A. HANUSHEK ET AL., *MAKING SCHOOLS WORK: IMPROVING PERFORMANCE AND CONTROLLING COSTS* (1994); ALLAN R. ODDEN & LAWRENCE O. PICUS, *SCHOOL FINANCE: A POLICY PERSPECTIVE* 277-81 (1992); Clayton P. Gillette, *Opting Out of Public Provision*, 73 *DENV. U. L. REV.* 1185, 1213-14 (1996); Eric A. Hanushek, *The Impact of Differential Expenditures on School Performance*, *EDUC. RESEARCHER*, May 1989, at 45, 49-50; Eric A. Hanushek, *Money Might Matter Somewhere: A Response to Hedges, Laine, and Greenwald*, *EDUC. RESEARCHER*, May 1994, at 5, 5-6, 8; Eric A. Hanushek, *Throwing Money at Schools*, 1 *J. POL'Y ANALYSIS & MGMT.* 19 (1981); Eric A. Hanushek, *When School Finance "Reform" May Not Be Good Policy*, 28 *HARV. J. ON LEGIS.* 423 (1991). For articles generally supportive of a correlation between expenditures and educational opportunity, see

true, few understand how additional educational spending increases student achievement.

A third factor that frequently arises in discussions about the relation of educational spending and equal educational opportunity involves the courts' struggle with imperfect and conflicting social science evidence, described briefly above. Given the lack of consensus on this topic within the social science community, a similar absence of consensus within the judiciary should surprise few.

A comparison between two notable Supreme Court decisions evidences a lack of consensus within the federal judiciary. On the one hand, in *San Antonio Independent School District v. Rodriguez* the United States Supreme Court characterized the asserted link between educational spending and equal educational opportunity as "unsettled and disputed."¹¹⁰ The Court emphasized that "[o]n even the most basic questions in this area the scholars and educational experts are divided."¹¹¹ Nevertheless, the Court also noted that the lower court opinion¹¹² in *Rodriguez* accepted a link as fact "underlying virtually every legal conclusion [it drew]."¹¹³ On the other hand, the Court's *Milliken II* opinion implicitly suggests something slightly different. In *Milliken II*, described in greater detail above,¹¹⁴ the Court's approval of costly compensatory educational programs designed to "restore" the education of students adversely affected by unconstitutional discriminatory conduct implicitly embodies the proposition that, at the very least,

Christopher F. Edley, Jr., *Lawyers and Education Reform*, 28 HARV. J. ON LEGIS. 293 (1991); Ronald F. Ferguson, *Paying for Public Education: New Evidence on How and Why Money Matters*, 28 HARV. J. ON LEGIS. 464 (1991); Hedges et al., *supra* note 108, at 5.

¹¹⁰ 411 U.S. 1, 23 (1972). Indeed, the *Rodriguez* opinion contains direct references to, among other authorities, the *Coleman Report*. *Id.* at 43 n.86. For a more recent articulation of this general proposition, see, for example, *Missouri v. Jenkins*, 515 U.S. 70, 102 (1995) ("[N]umerous external factors beyond the control of the KCMSD [(school district)] and the State affect minority student achievement.").

¹¹¹ *Rodriguez*, 411 U.S. at 42.

¹¹² *Rodriguez v. San Antonio Indep. Sch. Dist.*, 337 F. Supp. 280 (W.D. Tex. 1971), *rev'd*, 411 U.S. 1 (1973).

¹¹³ *Rodriguez*, 411 U.S. at 43.

¹¹⁴ See *supra* notes 48-56 and accompanying text (describing Court's multiple *Milliken v. Bradley* decisions).

money can remediate educational ills.¹¹⁵ From this proposition there is little to impede the logical extension that money positively correlates with educational opportunity. If so, the Court's implicit message in *Milliken II* seems to be at odds with the Court's express language in *Rodriguez*.

Like their federal counterparts, state court decisions reveal a conflict concerning the asserted link between educational spending and achievement, though perhaps to a lesser degree. In Rhode Island, the state supreme court cited precedent with approval casting some doubt on the relation between student achievement and educational spending.¹¹⁶ The Wyoming Supreme Court's *Herschler* opinion, however, stands in stark opposition. Despite acknowledging evidence to the contrary¹¹⁷ and conceding the importance of factors other than money,¹¹⁸ the Wyoming court in *Herschler* went on to conclude that educational spending and quality and opportunity correlate. To underscore its point, the court noted that "[i]t is nothing more than an illusion to believe that the extensive disparity in financial resources does not relate directly to quality of education."¹¹⁹ Moreover, as Professor Dayton noted, an increasing majority of state courts that have considered the issue has accepted the asserted relation.¹²⁰

¹¹⁵ I use the descriptor "costly" only in reference to the State of Michigan's position that the assignment of \$5.8 million of the remedial education's total cost was improper. The State's position, however, was rejected by the Court. *Milliken II*, 433 U.S. 267, 288-91 (1976).

¹¹⁶ *City of Pawtucket v. Sundlun*, 662 A.2d 40, 61 (R.I. 1995) ("[N]umerous external factors beyond the control of the KCMSD [(school district)] and the State affect minority student achievement." (quoting *Missouri v. Jenkins*, 515 U.S. 70, 102 (1995))).

¹¹⁷ *Washakie County Sch. Dist. No. One v. Herschler*, 606 P.2d 310, 334 (Wyo. 1980) ("There is some general disagreement over the degree to which money counts.").

¹¹⁸ *Id.* ("While we would agree that there are factors other than money involved in imparting education, those factors are not easy of measurement and comparison.").

¹¹⁹ *Id.*

¹²⁰ See John Dayton, *Correlating Expenditures and Educational Opportunity in School Funding Litigation: The Judicial Perspective*, 19 J. EDUC. FIN. 167, 178 (1993) (describing courts' response to asserted positive relation between educational funding and opportunity).

C. SCHOOL FINANCE LITIGATION: EFFORTS TO EMPLOY THE JUDICIARY TO ALTER CENTRALIZATION AND EDUCATIONAL SPENDING LEVELS

Just as litigants called upon the judiciary to enhance equal educational opportunity in terms of race (most prominently through school desegregation litigation), school finance reformers seek judicial assistance in their efforts to reform school finance systems, particularly centralization and total educational spending levels.¹²¹ Indeed, school finance litigation has endured for almost three decades and shows no signs of abating anytime soon. In sharp contrast to school desegregation litigation, which occurred in the federal courts and moored itself in the federal Constitution, most modern school finance litigation occurs in state court systems and employs state constitutional text.

Throughout the decades, school finance litigation has sought to reconcile its theoretical goals and empirical reality. One theoretical goal is to let coherence and fairness guide the distribution of educational opportunity, typically construed in terms of resources such as funding levels. The empirical reality is that educational resources, namely educational spending levels, significantly vary in some states. States' reliance on local property taxes for educational funding largely accounts for educational spending disparities.¹²² Variations in revenues generated by local property taxes stem from underlying variations in property values within a state. Generally, school districts in property-rich areas benefit from comparatively higher tax revenues generated by comparatively lower tax rates. Conversely, school districts located in property-poor areas receive lower tax revenues generated by, in some instances, higher tax rates. Variations in educational spending typically lead to per-pupil spending disparities within a state. These disparities fuel much of the school finance litigation.

¹²¹ See, e.g., Horton, *supra* note 73, at 706 (arguing that goal of school finance litigation was to "justify increased state support for Canton [Connecticut]").

¹²² Hawaii and the District of Columbia each operate a single or unified school system for their citizens. In 1993, Michigan decided to replace a property tax with a sales tax as the core for school funding. See Addonizio et al., *supra* note 91 (discussing ramifications of Michigan legislature's decision to eliminate local property tax base as a source of public school revenue).

School finance litigation during the past decades has been substantial, and the results have been essentially split. According to one recent count, thirty-one state supreme courts have ruled on the constitutionality of their state's school finance systems.¹²³ Of these thirty-one decisions, fourteen state supreme courts invalidated school finance systems¹²⁴ and seventeen upheld school funding systems.¹²⁵

A review of the past two decades of school finance court decisions reveals three distinct "waves"¹²⁶ generated by two distinct school finance litigation theories. The first and second waves of litigation advance an equity theory. The third (and current) wave pursues an adequacy theory. The demise of equity theory and the development of and transition to adequacy theory marks an important, indeed fundamental, change in school finance litigation. It signals a

¹²³ John Dayton, *Examining the Efficacy of Judicial Involvement in Public School Funding Reform*, 22 J. EDUC. FIN. 1, 1 (1996).

¹²⁴ See *Roosevelt Elementary Sch. Dist. No. 66 v. Bishop*, 877 P.2d 806 (Ariz. 1994); *DuPree v. Alma Sch. Dist. No. 30*, 651 S.W.2d 90 (Ark. 1983); *Serrano v. Priest*, 487 P.2d 1241 (Cal. 1971); *Horton v. Meskill*, 376 A.2d 359 (Conn. 1977); *Rose v. Council for Better Educ., Inc.*, 790 S.W.2d 186 (Ky. 1989); *McDuffy v. Secretary of the Executive Office of Educ.*, 615 N.E.2d 516 (Mass. 1993); *Helena Elementary Sch. Dist. No. 1 v. State*, 769 P.2d 684 (Mont. 1989); *Abbott v. Burke*, 575 A.2d 359 (N.J. 1990); *Bismarck Pub. Sch. Dist. No. 1 v. State*, 511 N.W.2d 247 (N.D. 1994); *Tennessee Small Sch. Sys. v. McWherter*, 851 S.W.2d 139 (Tenn. 1993); *Edgewood Indep. Sch. Dist. v. Kirby*, 777 S.W.2d 391 (Tex. 1989); *Seattle Sch. Dist. No. 1 v. State*, 585 P.2d 71 (Wash. 1978); *Pauley v. Kelly*, 255 S.E.2d 859 (W. Va. 1979); *Washakie County Sch. Dist. No. 1 v. Herschler*, 606 P.2d 310 (Wyo. 1980).

¹²⁵ See *Lujan v. Colorado State Bd. of Educ.*, 649 P.2d 1005 (Colo. 1982); *McDaniel v. Thomas*, 285 S.E.2d 156 (Ga. 1981); *Idaho Schs. for Equal Educ. Opportunity v. Evans*, 850 P.2d 724 (Idaho 1993); *Unified School Dists. v. State*, 885 P.2d 1170 (Kan. 1994); *School Admin. Dist. No. 1 v. Comm'n'r, Dept. of Educ.*, 659 A.2d 854 (Me. 1995); *Hornbeck v. Somerset County Bd. of Educ.*, 458 A.2d 758 (Md. 1983); *Milliken v. Green*, 212 N.W.2d 711 (Mich. 1973); *Skeen v. State*, 505 N.W.2d 299 (Minn. 1993); *Board of Educ., Levittown Union Free Sch. Dist. v. Nyquist*, 439 N.E.2d 359 (N.Y. 1982); *Board of Educ. v. Walter*, 390 N.E.2d 813 (Ohio 1979); *Fair Sch. Fin. Council v. State*, 746 P.2d 1135 (Okla. 1987); *Coalition for Equitable Sch. Funding, Inc. v. State*, 811 P.2d 116 (Or. 1991); *Danson v. Casey*, 399 A.2d 360 (Pa. 1979); *City of Pawtucket v. Sundlum*, 662 A.2d 40 (R.I. 1995); *Richland County v. Campbell*, 364 S.E.2d 470 (S.C. 1988); *Scott v. Commonwealth*, 443 S.E.2d 138 (Va. 1994); *Kukor v. Grover*, 436 N.W.2d 568 (Wis. 1989).

¹²⁶ Thro claims ownership over "[t]he idea of waves of litigation." See Thro, *supra* note 2, at 598 n.4. As Thro notes, the idea has been reiterated by others; see, e.g., Underwood & Sparkman, *supra* note 4, at 520-35 (noting that two waves center on constitutional theory of Equal Protection and one wave focuses on individual state's constitution as basis for relief); Levine, *supra* note 6, at 507-08 (noting that "[p]eople have been trying to reform school finance systems through litigation for 20 years").

decidedly different approach taken by those seeking to use the courts to reform school finance systems. An understanding of the general trends forged by more than a quarter century of school finance litigation places school finance reform into a more helpful context. Understanding the evolution of school finance litigation also informs discussions about equity theory's demise. Although more thorough explanations of school finance litigation history appear elsewhere,¹²⁷ a brief summary follows.

1. *Equity Theory*. Equity theory dominated the first and second waves of school finance court decisions. What distinguishes the initial two waves is that the first focused on the United States Constitution, particularly its Equal Protection Clause,¹²⁸ and the second focused on state constitutions.¹²⁹ School finance litigants' early attraction to the Equal Protection Clause is understandable, particularly after the Court's interpretation of it expanded during the 1950s and 1960s.¹³⁰ The first significant school finance court decision addressing the struggle over educational funding and articulating the equity theory, *Serrano v. Priest*,¹³¹ sought refuge within an expanding Equal Protection Clause doctrine.

In *Serrano*, the California Supreme Court considered a challenge to that state's public elementary and secondary school finance system, a system, like most others, rooted in local property tax bases. The plaintiffs grounded their lawsuit largely on the federal Equal Protection Clause,¹³² with a reference to the state's similar equal protection clause.¹³³ The plaintiffs noted that per-pupil spending disparities existed throughout California and, in some

¹²⁷ Enrich, *supra* note 1, at 115-43; Heise, *supra* note 6, at 1162-66.

¹²⁸ U.S. CONST. amend. XIV, § 1 (The federal Equal Protection Clause provides, in pertinent part, that a state shall not "deny to any person within its jurisdiction the equal protection of the laws.").

¹²⁹ See generally Thro, *supra* note 2 (stating that second wave relied on state equal protection clauses); Betsy Levine, *Editors Introduction to the State Studies*, 38 LAW & CONTEMP. PROBS. 309, 309-10 (1974) (noting that either state's equal protection clause or its mandating provision of education can be used as basis for attack on school finance system).

¹³⁰ Enrich, *supra* note 1, at 116; see also Frank I. Michelman, *Foreword: On Protecting the Poor Through the Fourteenth Amendment*, 83 HARV. L. REV. 7, 9 (1969) (describing "judicial equality" explosion and Supreme Court's "egalitarian revolution").

¹³¹ 487 P.2d 1241 (Cal. 1971).

¹³² *Id.* at 1249.

¹³³ *Id.* at 1249 n.11. Article IV of the California Constitution provides that "[a]ll laws of a general nature [shall] have [a] uniform operation." CAL. CONST. art. IV, § 16.

instances, within a county.¹³⁴ In its assessment of the California Constitution, the California Supreme Court looked closely at the United States Supreme Court's interpretation of the federal Constitution. Because the California court concluded that the state school finance system's reliance on local property tax bases and the resultant discrepancies in per-pupil educational spending implicated a suspect class of individuals¹³⁵ along with a fundamental right,¹³⁶ it applied strict judicial scrutiny.¹³⁷ Because California's school funding system harmed a suspect class's fundamental right and did not further a compelling governmental interest, the court ruled the state's school finance system unconstitutional.¹³⁸

The *Serrano* decision in California fueled a similar effort to test the United States Constitution's receptivity to school finance equity theory. Three years later, in *San Antonio Independent School District v. Rodriguez*,¹³⁹ the United States Supreme Court first addressed the constitutionality of per-pupil spending disparities generated by a local property tax-based school finance system. The plaintiffs in *Rodriguez*, including children from low-spending and property-poor school districts, asserted that educational quality was directly linked to the amount of money spent on education.¹⁴⁰ Moreover, they argued that factors such as geography, or more specifically, the neighborhood in which a child happened to live, should not determine the quality of educational services (measured by per-pupil spending) provided.¹⁴¹ Such disparities, the plaintiffs argued, violated the United States Constitution's Equal Protection Clause in the same way that the per-pupil spending disparities in California ran afoul of that state's version of the Equal Protection Clause.¹⁴²

The Court took issue with a few of the plaintiffs' crucial empirical assertions. In particular, the Court noted the lack of evidence

¹³⁴ *Serrano*, 487 P.2d at 1247-48.

¹³⁵ *Id.* at 1250-55.

¹³⁶ *Id.* at 1255-59.

¹³⁷ *Id.* at 1263.

¹³⁸ *Id.*

¹³⁹ 411 U.S. 1 (1973).

¹⁴⁰ *Id.* at 23-24.

¹⁴¹ See *id.* at 15 n.38 (demonstrating direct correlation between amount of district's taxable property and its level of per-pupil spending).

¹⁴² *Id.* at 17.

supporting the assertion that low-income families cluster in relatively low-spending school districts¹⁴³ and concluded that there was no suspect class disadvantaged by the Texas school finance system. The Court also questioned the plaintiffs' assertion that educational spending and quality are linked¹⁴⁴ by characterizing research on this subject as "unsettled and disputed,"¹⁴⁵ with plausible evidence pointing in opposite directions.¹⁴⁶ Moreover, the Court examined closely the plaintiffs' characterization of the alleged educational denial and remarked that although the plaintiffs may not have received the quality of education that they wanted, they were not absolutely denied educational services.¹⁴⁷ Finally, the Court reached the critical conclusion that under the United States Constitution education is neither an explicitly nor implicitly protected fundamental right.¹⁴⁸ Because neither a suspect class nor a fundamental right was jeopardized by Texas's school finance system, the Court applied the rational relation test and concluded, in a 5-4 decision, that the system's reliance on local property tax bases, although responsible for per-pupil spending disparities, was rationally related to legitimate governmental interests¹⁴⁹ and, as a result, did not violate the Constitution.¹⁵⁰

Interestingly, dictum from the *Rodriguez* opinion illustrates another point linking, albeit obliquely, the overlap between equal educational opportunity's racial and resource perspectives. No

¹⁴³ *Id.* at 23 (citing Note, *A Statistical Analysis of the School Finance Decisions: On Winning Battles and Losing Wars*, 81 YALE L.J. 1303, 1328-29 (1972) (presenting empirical study of Connecticut school districts challenging assumption that only low-income families live in low-spending school districts)).

¹⁴⁴ *Rodriguez*, 411 U.S. at 42-43 ("[T]his case also involves the most persistent and difficult questions of educational policy. . . .").

¹⁴⁵ *Id.* at 23.

¹⁴⁶ *Id.* at 42-43 ("Indeed, one of the major sources of controversy concerns the extent to which there is a demonstrable correlation between educational expenditures and the quality of education—an assumed correlation underlying virtually every legal conclusion drawn by the District Court in this case."); see also *id.* n.86 (citing authorities which have discussed quality-cost controversy). Where the Supreme Court hesitated, however, many lower courts, particularly state courts, have not. See Dayton, *supra* note 120, at 182 (stating majority of state high court decisions has ruled for plaintiff, recognizing correlation between educational expenditures and educational opportunity).

¹⁴⁷ *Rodriguez*, 411 U.S. at 23-24.

¹⁴⁸ *Id.* at 35.

¹⁴⁹ *Id.* at 49-55 (discussing local control as legitimate governmental interest).

¹⁵⁰ *Id.* at 55.

doubt mindful of the considerable effort federal courts continue to exert on school desegregation matters, the Court in *Rodriguez* noted the implications of a decision that would effectively abrogate school finance systems operating in virtually every state, thereby affecting most of the nation's public schools as well as the relation between federal and state power.¹⁵¹

The *Rodriguez* decision, adverse to school finance litigants, altered a crucial component of school finance litigation. By essentially closing the door to school finance challenges based on the federal Equal Protection Clause,¹⁵² *Rodriguez* transformed the school finance debate from a federal to a state and local issue.¹⁵³ The retreat from the federal Constitution and a simultaneous embrace of state constitutions mark the emergence of the second wave of school finance court decisions. Despite an important change in focus, however, this second wave of court decisions, similar to its predecessor, pursued and refined the equity theory.

Rebounding from their loss in the Supreme Court, school finance reformers stumbled onto more favorable constitutional text. State education clauses contrast sharply with federal constitutional language that contains no explicit reference to education and thereby only indirectly addresses any educational duties.¹⁵⁴ Yet,

¹⁵¹ *Id.* at 44.

¹⁵² Whether the United States Constitution ensures a minimal level of educational services remains the subject of continued debate. See, e.g., ARTHUR E. WISE, *RICH SCHOOLS, POOR SCHOOLS: THE PROMISE OF EQUAL EDUCATIONAL OPPORTUNITY 175-77* (1968) (discussing due process requirement to meet certain minimal educational standards); Julius Chambers, *Adequate Education for All: A Right, an Achievable Goal*, 22 HARV. C.R.-C.L. L. REV. 55, 67-72 (1987) (surveying numerous constitutional theories which have been offered to support federal right to adequate education); Erica B. Grubb, *Breaking the Language Barrier: The Right to Bilingual Education*, 9 HARV. C.R.-C.L. L. REV. 52, 87-92 (1974) (arguing existence of due process right to bilingual education); Gershon M. Ratner, *A New Legal Duty for Urban Public Schools: Effective Education in Basic Skills*, 63 TEX. L. REV. 777, 823-28 (1985) (arguing Due Process requires schools to provide adequate education in basic skills).

¹⁵³ See, e.g., *Levine*, *supra* note 6, at 509-10 (discussing new wave of litigation challenging school finance systems based upon state constitutional rights).

¹⁵⁴ See ALA. CONST. art. XIV, § 256; ALASKA CONST. art. VII, § 1; ARIZ. CONST. art. XI, § 1; ARK. CONST. art. XIV, § 1; CAL. CONST. art. IX, § 1; COLO. CONST. art. IX, § 2; CONN. CONST. art. VIII, § 1; DEL. CONST. art. X, § 1; FLA. CONST. art. IX, § 1; GA. CONST. art. VIII, § 1; HAW. CONST. art. X, § 1; IDAHO CONST. art. IX, § 1; ILL. CONST. art. X, § 1; IND. CONST. art. VIII, § 1; IOWA CONST. art. IX, 2d, § 3; KAN. CONST. art. VI, § 1; KY. CONST. § 183; LA. CONST. art. VIII, § 1; ME. CONST. art. VIII, pt.1, § 1; MD. CONST. art. VIII, § 1; MASS. CONST.

state education clauses vary in what they require of states. Commentators note four basic groups of clauses.¹⁵⁵ The first group of education clauses simply mandates the establishment of public education.¹⁵⁶ Clauses in the second group require that a state provide a minimal level of educational services or possess some other characteristic such as uniformity.¹⁵⁷ A third group mandates a minimum educational quality level but also articulates other purposes, usually described by such language as requiring a "thorough and efficient"¹⁵⁸ educational system. The fourth group, and the most stringent from a state's perspective, explicitly describes education as a "primary," "fundamental," or "paramount" duty of the state legislature.¹⁵⁹

Such variation in state constitutional language means that litigants in some states benefit from more generous or explicit education clause language than litigants in other states.¹⁶⁰ Not surprisingly, this contributes to variation in school finance decisions. Between 1973 and 1989, the years in which school finance litigants pursued an equity theory, almost as many state courts invalidated school finance systems as upheld them.¹⁶¹

pt.2, ch.5, § 2; MICH. CONST. art. VIII, § 2; MINN. CONST. art. XIII, § 1; MISS. CONST. art. 8, § 201; MO. CONST. art. IX, § 1(a); MONT. CONST. art. X, § 1; NEB. CONST. art. VII, § 1; NEV. CONST. art. XI, § 2; N.H. CONST. pt.2, art. LXXXIII; N.J. CONST. art. VIII, § 4; N.M. CONST. art. XII, § 1; N.Y. CONST. art. XI, § 1; N.C. CONST. art. IX, § 2; N.D. CONST. art. VIII, § 1; OHIO CONST. art. VI, § 2; OKLA. CONST. art. XIII, § 1; OR. CONST. art. VIII, § 3; PA. CONST. art. III, § 14; R.I. CONST. art. XII, § 1; S.C. CONST. art. XI, § 3; S.D. CONST. art. VIII, § 1; TENN. CONST. art. XI, § 12; TEX. CONST. art. VII, § 1; UTAH CONST. art. X, § 1; VT. CONST. ch.2, § 68; VA. CONST. art. VIII, § 1; WASH. CONST. art. IX, § 1; W. VA. CONST. art. XII, § 1; WIS. CONST. art. X, § 3; WYO. CONST. art. VII, § 1.

¹⁵⁵ Ratner, *supra* note 152, at 814-16 (describing four groups of education clauses classified as descriptions of general education, quality of education, specific mandates, and strongest commitment to education).

¹⁵⁶ See, e.g., CONN. CONST. art. VIII, § 1.

¹⁵⁷ See, e.g., ARK. CONST. art. XIV, § 1.

¹⁵⁸ See, e.g., N.J. CONST. art. VIII, § 4; OHIO CONST. art. VI, § 2; Thro, *supra* note 2, at 606 n.57 (stating that education clauses in New Jersey and Ohio are similarly categorized as "Category II"-type education clauses).

¹⁵⁹ See, e.g., ILL. CONST. art. X, § 8.

¹⁶⁰ Thro, *supra* note 2, at 605-08 (describing four categories of education clauses and impact of language on school finance decisions).

¹⁶¹ Hickrod et al., *supra* note 13, app. at 208-10. Many state courts upheld school finance systems despite per-pupil spending disparities. See, e.g., *Shofstall v. Hollins*, 515 P.2d 590, 592-93 (Ariz. 1973) (finding school finance system had "a rational and reasonable basis" despite per-pupil disparities); *Lujan v. Colorado State Bd. of Educ.*, 649 P.2d 1005, 1024-25

More surprising are instances where different results emerge from state courts examining similar education clause texts.¹⁶²

2. *Adequacy Theory*. The third (and current) wave of school finance court decisions, which began in 1989, reflects another subtle yet dramatic shift in school finance litigation theory. Wave three marks the demise of equity theory with its focus on closing per-pupil spending gaps and the emergence of a successor theory rooted in notions about educational adequacy. The *Rose v. Council for Better Education, Inc.* decision in Kentucky endures as one of the more sweeping state court decisions involving public education.¹⁶³ A school finance lawsuit provided the Kentucky Supreme Court with the occasion not only to invalidate the state's school finance system, but also to declare that the state's entire system of public elementary and secondary education was inadequate and, therefore, unconstitutional.¹⁶⁴

Such a conclusion, rooted in adequacy theory, at least implicitly required the court to establish a point of reference from which to assess Kentucky's school system. In grappling with a workable and judicially manageable definition of an "adequate" education, the Kentucky court concluded that such an education must have as a goal student development and progress in seven basic capacities.¹⁶⁵ Having concluded that the Kentucky constitution required an "adequate" education that attended to at least seven basic capacities, the court then set about to assess whether Kentucky's educational system met the constitutional requirements. The Kentucky court believed that the evidence that schools were not meeting constitutional minimums was so overwhelming that it

(Colo. 1982) (en banc) (upholding finance system despite per-pupil spending disparities); *McDaniel v. Thomas*, 285 S.E.2d 156, 168 (Ga. 1981) (finding Georgia's public education finance system constitutional); *Thompson v. Engelking*, 537 P.2d 635, 636 (Idaho 1975) (finding Idaho's finance system constitutional); *Board of Educ. v. Walter*, 390 N.E.2d 813, 825-26 (Ohio 1979) (upholding Ohio's public education finance system).

¹⁶² William E. Sparkman et al., *Financing Wyoming's Public Schools: The Wyoming Legislature Gets to Try Again*, 31 LAND & WATER L. REV. 469, 499 n.198 (1996) ("However, a review of judicial decisions on school funding challenges indicates no consistent pattern.")

¹⁶³ See, e.g., *Alexander*, supra note 92, at 342 (stating that "ruling constituted one of the most comprehensive interventions by a state judiciary into the realm of legislative policymaking for education").

¹⁶⁴ *Rose v. Council for Better Educ., Inc.*, 790 S.W.2d 186, 215 (Ky. 1989).

¹⁶⁵ *Id.* at 212.

could be likened to a "tidal wave."¹⁶⁶ Such evidence included student achievement scores that placed Kentucky's students well below neighboring states.¹⁶⁷ More than twenty-one percent of Kentucky's ninth graders failed to graduate from high school.¹⁶⁸ Kentucky ranked fortieth nationally in per-pupil spending and thirty-seventh in average teacher salary.¹⁶⁹ This latter finding prompted the Kentucky court to conclude that even the state's more affluent school districts were inadequately funded by comparison to what the court deemed "acceptable national standards."¹⁷⁰

Despite significant success, adequacy theory's emphasis on quality of education rather than equality of funding¹⁷¹ has not survived unscathed. One trouble spot involves the political question doctrine.¹⁷² Although the precise contours of the political question doctrine are notoriously vague, some guidance exists. The Supreme Court recently noted that nonjusticiability problems arise where there is "a textually demonstrable constitutional commitment of the issue to a coordinate political department; or a lack of judicially discoverable and manageable standards for resolving it."¹⁷³ By inviting courts to explore the quality or adequacy of schools and school systems, adequacy-based lawsuits raise important questions for both components of the political question doctrine. Such lawsuits seek remedies that risk upsetting a delicately calibrated balance separating the judicial and legislative branches and plunging courts into an area that lacks standards, judicially manageable or otherwise, which might offer some assistance. The doctrine's application to school finance litigation,

¹⁶⁶ *Id.* at 197.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

¹⁷⁰ *Id.* at 198.

¹⁷¹ Thro, *supra* note 2, at 604.

¹⁷² For a more lengthy analysis of the political question doctrine's effect on educational finance litigation, see Michael Heise, *Schoolhouses, Courthouses, and Statehouses: Educational Finance, Constitutional Structure, and the Separation of Powers Doctrine*, 33 LAND & WATER L. REV. 281 (1998).

¹⁷³ *Nixon v. U.S.*, 506 U.S. 224, 228 (1993) (quoting *Baker v. Carr*, 369 U.S. 186, 217 (1962)).

recognized by courts as early as the late nineteenth century,¹⁷⁴ gives some courts, but not all, pause. As the political question doctrine's two components conflate, an absence of judicially manageable standards may suggest an implicit assignment of such issues to the legislative branch.¹⁷⁵

II. THE DEMISE OF EQUITY THEORY: EXISTING EXPLANATIONS AND AN ALTERNATIVE

The recent and dramatic shift from equity to adequacy school finance litigation clearly signals a significant change in school finance litigation theory. And, as explained above, significant changes in school finance litigation theory implicate general notions about evolving understandings of the equal educational opportunity doctrine. Much less clear, however, are explanations for equity theory's sudden demise. A more complete explanation will undoubtedly emerge after the efficacy of the current adequacy court decisions can be better assessed.

Until then, however, we do benefit from an adequate sample of equity-based court decisions. School finance equity theory, and the court decisions rooted in it, benefit from a distinguished legal pedigree that includes *Brown v. Board of Education*.¹⁷⁶ Indeed, the concept of equality generates an almost "mystical" allure in this nation.¹⁷⁷ It draws for support a considerable normative base and enjoys a special and elevated place in United States' history.¹⁷⁸ However, despite equality's "mystical" allure, its close relative, school finance equity theory, experienced problems. Many of these problems fueled equity theory's demise.

¹⁷⁴ See, e.g., *Robinson v. Schenck*, 1 N.E. 698, 705 (Ind. 1885) ("The duty rests on the legislature to adopt the best [school] system that can be framed; but they, and not the courts, are to judge what is the best system.")

¹⁷⁵ *Nixon*, 506 U.S. at 228-29; see also Heise, *supra* note 172, at 309-10 (stating that "the complexities that surround school finance issues, including those pertaining to judicially discoverable and manageable standards, rise to a level that have prompted some commentators and courts to question the suitability of judicial involvement" (footnotes omitted)).

¹⁷⁶ 347 U.S. 483 (1954).

¹⁷⁷ Enrich, *supra* note 1, at 143.

¹⁷⁸ See, e.g., GARY WILLS, *LINCOLN AT GETTYSBURG: THE WORDS THAT REMADE AMERICA* 33-40, 146-47 (1992) (noting that "equality as a national commitment" was created by Gettysburg Address and has become a "hallowed" and "sacrosanct" constitutional interpretation and "an expression of the American Spirit").

Commentators identify three factors for school finance equity theory's demise, including its complexity, threat to local control, and failure to retain the allegiance of many urban school districts.¹⁷⁹ Each factor certainly contributes to our understanding of equity theory's demise. Before turning to an alternative factor suggested by the results of this study, each of these three conventional factors are briefly described.¹⁸⁰

A. EQUITY'S COMPLEXITY

At first glance, equal educational opportunity and, more specifically, school finance equity appear almost seductively simple. The illusion of simplicity is perhaps partly fueled by individuals' intuitive and commonsense feel for what is fair or just. Despite such illusions, the legal operationalization of equity, at least at the public level involving school resources, has proven notoriously complex and difficult. Judicial efforts, framed by adversarial litigation and bound by formal and informal legal institutions and norms, uncover nettlesome complexities. Although numerous factors no doubt combine to further complicate efforts to inject more equity into school finance systems, one crucial factor is the absence of a consensus on how to define equal educational opportunity, particularly in the school finance context. Consensus on a coherent definition of equal educational opportunity remains elusive, and its elusiveness stems from discord over critical underlying principles.

One such principle relates to uncertainty about equal educational opportunity's proper goal. An enduring question is whether equal educational opportunity seeks equality of opportunity or equality of outcome. Tensions between horizontal and vertical equity¹⁸¹ sometimes arise and suggest that these two versions of equality are not always in concert. Specifically, in the area of education, the fit between educational opportunity (frequently defined in terms of resources or "inputs") and educational outcomes (such as student

¹⁷⁹ Heise, *supra* note 6, at 1168-74.

¹⁸⁰ For a more complete description of the three conventional explanations for school finance equity theory's demise, see Enrich, *supra* note 1, at 143-66; Heise, *supra* note 6, at 1168-74.

¹⁸¹ Julie K. Underwood, *School Finance Adequacy as Vertical Equity*, 28 U. MICH. J.L. REFORM 493, 495-96 (1995).

achievement) is far from snug. Most commentators agree that the amount of resources needed to meet desired educational outcomes varies from student to student.¹⁸² Students coming from different backgrounds and possessing different educational needs, interests, and learning styles¹⁸³ impose different costs on school systems constitutionally charged with a duty to educate all eligible students.¹⁸⁴

Another important underlying principle that defies easy agreement concerns the various perspectives on how school funding can become more equitable. For example, school finance reform could adopt a student or taxpayer perspective. Not surprisingly, these two different perspectives can quickly lead to markedly different results. Total¹⁸⁵ and minimum revenue equality plans¹⁸⁶ incorporate a student perspective and seek outright equality or a minimal level of educational spending, respectively.¹⁸⁷ In contrast, fiscal neutrality plans adopt a taxpayer perspective and seek increased school finance equity by forging a closer link between per-pupil spending and taxpayer effort.¹⁸⁸ Fiscal neutrality plans typically award additional resources to those property-poor school districts that tax themselves at a relatively high rate. The integrity of such plans pivots on the assumption that taxpayers' appetite for educational services is accurately reflected by their willingness to tax themselves. In contrast to school finance reforms reflecting the student perspective, taxpayer-oriented reforms tolerate a greater degree of per-pupil spending disparity.

B. SCHOOL FINANCE EQUITY VERSUS LOCAL CONTROL

Local control over schools and educational policy is one salient characteristic that distinguishes American school systems from

¹⁸² See, e.g., Levine, *supra* note 6, at 520 (explaining that many school districts using "cost of education index" adjust resources according to factors such as educational characteristics of students).

¹⁸³ For an interesting account on different "learning styles," see HOWARD GARDNER, *FRAMES OF MIND: THE THEORY OF MULTIPLE INTELLIGENCES* (1983).

¹⁸⁴ See, e.g., Levine, *supra* note 6, at 514 (noting that Texas Constitution of 1876 required that each student receive equal portion of common fund for education).

¹⁸⁵ *Id.* at 520-23.

¹⁸⁶ *Id.* at 523-26.

¹⁸⁷ *Id.* at 520-26.

¹⁸⁸ *Id.* at 526-28.

most others throughout the world.¹⁸⁹ America's tradition and history of local control, embodying "deep-seated" convictions,¹⁹⁰ present another considerable challenge to equity litigation. Opponents of school finance equity lawsuits, in many instances wealthier school districts that stood to lose resources, couched their resistance partly in terms of threats to and encroachments upon local control, however illusory that local control might actually be.¹⁹¹ Nevertheless, some courts, particularly the Supreme Court, have listened and repeatedly recognized the importance and sanctity of local control and agreed that its furtherance is a legitimate governmental interest.¹⁹² Efforts to dislodge or blunt the effects of local funding for schools invariably weaken arguments favoring local control over policy making.

Many school finance reforms, especially those embodying equity theory, pose just such a threat. After all, it is school districts' reliance on a local property tax base that accounts for many of the per-pupil spending disparities. Of course, it is the local nature of the school finance system that supports assertions for local control over educational policy.

C. THE WANING INTEREST OF URBAN SCHOOL DISTRICTS

Urban school districts' dulled economic incentives to participate in school finance equity lawsuits also contributed to equity theory's demise. Early school finance equity litigation involved some of the

¹⁸⁹ DAVID T. KEARNS & DENIS P. DOYLE, WINNING THE BRAIN RACE: A BOLD PLAN TO MAKE OUR SCHOOLS COMPETITIVE 111 (1991).

¹⁹⁰ Kern Alexander, *Equitable Financing, Local Control, and Self-Interest*, in THE IMPACTS OF LITIGATION AND LEGISLATION ON PUBLIC SCHOOL FINANCE: ADEQUACY, EQUITY, AND EXCELLENCE, *supra* note 71, at 293, 299.

¹⁹¹ See generally Denis P. Doyle & Chester E. Finn, Jr., *American Schools and the Future of Local Control*, 77 PUB. INTEREST 77 (1984) (arguing that local policy control is illusory notwithstanding influence of local funds because educational reforms of the early 1980s combined with increased state-level school funding erode local control over educational policy making).

¹⁹² See, e.g., *Missouri v. Jenkins*, 515 U.S. 70, 99 (1995) (citing *Dayton Bd. of Educ. v. Brinkman*, 433 U.S. 406, 410 (1977)); *San Antonio Indep. Sch. Dist. v. Rodriguez*, 411 U.S. 1, 49-50 (1973) (discussing importance of local control); *Wright v. Council of the City of Emporia*, 407 U.S. 451, 469 (1972) (discussing importance of local control). *But cf.* *Serrano v. Priest*, 487 P.2d 1241, 1260 (Cal. 1971) (varying local property values render local control for poor school districts "cruel illusion").

nation's urban school systems, the per-pupil spending revenue of which fell below per-pupil spending for their more affluent, typically suburban, counterparts.¹⁹³ In addition, the urban school systems, particularly the larger ones, faced numerous, serious, and complicated challenges in delivering educational services.¹⁹⁴

While the problems and challenges confronting many large urban public school systems mount, comparative underfunding is no longer among them. Recent educational spending data reveal that many urban school districts might actually *lose* financially by an effort to equalize per-pupil educational spending state-wide.¹⁹⁵ Although such data do not "prove" anything, they suggest why it is no longer prudent to simply assume that urban school districts will necessarily benefit from equity litigation designed to equalize educational spending state-wide.¹⁹⁶ In particular, the data illustrate that equalization efforts might help some urban school districts, but harm others.¹⁹⁷

¹⁹³ One notable example is the participation of Jersey City, Paterson, and the City of East Orange in the early stages of New Jersey's school finance litigation. See *Robinson v. Cahill*, 303 A.2d 273 (N.J. 1973) (holding New Jersey's system of financing public education unconstitutional where local taxation provides 67% of public school costs, reflecting large disparity in number of dollars spent per pupil that shows no relation to equal protection mandates).

¹⁹⁴ These challenges are well-known and documented elsewhere. See, e.g., COUNCIL OF THE GREAT CITY SCHOOLS, NATIONAL URBAN EDUCATION GOALS: BASELINE INDICATORS 1990-91 (1992) (providing 1990-91 baseline from which urban public schools will measure their progress in meeting National Urban Educational Goals). For a journalistic account describing vast differences in resources that distinguish wealthy and non-wealthy schools, see generally KOZOL, *supra* note 45.

¹⁹⁵ See NATIONAL CTR. FOR EDUC. STATISTICS, DISPARITIES IN PUBLIC SCHOOL DISTRICT SPENDING, 1989-90, app. at A1-E7, 15, 27 (1995) (demonstrating that efforts to equalize do not always benefit urban school districts financially); Heise, *supra* note 6, at 1173-74 tbls. 1 & 2 (same).

¹⁹⁶ Some legal scholars, particularly recently, have begun to take note. See, e.g., Clune, *supra* note 67, at 735 (arguing that judicial three-part remedy is better answer than pure fiscal neutrality); David Dormont, *Separate and Unequal: School District Financing*, 11 LAW & INEQ. J. 261, 278-79 n.129 (1992) (describing one Minnesota case where largest inner-city metropolitan school districts did not participate on either side, which suggests that litigation centers primarily on local property wealth and local benefits); Bradley W. Joondeph, *The Good, the Bad, and the Ugly: An Empirical Analysis of Litigation-Prompted School Finance Reform*, 35 SANTA CLARA L. REV. 763, 771 (1995) (questioning whether finance reform litigation actually improves educational outcomes of disadvantaged students).

¹⁹⁷ See KEARNS & DOYLE, *supra* note 189, at 30 (arguing that if states funded individual children, rather than individual districts, schools would lose their guaranteed income and would only receive education money when students chose to enroll in their school); NATIONAL CTR. FOR EDUC. STATISTICS, DIGEST OF EDUCATION STATISTICS 1994, at 98-102, 165 (showing

D. AN ALTERNATIVE EXPLANATION: LEGAL IMPACT AND HOLLOW VICTORIES

As previously discussed, equity theory's complexities, the threat it poses to local control, and its inability to advance urban school districts' financial interests provide important clues about the theory's sudden and recent demise in 1989. Yet other factors may also help explain that demise. One underexplored reason for the demise of equity school finance litigation and its replacement by adequacy litigation in 1989 includes equity theory's efficacy. Specifically, successful equity lawsuits do not always generate sought-after changes to a state's school finance system.

As a variable partly explaining school finance equity's recent demise, litigation efficacy is deceptively simple. After all, on a pragmatic level, a litigation theory succeeds or it does not. Those theories that do not enjoy some level of practical success will not likely survive long in the litigation marketplace. Complicating matters, however, is that litigation theory's efficacy, analyzed narrowly in this study by its impact on centralization and educational spending levels, is notoriously difficult to empirically assess with a high degree of precision. Moreover, indeterminate theory and mixed preliminary empirical work further hinder explorations into the efficacy of school finance court decisions.

Regardless of whether successful equity lawsuits stimulated increased centralization and educational spending, among the goals sought by many litigants,¹⁹⁸ it is important to note that such lawsuits undoubtedly generated an array of other important legal impacts. School finance court decisions certainly increased public awareness of particular issues and helped shape political agendas. Moreover, successful court decisions assisted lawmakers', policy makers', and educators' efforts to frame legislative action.¹⁹⁹ Also, court decisions helped define and shape appropriate legal and legislative roles with respect to the task of school finance re-

selected statistics for public school districts, by state).

¹⁹⁸ See, e.g., Horton, *supra* note 73, at 706 (arguing that goal of school finance litigation was to "justify increased support for Canton [Connecticut]").

¹⁹⁹ Phil Weiser, *What's Quality Got to Do with It?: Constitutional Theory, Politics, and Education Reform*, 21 N.Y.U. REV. L. & SOC. CHANGE 745, 747 (1994-95).

form.²⁰⁰ Some commentators attribute specific school finance reform to successful litigation efforts.²⁰¹ Indeed, after more than two decades of school finance litigation, it is difficult to imagine public officials in any state who are at least not aware of and sensitive to legal exposure created by per-pupil spending discrepancies. Thus, on some levels and from certain perspectives, equity court decisions have been quite influential.

Notwithstanding the array of important results that might be properly attributed to successful school finance litigation, a decidedly more narrow and technical inquiry guides this empirical study: namely, whether and, if so, to what degree, successful equity lawsuits exerted *independent* influence on such key school finance variables as centralization and total educational spending levels. Empirical evidence on equity theory's efficacy, so defined, is thin. What evidence does exist, summarized below, is largely inconclusive.

III. LITERATURE REVIEW: JUDICIAL IMPACT AND SCHOOL FINANCE

Even a cursory review of school finance litigation reveals the courts' substantial involvement with school finance reform. Despite this substantial involvement, however, scholarship seeking to explore the impacts of court-ordered school finance reform remains curiously underdeveloped. This is true even for the potential relations between successful school finance lawsuits and such crucial variables as centralization and total educational spending levels. Results from what scholarship does exist are mixed and beset with methodological issues that work against comparability.

A. CENTRALIZATION

Of particular import to many school finance reform efforts is the possible link between successful litigation efforts and increased

²⁰⁰ *Id.*

²⁰¹ See, e.g., Richard G. Salmon & M. David Alexander, *State Legislative Responses, in THE IMPACTS OF LITIGATION AND LEGISLATION ON PUBLIC SCHOOL FINANCE*, *supra* note 71, at 249, 260-63, 267-69 (comparing state school finance systems before and after ruled unconstitutional).

school funding centralization. Many equity litigants argued that a more centralized system of school funding distribution was needed to offset the present influence of property value variation which fuels per-pupil spending disparities.²⁰² Although there is little theory to suggest that a successful school finance lawsuit will necessarily have either a positive or negative independent effect on centralization levels,²⁰³ some observers predict that such a lawsuit would increase a state's school funding centralization.²⁰⁴ Such predictions are far from specious as increased centralization is often one goal, even if it is just an implicit goal, sought by school finance litigants.²⁰⁵ Moreover, anecdotal evidence from a few states, notably California and Washington, suggests that successful school finance lawsuits stimulated increased school funding centralization.²⁰⁶ But even if successful school finance lawsuits do influence school funding centralization levels, the implications of such a finding are not clear.

Regrettably, aside from a relatively few notable exceptions,²⁰⁷ much of the judicial impact literature ignores school funding centralization. The number of studies exploring the relation between successful school finance litigation and school funding centralization levels is small. Smaller still is the number of studies designed to assess successful school finance lawsuits' independent impact, if any, on centralization levels from an empirical perspective. One important exception is the Bahl study which, because it

²⁰² See, e.g., Horton, *supra* note 73, at 706 (describing one lawsuit's use of statistics to detail discrepancies in per-pupil expenditures resulting from property base valuations).

²⁰³ See, e.g., Bahl et al., *supra* note 70, at 168 (examining school funding and effects of school financing litigation).

²⁰⁴ *Id.*

²⁰⁵ See, e.g., Horton, *supra* note 73, at 705-06 (discussing litigant's motivation for filing school finance complaint).

²⁰⁶ See, e.g., William A. Fischel, *How Serrano Caused Proposition 13*, 12 J.L. & POL. 607, 635 (1996) [hereinafter Fischel, *How Serrano Caused*] (arguing that lawsuit undermined support for property taxes which led to legislation mandating school funding centralization); *id.* at 465 (stating that school finance lawsuits in California forced creation of new school aid formula that limited revenue from local districts); Picus, *supra* note 77, at 37-46 (stating how legal challenges to school finance system resulted in shift of school finance control from local districts to state); Theobald & Hanna, *supra* note 77, at 26 (arguing that highly centralized school funding developed in Washington as result of lawsuit).

²⁰⁷ One notable exception, discussed in greater detail below, includes Bahl et al., *supra* note 70.

most closely resembles this study in scope and design,²⁰⁸ warrants particular attention. To explore a possible relation between court decisions and centralization levels, the Bahl study developed a school finance centralization model constructed to capture the potential effects of judicial intervention. Bahl estimated regressions using ordinary least squares and time series data for five time periods from all fifty states. The study found that the coefficients for the court intervention variable were, as expected, "systematically associated with an increasing share of state assistance and a reduced reliance on the [local] property tax."²⁰⁹ Bahl's findings comport with what many commentators expected, as well as findings from other studies.²¹⁰

In addition to the factors limiting empirical judicial impact studies generally,²¹¹ additional methodological and data factors restrict implications from Bahl's findings. Moreover, these differences distinguish the model employed in Bahl's study from the model developed and employed in this study. Most fundamentally, Bahl's study combined two decidedly different types of school finance court decisions, equity and adequacy, and therefore missed potentially important distinctions separating these two types of court decisions. In addition, examining data from only five different time periods risks missing potentially interesting yet subtle variations within each five-year time period. Finally, Bahl's centralization model contained a limited number of independent variables.²¹² The inclusion of a greater number of control variables that might influence centralization levels might enhance Bahl's model. Despite these crucial limitations, Bahl's study provides a helpful foundation upon which to pursue further empirical work on centralization models.

²⁰⁸ *Id.*

²⁰⁹ *Id.* at 167.

²¹⁰ See, e.g., Ficus, *supra* note 77, at 52 (illustrating greater state revenue sources and fewer local revenue sources for school district in California); Theobald & Hanna, *supra* note 77, at 30 (finding that solutions to Washington's inadequate school funding system require dramatically increasing current level of state support).

²¹¹ See *infra* notes 318-328 and accompanying text (discussing limitations).

²¹² In fairness, it should be noted that the Bahl Study did not have the benefit of prior published work on this topic. See Bahl et al., *supra* note 70, at 168 ("[W]e have found no study of the effect of court rulings or reform of the education financing system measures on the state share or property tax share.").

That successful school finance lawsuits might stimulate increased centralization, as Bahl's findings suggest, furthers speculation about other possible consequences stemming from a more centralized school finance system. One obvious question is whether increased centralization will result in increased educational spending. Implications from public choice theory are unclear.²¹³ On the one hand, public choice theory suggests that by focusing a greater portion of school funding on a single governmental entity, state general assemblies, education advocates can better focus their efforts, thereby resulting in increased education spending. On the other hand, education spending decisions placed at the state level will have to compete with other legitimate claims for limited state funding. According to one tenet of public choice theory, such competition will result in reductions in educational spending.²¹⁴

Evidence from three different states points in at least two different directions. In Michigan, which recently abandoned the local property tax base as the primary source of school funding,²¹⁵ no district's per-pupil spending is worse off than it was prior to the centralization of educational spending. Indeed, some districts appear to be better off.²¹⁶ On balance, initial evidence suggests that increased centralization in Michigan raised educational spending, however slightly. The absence, however, of decreased support due to Michigan's move to a more centralized school funding system was assured statutorily. The Michigan law includes a "hold-harmless" provision that assures that no district will be made worse off under the state's newly centralized school finance system.²¹⁷ A critical counterfactual is whether educational funding for some Michigan school districts would have decreased absent the statutory "hold-harmless" provision.

²¹³ For a helpful, general description of public choice theory and its particular application to law, see DANIEL A. FARBER & PHILIP P. FRICKEY, *LAW AND PUBLIC CHOICE: A CRITICAL INTRODUCTION* (1991).

²¹⁴ See, e.g., Heise, *supra* note 172, at 305-06 (explaining public officials' incentives and decisions in context of redistribution of locally-generated school funds).

²¹⁵ Addonizio et al., *supra* note 91, at 256-63 (discussing ramifications of Michigan legislature's decision to eliminate local property tax base as source of public school revenue); Courant & Loeb, *supra* note 69, at 114-15 (discussing changes in Michigan public school financing, including reduction in local property taxes and increase in various state taxes).

²¹⁶ Courant & Loeb, *supra* note 69, at 131.

²¹⁷ *Id.*

Evidence from California and Washington suggests that increased centralization can result in reduced education spending. Professors Picus²¹⁵ and Fischel²¹⁹ have noted that California's *Serrano*²²⁰ decision resulted in a dramatically more centralized school funding system. From one perspective the centralized system is more equitable in that it reduced per-pupil spending disparities within the state.²²¹ Perhaps less anticipated was a reduction in real educational spending growth rates. Professor Picus noted that "spending for our nation's schools increased by 67% in the 1960s, 35% in the 1970s, and 30% in the 1980s."²²² In California, real per-pupil educational spending grew thirteen percent during the 1980s.²²³ Thus, in exchange for more equalized educational spending, Californians received slower spending growth rates.²²⁴

A similar result ensued after the *Seattle*²²⁵ decision in Washington State. Washington lawmakers enacted legislation that increased the state's presence in school finance policy. Theobald's data illustrate that Washington's legislative response to an adverse court decision did not result in an " 'ample provision' for education, as was mandated by *Seattle*. Instead, it [the result] has been to redistribute funds to provide more equal access to school resources."²²⁶ Ironically, this redistribution disadvantaged a disproportionate number of students from low-income families.²²⁷

²¹⁵ Picus, *supra* note 77, at 57.

²¹⁹ See, e.g., Fischel, *Did Serrano Cause?*, *supra* note 77, at 465 (noting that *Serrano* shifted burden of educational finance from localities to state); Fischel, *How Serrano Caused*, *supra* note 206, at 607 (explaining that *Serrano*, which sought to equalize taxable resources across school districts, resulted in almost complete loss of local control of school property taxes).

²²⁰ *Serrano v. Priest*, 487 P.2d 1241 (Cal. 1971).

²²¹ Picus, *supra* note 77, at 58.

²²² *Id.* at 33.

²²³ *Id.* (citing Allan Odden, *Education Funding Changes During the 1980s*, 4 EDUC. POL. 33 (1990)).

²²⁴ For a helpful discussion about the relation between the *Serrano* decision and Proposition 13, see Fischel, *Did Serrano Cause?*, *supra* note 77, at 465.

²²⁵ *Seattle Sch. Dist. v. State*, 585 P.2d 71 (Wash. 1978).

²²⁶ Theobald & Hanna, *supra* note 77, at 25.

²²⁷ *Id.*

B. EDUCATIONAL SPENDING

Given the uncertainty surrounding the precise impact of successful school finance litigation on centralization levels, it is not surprising to discover that the precise impact of successful school finance lawsuits on educational spending levels also remains murky and unsettled. Although school finance litigants no doubt seek multiple and various goals, it remains reasonable to assume that among them are more immediate and concrete returns for their investments of time, energy, and money. In particular, given that economic disparities resided at the core of equity lawsuits, it is reasonable to assume that litigants sought economic goals from successful litigation. Specifically, it is reasonable to assume that one of the litigants' goals was increased educational spending. In Connecticut, the lead attorney litigating the *Horton*²²⁸ case wrote that the lawsuit was designed to amend the state school aid formula in a manner that would "justify increased state support for Canton [Connecticut]."²²⁹

Existing theory on the efficacy of school finance litigation's ability to generate increased educational spending is largely indeterminate. Some commentators articulate theories suggesting that such litigation should decrease educational spending.²³⁰ Specifically, they note that successful school finance lawsuits will likely reduce the relative influence of local property tax revenues and increase the influence of state funding.²³¹ Once elevated to the state level, educational funding claims must compete with other claims on state treasuries. Such competition should exert downward pressure on state educational spending.²³² Others argue that reducing

²²⁸ *Horton v. Meskill*, 376 A.2d 359 (Conn. 1977).

²²⁹ *Horton*, *supra* note 73, at 706.

²³⁰ See, e.g., Picus, *supra* note 77, at 37 (describing forces that caused decrease in spending for California schools).

²³¹ See, e.g., Neil D. Theobald & Lawrence O. Picus, *Living with Equal Amounts of Less: Experiences of States with Primarily State-Funded School Systems*, 17 J. EDUC. FIN. 1, 1 (1991) (noting that in response to court rulings, states have increased share of school revenues provided by state).

²³² See generally James M. Poterba, *State Responses to Fiscal Crises: The Effects of Budgetary Institutions and Politics*, 102 J. POL. ECON. 799 (1994) (analyzing adverse fiscal effects of cyclical state economic downturns as well as increased claims on state fiscal resources).

school funding's reliance on local property tax revenues similarly reduces property owners' incentive to pay higher property taxes, having the net effect of reducing state educational spending.²³³

Other theorists, however, raise the possibility that successful school finance litigation will result in increased educational spending. Specifically, public choice theorists presume that successful equity litigation lawsuits will result in greater state influence over and contribution to educational spending. Increased state influence and control over school funding advantage special interest groups, notably teacher unions, special educational lobbies, and parent groups.²³⁴ Lobbying at the state level will lead to economies of scale because lobbyists can focus on one legislative body rather than on numerous local school districts.

From a pragmatic perspective, alternatives to reducing educational spending gaps are numerous but include two general approaches. States can either "level up,"²³⁵ that is increase lower school districts' spending to a level closer to that of their more generous counterparts, or "level down,"²³⁶ by lowering per-pupil spending in the more generous school districts. Although both options could reduce, if not eliminate, disparities in per-pupil spending, their policy implications differ considerably.

The possibility that successful equity lawsuits will result in overall educational spending increases (leveling up) appears reasonable. One reason is that the major alternative, redistributing existing funding away from wealthier districts and toward their less affluent counterparts (or leveling down), is problematic. The protracted school finance saga in Texas illustrates one state's recent struggle.²³⁷ Also, results from some preliminary empirical analyses of school finance litigation's effect on educational spending

²³³ Fischel, *Did Serrano Cause?*, *supra* note 77, at 465.

²³⁴ See generally FARBER & FRICKEY, *supra* note 213, at 18-20 (describing factors which affect political influence of special interest groups).

²³⁵ See generally Theobald & Hanna, *supra* note 77, at 17 (discussing legislative efforts to "level down" educational spending).

²³⁶ *Id.*

²³⁷ See *Edgewood Indep. Sch. Dist. v. Kirby*, 777 S.W.2d 391 (Tex. 1989) (holding school finance system violated state constitution); Charles S. Benson, *Definitions of Equity in School Finance in Texas, New Jersey, and Kentucky*, 28 HARV. J. ON LEGIS. 401 (1991) (discussing challenges to state and local systems of educational funding in Texas, New Jersey and Kentucky).

support the assumption that successful lawsuits correlate with increased educational spending.²³⁸

Empirical efforts to assess successful school finance lawsuits' impact on educational spending levels, though decidedly more numerous than those focusing on centralization levels, also remain underdeveloped in the research literature. Moreover, the overall results are mixed. Professor Dayton recently summarized much of this literature.²³⁹ His chronological, and quite helpful, summary identifies two broad groups of studies, largely distinguished by their underlying methodological design. Descriptive studies dominate the first group.²⁴⁰ Empirical studies seeking to systematically isolate the possible independent influences of school finance court decisions on educational spending dominate the second.²⁴¹ Interestingly, results vary even within each of these two groups of studies.²⁴²

Some of the early and more descriptive studies, such as those by Fuhrman,²⁴³ Berne,²⁴⁴ and Camp and Thompson,²⁴⁵ are generally more optimistic about courts' ability to influence school finance reform. Even those researchers who had difficulty describing state courts' precise contribution were nevertheless persuaded of its existence.²⁴⁶ After examining the effort to reform Kentucky's school finance system that resulted in the *Rose v. Council for Better Education, Inc.*, decision in 1989,²⁴⁷ Alexander, understandably, was persuaded of the courts' efficacy. He described the Kentucky Supreme Court's opinion as providing state lawmakers with both

²³⁸ Hickrod et al., *supra* note 13, at 184. *But see* Heise, *supra* note 10, at 1738 (noting that state supreme court school finance decisions and changes in educational spending are not necessarily related).

²³⁹ John Dayton, *Examining the Efficacy of Judicial Involvement in Public School Funding Reform*, 22 J. EDUC. FIN. 1 (1996).

²⁴⁰ *Id.* at 2-12.

²⁴¹ *Id.* at 12-15.

²⁴² *Id.* at 2-15.

²⁴³ Susan Fuhrman, *State-Level Politics and School Financing*, in *THE CHANGING POLITICS OF SCHOOL FINANCE* (Nelda H. Cambron-McCabe & Allan Odden eds., 1982).

²⁴⁴ Robert Berne, *Equity Issues in School Finance*, 14 J. EDUC. FIN. 159 (1988).

²⁴⁵ William E. Camp & David C. Thompson, *School Finance Litigation: Legal Issues and Politics of Reform*, 14 J. EDUC. FIN. 221 (1988).

²⁴⁶ Berne, *supra* note 244, at 166.

²⁴⁷ 790 S.W.2d 186 (Ky. 1989).

the "nerve and the rationale" to equalize educational spending levels and pursue other, related reforms.²⁴⁸

Other scholars, however, viewing the same or similar evidence during much of the same period of time reached different, and sometimes opposite, conclusions. Brown and Elmore conceded that school finance court opinions exerted some influence, yet they argued that any influence was frequently overstated.²⁴⁹ Rossmiller's dim view of litigation's efficacy pivoted partly on economic factors. Simply put, Rossmiller concluded that school finance litigation may be less cost-effective than political activity.²⁵⁰ On more than one occasion, Ward concluded that even successful litigation did not typically result in increased educational spending, particularly for pupils from low-income households.²⁵¹ Kozol²⁵² and Yudof²⁵³ also expressed concerns about courts' ability to influence school finance reform issues, many of which implicate "American ideas"²⁵⁴ that place too much of the status quo "at stake."²⁵⁵

A few scholars advance middle positions. Tyll van Geel concluded that, at least in states not experiencing economic downturns, successful school finance lawsuits result in something greater than "symbolic change" but less than the eradication of per-pupil spending disparities.²⁵⁶ McCarthy noted that although successful court decisions can stimulate necessary activity in the legislative and executive branches of state government, school finance reform

²⁴⁸ Alexander, *supra* note 92, at 343.

²⁴⁹ Patricia R. Brown & Richard F. Elmore, *Analyzing the Impact of School Finance Reform*, in *THE CHANGING POLITICS OF SCHOOL FINANCE*, *supra* note 243, at 107, 117.

²⁵⁰ Richard A. Rossmiller, *School Finance Reform Through Litigation: Expressway or Cul-de-Sac?*, in *SCHOOL LAW UPDATE 1986*, at 191, 201 (Thomas N. Jones & Davel P. Semler eds.), microformed on ERIC No. 273006 (Educ. Resources Info. Ctr., U.S. Dep't of Educ.).

²⁵¹ James Gordon Ward, *Implementation and Monitoring of Judicial Mandates: An Interpretive Analysis*, in *THE IMPACTS OF LITIGATION AND LEGISLATION ON PUBLIC SCHOOL FINANCE*, *supra* note 71, at 225, 243-44; James Gordon Ward, *Schools Struggle for Democracy*, in *WHO PAYS FOR STUDENT DIVERSITY?* 241, 246-47 (James Gordon Ward & Patricia Anthony eds., 1992).

²⁵² KOZOL, *supra* note 45.

²⁵³ Mark Yudof, *School Finance Reform in Texas: The Edgewood Saga*, 28 *HARV. J. ON LEGIS.* 499 (1991).

²⁵⁴ KOZOL, *supra* note 45, at 222.

²⁵⁵ Yudof, *supra* note 253, at 499.

²⁵⁶ Tyll van Geel, *The Courts and School Finance Reform: An Expected Utility Model*, in *THE CHANGING POLITICS OF SCHOOL FINANCE*, *supra* note 243, at 71, 96.

ultimately cannot be achieved through judicial action alone.²⁵⁷

In contrast to the first group of judicial impact studies, a second group of studies displays a greater emphasis on data and seeks to explore empirically the possible independent influence of court decisions on a number of such school finance dependent variables such as total and per-pupil spending. Similar to their more qualitative counterparts, the empirical studies, though fewer in number, do not yield a consensus about the efficacy of school finance litigation.

Some of the more empirically sophisticated studies found that successful school finance court decisions do not result in greater equity in educational spending. Wyckoff concluded that his study of Theil coefficients revealed important limitations to what court decisions could accomplish.²⁵⁸ Others found that successful lawsuits result in decreased educational spending. Picus' study suggested that real growth in educational spending rates for California suffered after the *Serrano* decision,²⁵⁹ at least in comparison to the rest of the country.²⁶⁰ An earlier, limited iteration of this study found that successful equity-based court decisions in two states did not result in increased educational spending.²⁶¹ Joondeph examined changes in per-pupil spending in five states and found that litigation reduced funding disparities in all five states. In four of the five states, however, educational spending growth rates increased at a rate slower than the national average.²⁶² Other empirically-based judicial impact studies, however, concluded that successful school finance litigation increased educational spending. Hickrod found that even unsuccessful school finance lawsuits enhanced educational funding

²⁵⁷ Martha M. McCarthy, *The Courts and School Finance Reform*, 33 THEORY INTO PRAC. 89, 95 (1994).

²⁵⁸ James H. Wyckoff, *The Intrastate Equality of Public Primary and Secondary Education Resources in the U.S., 1980-1987*, 11 ECON. EDUC. REV. 19, 26 (1992).

²⁵⁹ *Serrano v. Priest*, 487 P.2d 1241 (Cal. 1971).

²⁶⁰ Picus, *supra* note 77, at 46-47.

²⁶¹ Heise, *supra* note 10, at 1763.

²⁶² Joondeph, *supra* note 196, at 784-86 (including Arkansas, California, Connecticut, Washington, and Wyoming in his study).

growth rates.²⁶³ Thus, results from the qualitative and quantitative studies focusing on the effect of school finance court decisions on educational spending simultaneously point in different directions. What can be made of this indeterminacy in the judicial impact literature? Two factors warrant consideration.

First, similar to the studies' results, variations in their methodologies, research designs, and data might partly explain the mixed results. As discussed earlier, many studies combine equity and adequacy types of school finance lawsuits as if they were identical or interchangeable.²⁶⁴ In some respects the actual theory used by litigants is of little consequence. This would be especially true for those studies more interested in educational spending levels rather than the efficacy of competing legal theories. Other studies, however, seek to compare the efficacy of two alternative school finance litigation theories. In these latter studies, it is important to treat the two different types of lawsuits separately. The more recent adequacy-based school finance lawsuits might prove to be more successful at extracting such sought-after reforms such as increased educational spending than their predecessors. Judicial impact studies that do not differentiate between the two different types of lawsuits and conflate competing school finance theories miss this critical distinction. Differing technical treatment of data also contributes to the absence of a consensus. Some studies exploring educational spending levels use current dollars,²⁶⁵ while other studies use constant dollars.²⁶⁶ Units of analysis also vary.

²⁶³ Hickrod et al., *supra* note 13, at 188-89; see also William N. Evans et al., *Schoolhouses, Courthouses, and Statehouses After Serrano*, 16 J. POL. ANALYSIS & MGMT. 10, 20 (1997) (comparing educational funding growth rates over 20-year period of 11 states with successful school finance lawsuits and 35 states with unsuccessful or no school finance lawsuits).

²⁶⁴ See, e.g., Evans et al., *supra* note 263, at 12, 20, 28 (focusing on court-mandated school finance reform, in general, without drawing distinction between underlying litigation theories); Hickrod et al., *supra* note 13, at 181 (using "complaints which allege a violation of the Equal Protection Clause and/or a violation of the education article in the state constitutions.").

²⁶⁵ See, e.g., Hickrod et al., *supra* note 13, at 206 (using growth rates reflecting current, not constant, dollars).

²⁶⁶ See, e.g., Heise, *supra* note 10, at 1758 (converting all data with appropriate government index and deflator to express data in constant 1992 dollars).

Most studies use the state as the unit of analysis,²⁶⁷ while others examined regions.²⁶⁸ Some studies consider data at two or more points in time over an extended period,²⁶⁹ while other studies used annual data points.²⁷⁰

A second source of complexity confounding judicial impact studies stems from the underlying difficulty in capturing what is meant by "judicial impact" in the school finance context. Commentators have frequently noted the research difficulties this line of scholarly inquiry presents.²⁷¹ As Professor Dayton remarked, part of the difficulty surrounding varying efforts to operationalize judicial impact might stem from the ease by which two related but distinct questions can be conflated. One question is largely empirical and pivots on whether school finance court decisions result in actual changes to such variables as educational spending or centralization levels. A second question is more qualitative and considers whether such changes as increased educational spending result in greater equity in educational opportunity.²⁷² Both questions, while important and interesting, are nonetheless different. These two different questions represent two decidedly different approaches to an inquiry about the efficacy of school finance litigation and

²⁶⁷ See, e.g., *id.* at 1755-59 (using Wyoming and Connecticut); Hickrod et al., *supra* note 13, at 181-84 (using various states); Wyckoff, *supra* note 258, at 23 tbl.2 (using various states).

²⁶⁸ See, e.g., Salmon, *supra* note 69, at 551, 555 tbls.1 & 3 (dividing United States into eight regions for analysis).

²⁶⁹ See, e.g., Hickrod et al., *supra* note 13 (using 1970-90); Joondeph, *supra* note 196, at 785 (comparing per-pupil expenditures in five states in year state supreme court invalidated public school funding system and 1991-92 school year); Wyckoff, *supra* note 258 (using 1980-87).

²⁷⁰ See, e.g., Heise, *supra* note 10, at 1755-59 (analyzing two states from 1970 to 1992 with annual data points).

²⁷¹ See, e.g., Dayton, *supra* note 123, at 19 ("A comprehensive study of judicial efficacy in school funding reform presents substantial logistical challenges in data collection, and legal and legislative research."); Heise, *supra* note 10, at 1763-64 ("It may be that the impact of state court decisions involving school finance lawsuits is expressed in a variable other than current educational spending."); Hickrod et al., *supra* note 13, at 181, 206-07 (noting that study's findings are "preliminary" since it is difficult to establish fiscal effects of constitutional challenges in education financing).

²⁷² Dayton, *supra* note 123, at 19 n.95. The study discussed in this Article, in contrast, focuses on the more empirical question of whether successful equity court decisions increase centralization levels and assiduously sets aside the admittedly more important and complicated question concerning equal educational opportunity.

might lead to different yet plausible interpretations of similar data. Concluding that school finance litigation increased either centralization or total educational spending levels or both is one thing, but concluding that a school finance lawsuit resulted in greater equal educational opportunity is entirely different.

IV. AN EMPIRICAL ANALYSIS OF SCHOOL FINANCE EQUITY LITIGATION ON EDUCATIONAL CENTRALIZATION AND SPENDING

School finance litigation already spans decades and will assuredly continue into the next century. Moreover, the "large amounts of money and time" that have already been devoted to such litigation have not escaped note.²⁷³ Accordingly, asking what these litigation efforts have accomplished is logical. Specifically, it would be helpful to know whether and, if so, how and to what degree successful school finance litigation may have influenced school centralization and total educational spending levels in ways litigants sought. Unfortunately, such a complex question is not easily answered, and efforts to do so empirically are particularly difficult.²⁷⁴

Some of the difficulties associated with efforts to assess the independent impact of court decisions on social policies are difficulties common to empirical research generally. Numerous variables move simultaneously in different directions. Also, different people and institutions can view a single judicial decision differently. Other difficulties, particularly those relating to data and how to "time" (or even define) the judicial impact, are especially common to empirical efforts to assess legal impact in the school finance area.²⁷⁵ Despite such difficulties, research in this area continues to develop.²⁷⁶

²⁷³ *Id.* at 18.

²⁷⁴ Hickrod et al., *supra* note 13, at 181.

²⁷⁵ See Dayton, *supra* note 123, at 20-21 ("[T]he passage of time increasingly introduces factors such as political and fiscal changes that may effect funding but that may have no relationship to the original judicial order.").

²⁷⁶ Much of the recent attention to empirical assessments of the efficacy of school finance litigation can be traced to a 1992 article by Professor Hickrod. See Hickrod et al., *supra* note 13 (summarizing relevant scholarly literature).

A. MODELING JUDICIAL IMPACT ON EDUCATIONAL CENTRALIZATION AND SPENDING

1. *Centralization.* From methodological and data perspectives, this study of the possible influence of successful school finance court decisions on school funding centralization levels closely parallels earlier studies that explored the possible influence of successful school finance court decisions on educational spending levels.²⁷⁷ Addressing such a research question empirically requires a model. Due to a relative paucity of empirical research on this topic, helpful models are scarce. As a result, the model developed and employed in this study modifies a general school spending model developed earlier;²⁷⁸ it, in turn, drew from prior work in other related, yet distinct, areas.²⁷⁹ Prior research on related questions analogous to centralization identifies three important general models, including the autoregressive, share-of-the-pie, and constituency models.²⁸⁰ The decision to base a centralization model on the comparatively more developed school spending models, while admittedly not without risk, on balance makes sense because both models focus on educational spending, even if they do so from different perspectives. Nevertheless, it is important to note that earlier efforts to model school spending levels have received both praiseworthy and critical commentary.²⁸¹

²⁷⁷ See, e.g., Heise, *supra* note 10, at 1753-57 (measuring "the possible influence of a state supreme court decision involving a school finance equity claim on educational spending"); Hickrod et al., *supra* note 13 (exploring effect of state-level litigation of constitutional claims on state financing of public education).

²⁷⁸ Heise, *supra* note 10; see also *infra* Part IV.A.2 (describing educational spending model).

²⁷⁹ See, e.g., Virginia Gray, *Models of Comparative State Politics: A Comparison of Cross-Sectional and Time Series Analyses*, 20 AM. J. POL. SCI. 235, 235 (1976) (determining "if cross-sectional analyses of interstate policy variation are adequate for explaining the dynamic policy process").

²⁸⁰ See David Lowrey et al., *Spending in the States: A Test of Six Models*, 37 W. POL. Q. 48, 49-52 (1984) (examining six models of state budget decision-making process); William A. Taggart, *Redefining the Power of the Federal Judiciary: The Impact of Court-Ordered Prison Reform on State Expenditures for Corrections*, 23 L. & SOC'Y REV. 241, 251-52 (1989) (establishing model for state corrections spending).

²⁸¹ Compare, e.g., Dayton, *supra* note 123, at 14-15 (describing Heise's 1995 general model of educational spending and judicial impact), and Douglas S. Reed, *Twenty-Five Years After Rodriguez: School Finance Litigation and the Impact of the New Judicial Federalism*, 32 L. & SOC'Y REV. (forthcoming March 1998) (noting that prior studies have "explored thoroughly

As its name suggests, the autoregressive model posits that the level of centralization in any year influences centralization in the next year. The share-of-the-pie model proposes that a state's relative financial contribution to any particular activity within an overall state budget remains stable over time. Finally, the constituency model suggests that a particular state activity's share of the overall state budget reflects the activity's number of beneficiaries. In the context of school funding, therefore, the constituency model predicts that a state's public elementary and secondary school enrollment influences centralization. Cumulatively, these three models present a viable model of school funding centralization that can be expressed as follows:

Equation 1

$$P_t = b_0 + b_1 P_{t-1} + b_2 T_{t-1} + b_3 E_{t-1} + b_4 Y_{t-1} + e_t$$

In Equation 1, (P_t), is the state contribution to total educational spending expressed as a percentage. Total annual educational spending combines contributions from federal, state, and local sources. The lagged endogenous variable, (P_{t-1}), is the dependent variable lagged by one year.

In addition to the lagged endogenous variable, (P_{t-1}), Equation 1 includes three other independent background variables. One is total annual state spending, (T_{t-1}), which includes a state's general expenditures, lagged by one year. Another background variable is elementary and secondary public school enrollment, (E_{t-1}), also lagged by one year. Enrollment figures in most jurisdictions are established by annual attendance surveys. Finally, the model includes total state annual educational spending, (Y_{t-1}), lagged by one year.

The final component of the general model (Equation 1) involves the intervention variable, (I), which is a dummy variable assigned a value of zero until the year that a state supreme court decision

and quite capably the aggregate impact of court decisions on educational spending"), with *Rebell & Hughes, supra* note 63, at 1141 n.108 (arguing that prior analysis "exemplifies the shortcomings of conclusions drawn by social scientists who sometimes seem unaware of the extent and implications of legal processes.").

is presumed to have gone into effect and is coded one for each year after that. Compliance deadlines imposed by court decisions and legislative responses serve as markers to help identify the court decisions' presumed impacts. The 1980 *Herschler*²⁸² decision in Wyoming illustrates that court's use of a compliance deadline. In *Herschler*, the Wyoming court required the state's general assembly to remedy the unconstitutional school finance system by July 1, 1983.²⁸³ The Wyoming legislature responded by passing legislation in 1983 which went into effect for the 1984 school year.²⁸⁴ Accordingly, the dummy judicial intervention variable in Wyoming is lagged until the 1984 school year.

In contrast to Wyoming's judicially mandated compliance deadline, a legislative response guides the intervention lagging decision for Connecticut. Although not formally pursuant to a court-imposed compliance deadline, Connecticut lawmakers responded to the 1977 *Horton* decision²⁸⁵ during the 1979 legislative session and enacted a new school finance formula for that state.²⁸⁶ Accordingly, the impact of the Connecticut court decision is lagged until the 1980 school year.

The third state included in this study, Arkansas, is somewhat of an anomaly, as the 1983 *DuPree v. Alma School District No. 30* decision²⁸⁷ did not contain an explicit compliance deadline. Moreover, the Arkansas legislature did not pass any substantive school finance reform legislation within two years of the court decision.²⁸⁸ Thus, for methodological reasons described below, the judicial impact variable for Arkansas is lagged two years.

The general model presented in Equation 1, above, can be modified to include the effects of state supreme court decisions that

²⁸² *Washakie County Sch. Dist. No. One v. Herschler*, 606 P.2d 310, 340 (Wyo. 1980).

²⁸³ *id.*

²⁸⁴ 1983 WYO. SESS. LAWS 399-400 (redistributing revenue to meet financial requirements of school districts receiving state aid, effective July 1, 1983).

²⁸⁵ *Horton v. Meskill*, 376 A.2d 359 (Conn. 1977).

²⁸⁶ *Horton*, *supra* note 73, at 717.

²⁸⁷ *DuPree v. Alma Sch. Dist. No. 30*, 651 S.W.2d 90 (Ark. 1983).

²⁸⁸ Notably, after the *DuPree* decision the Arkansas legislature considered (but ultimately abandoned) implementing a school finance system in which state funds would have largely replaced local property tax funds as the major source of revenue for schools. See Schoppmeyer, *supra* note 69, at 180 (discussing proposed state constitutional amendment which provided for state assumption of school expenses).

invalidate school funding formulas. The full model can be expressed as follows:

Equation 2

$$P_t = b_0 + b_1 P_{t-1} + b_2 T_{t-1} + b_3 E_{t-1} + b_4 Y_{t-1} + b_5 I + e_t$$

As is customary, e_t represents the error term and $b_0, b_1, b_2, b_3, b_4,$ and b_5 are parameters to be estimated.²⁸⁹ A statistically significant²⁹⁰ intervention coefficient, (b_5), would suggest a relative change in school finance centralization beyond that explained by the other independent variables or random chance.

2. *Educational Spending.* Similar to the analysis of the potential impact of successful school finance equity lawsuits on centralization levels, an analysis of the potential impact of school finance equity court decisions on total educational spending levels requires a model. Not surprisingly (and as hinted earlier²⁹¹), the state educational spending model resembles the school funding centralization model. Accordingly, the total educational spending model incorporates the autoregressive, share-of-the-pie, and constituency aspects earlier described. Unlike the nascent

²⁸⁹ Although necessary for the analyses, given the nature of the four background independent variables contained in the full model there is likely some level of multicollinearity. While this renders estimates of their parameters unstable, it does not necessarily destabilize the estimates for other parameters, such as the independent variable of interest, judicial impact (I). Moreover, the focus of this particular study is, at bottom, judicial impact (I). For a more complete discussion of multicollinearity, see JOHN JOHNSTON, *ECONOMETRIC METHODS* 159-69 (2d ed. 1972); Taggart, *supra* note 280, at 252 n.12. The presence of multicollinearity would make the test more conservative as it would increase the size of the standard errors, thus making it more difficult to achieve statistical significance. See MICHAEL S. LEWIS-BECK, *APPLIED REGRESSION: AN INTRODUCTION* 59 (1980) (stating that high multicollinearity creates estimation problems "because it produces large variances for the slope estimates and, consequently, large standard errors"). Thus, if anything, the presence of multicollinearity would make the model more parsimonious and, by definition, more prone to a type II error (but, at the same time, less prone to a type I error). For a helpful description of type I and II errors, see GEORGE W. BOHRNSTEDT & DAVID KNOKE, *STATISTICS FOR SOCIAL DATA ANALYSIS* 113-14 (2d ed. 1988).

²⁹⁰ Throughout, this study adheres to social science convention by defining statistical significance at the $p < .05$ level. For a general discussion of this convention, see, for example, BOHRNSTEDT & KNOKE, *supra* note 289, at 113 (describing $p < .05$ level for statistical significance "conventional").

²⁹¹ See *supra* Part IV.A.1 (describing centralization model).

empirical research on judicial impact and centralization levels,²⁹² however, the literature on judicial impact and educational spending levels is more developed. Greater scholarly attention to total educational spending as a dependent variable has uncovered two additional categories of potential determinants of public school spending: (1) a set of shared expectations (and demand) for educational services; and (2) the availability of funding.²⁹³ Both categories suggest specific variables considered in this study. Cumulatively, the three models and two categories of determinants suggest variables that form a general model of educational spending that can be expressed as follows:

Equation 3

$$Y_t = b_0 + b_1 Y_{t-1} + b_2 T_{t-1} + b_3 E_{t-1} + b_4 A_{t-1} + b_5 H_{t-1} + b_6 O_{t-1} + e_t$$

The dependent variable, (Y_t), is current public elementary and secondary school (K-12) spending for a state in a given year. The lagged endogenous variable, (Y_{t-1}), is current state educational spending for the prior year. Both the dependent variable and its lagged counterpart include such costs as salaries, fixed charges, transportation, instructional materials such as school books, and energy costs.²⁹⁴ They exclude, however, capital outlay and debt service.²⁹⁵ Demand and supply variables include: (T_{t-1}), total state spending for the previous year; (E_{t-1}), a state's public K-12 prior year enrollment; (A_{t-1}), per capita income; (H_{t-1}), educational attainment; and (O_{t-1}), the availability of substitutes for public education (e.g., private education). The final variable, (O_{t-1}), is expressed by the percentage of school-age population attending public schools. As is customary, e_t represents the error term, and b_0 , b_1 , b_2 , b_3 , b_4 , b_5 , and b_6 are the parameters to be estimated.²⁹⁶

²⁹² The Bahl study, Bahl et al., *supra* note 70, is one of only a few such studies.

²⁹³ See Evelyn Kinue Fuji Hawkins, *The Effect of the 1980s Reform Movement on Levels of Public Education Expenditure* 41 (1991) (unpublished Ph.D. dissertation, Stanford University) (on file with author). Hawkins identifies one other category not considered in this study that relates to political constraints, *id.*, and describes the difficulties surrounding their operationalization. *Id.* at 47.

²⁹⁴ NATIONAL CTR. FOR EDUC. STATISTICS, *supra* note 29, at 472.

²⁹⁵ *Id.*

²⁹⁶ See *supra* note 289 (discussing likely presence of some level of multicollinearity).

Also, similar to the fully specified centralization model (Equation 2),²⁹⁷ the general educational spending model (Equation 3)²⁹⁸ can be expanded to incorporate the effects of a state supreme court school finance decision. The fully specified educational spending model (Equation 4) can be expressed as follows:

Equation 4

$$Y_t = b_0 + b_1 Y_{t-1} + b_2 T_{t-1} + b_3 E_{t-1} + b_4 A_{t-1} + b_5 H_{t-1} + b_6 O_{t-1} + b_7 I_t + e_t$$

where (I) is a binary expression of a state supreme court ruling that a state's school finance system is unconstitutional.²⁹⁹ Similar to the parameters in the centralization model (Equation 2), b_7 is a parameter to be estimated.³⁰⁰

3. *Statistical Analyses.* Ordinary Least Squares (OLS) multiple regression was used for both models (centralization and total educational spending) to estimate coefficients in Equations 2 and 4 for all three states. Basic regression assumptions, including those involving homoscedasticity and serial correlation of the error term, e_t , were examined and appear to have been satisfied.³⁰¹ Because many legal decisions involve remedies designed to create a specific change in individuals or institutions, interrupted time series as an analytical technique is well-suited to the study of their impact.³⁰² The interrupted time series model used in this study

²⁹⁷ See *supra* p. 601 (setting forth Equation 2).

²⁹⁸ See *supra* p. 602 (setting forth Equation 3).

²⁹⁹ See Taggart, *supra* note 280, at 254 (using I_{t-1} to represent binary expression of court order, lagged one year).

³⁰⁰ See *id.* (using b_7 as parameter to be estimated).

³⁰¹ Largely because variables on both sides of the equations were logged, error terms did not appear to be heteroscedastic. Due to the inclusion of the lagged endogenous variable, Y_{t-1} , the Durbin-Watson test statistic, frequently used to help detect serial correlation, could not be used. Instead, the presence of serial correlation was examined by regressing the error term, e_t , (obtained from the OLS results) on the error term lagged, e_{t-1} , and the independent variables. A significant slope would call for the rejection of the null hypothesis of no serial correlation. See Taggart, *supra* note 280, at 257 n.23 (discussing use of Durbin-Watson test and regression of error terms).

³⁰² See, e.g., Malcolm D. Holmes et al., *Plea Bargaining Policy and State District Court Caseloads: An Interrupted Time Series Analysis*, 26 L. & SOC'Y REV. 139 (1992) (using interrupted time series analysis to study plea bargaining and court caseloads); James W. Meeker & Henry N. Pontell, *Court Caseloads, Plea Bargains, and Criminal Sanctions: The Effects of Section 17 P.C. in California*, 23 CRIMINOLOGY 119 (1985) (using interrupted time series analysis to study effects of change in California Penal Code on court caseloads).

is among the models commonly found in legal impact literature and offers important advantages over competing models.³⁰³ One important advantage is that interrupted time series represents a quasi-experimental design that eliminates many threats to generalizations commonly found in the legal impact literature.³⁰⁴

The interrupted time series technique is not, however, without its analytical shortcomings.³⁰⁵ Although the number of observations in this study ($t=23$ for $P_{t,j}$) and the absence of serial autocorrelation³⁰⁶ make regression techniques possible for this study,³⁰⁷ alternative analytical models are also helpful in analyzing time series data.³⁰⁸

4. *Data.* Both models require similar data. Time series panel data were gathered for the three states (Arkansas,³⁰⁹ Connecticut,³¹⁰ and Wyoming³¹¹) that met four criteria. First, an equity-based constitutional challenge to a school finance system reached the state supreme court level. Second, the state court ruled in

³⁰³ See Holmes et al., *supra* note 302, at 144 n.2 (discussing advantages).

³⁰⁴ *Id.* For example, interrupted time series has been used to assess the impact of traffic laws, see, Gene V. Glass, *Analysis of Data on the Connecticut Speeding Crackdown as a Time Series Quasi-Experiment*, 3 L. & SOC'Y REV. 55 (1968); Donald T. Campbell & H. Laurence Ross, *The Connecticut Crackdown on Speeding: Time Series Data in Quasi-Experimental Analysis*, 3 L. & SOC'Y REV. 33 (1968); to assess domestic violence administrative directives, see, Frances Lawrenz et al., *Time Series Analysis of the Effect of a Domestic Violence Directive on the Number of Arrests Per Day*, 16 J. CRIM. JUST. 493 (1988); to assess plea bargaining policies, see, Holmes et al., *supra* note 302; to assess drunken driving laws, see, Subhash C. Ray, *Legal Control of Drunken Driving: A Time Series Study of California Data*, 5 INT'L J. FORECASTING 515 (1989); and to assess caseload reduction laws, see, Meeker & Pontell, *supra* note 302.

³⁰⁵ See, e.g., Leslie J. McCain & Richard McCleary, *The Statistical Analysis of the Simple Interrupted Time Series Quasi-Experiment*, in QUASI-EXPERIMENTATION: DESIGN & ANALYSIS ISSUES FOR FIELD SETTINGS 233, 234-35 (Thomas D. Cook & Donald T. Campbell eds., 1979) (discussing bias problem with ordinary least squares regression); Meeker & Pontell, *supra* note 302, at 125 (discussing various analytical problems of interrupted time series design).

³⁰⁶ See *supra* note 301 (discussing absence of Durbin-Watson statistic). Also, as discussed earlier, *supra* note 289, while some multicollinearity is likely, the requirement for the absence of perfect multicollinearity is met. See LEWIS-BECK, *supra* note 289, at 58 (discussing multicollinearity problem).

³⁰⁷ Meeker & Pontell, *supra* note 302, at 125 n.2.

³⁰⁸ For example, while a more sophisticated autoregressive integrated moving average (ARIMA) model would be preferable, most ARIMA models require a minimum of 50 time points. *Id.* at 125-26.

³⁰⁹ *DuPree v. Alma Sch. Dist. No. 30*, 651 S.W.2d 90 (Ark. 1983).

³¹⁰ *Horton v. Meskill*, 376 A.2d 359 (Conn. 1977).

³¹¹ *Washakie County Sch. Dist. No. One v. Herschler*, 606 P.2d 310, 340 (Wyo. 1980).

favor of the plaintiffs and, as a result, invalidated the state's school finance system. Third, subsequent court decisions, compliance or otherwise, filed between 1970 and 1993 did not substantially disrupt the original decision.³¹² Fourth, the state supreme court ruling occurred before 1984, thereby allowing for the accumulation of an adequate number of post-decisional data points. This final point is important because an adequate number of post-decisional data points is essential for time series analysis, the model employed in this study.

Analyses in this study cover the years 1970 to 1993, inclusive. The number of data time points is reduced to twenty-three because of the lagging of independent variables by one year. United States Department of Education reports provide annual data on public elementary and secondary school spending, sources of spending, and student enrollment.³¹³ United States Census reports provide annual state spending data.³¹⁴ Also, where appropriate, data on both sides of the equation were expressed as natural logs to ensure greater data smoothing. Finally, to control for the effects of inflation, all dollar variables were deflated and expressed in constant 1993 dollars.³¹⁵

Centralization, (P_t), reflecting a state's contribution to total educational spending expressed as a percentage of total spending, serves as the dependent variable in the first analysis. Current annual state educational spending, (Y_t), including such items as salaries, fixed expenses, student transportation, school books and other instructional material, and energy costs, but excluding capital outlay and interest on school debt, serves as the dependent variable in the second analysis.

³¹² Despite a plaintiff victory in 1980, *id.*, Wyoming school districts filed another lawsuit seeking to render Wyoming's school finance system unconstitutional in January 1992. *Campbell County Sch. Dist. v. State*, 907 P.2d 1238 (Wyo. 1995). A decision in the second piece of litigation, however, was not rendered by the Wyoming Supreme Court until November 1995 and, as a result, arrived well after the 1993 data deadline used in this study. *Id.*

³¹³ These reports include NATIONAL CTR. FOR EDUC. STATISTICS, *supra* note 29; NATIONAL CTR. FOR EDUC. STATISTICS, HISTORICAL TRENDS: STATE EDUCATION FACTS 1969-89 (1993).

³¹⁴ These include U.S. BUREAU OF CENSUS, STATE GOVERNMENT FINANCES (series GF, No. 3) (1968-92). After 1992, these data are only available on the Internet. <<http://www.census.gov/govs/www/state.html>>.

³¹⁵ For a list of the most common deflators and indexes, see NATIONAL CTR. FOR EDUC. STATISTICS, *supra* note 29, at 41 tbl.37.

Both models employ such independent variables as total annual state spending, ($T_{t,t}$), which includes a state's total real general expenditures, lagged by one year. (All independent variables, except for the binary, dummy court decision intervention variable, I , are lagged by one year.) Elementary school enrollment, ($E_{t,t}$), is the total number of students registered in a school (or local education agency). School officials typically count students in public elementary and secondary schools in early October of each year for the purpose of establishing official annual enrollment. The fully specified educational spending model (Equation 4)³¹⁶ includes such additional independent variables as the percentage of a state's population achieving a high school diploma, ($H_{t,t}$), including those adults, twenty-five years old or older, who either graduated from high school or received a General Education Degree (GED). State personal income, ($A_{t,t}$), is the current real income received by residents from all sources, including transfers from government and business, but excluding transfers among persons. The percentage of a state's school-age population (five to nineteen year-olds) attending public elementary or secondary schools, $O_{t,t}$, was computed by dividing a state's public elementary and secondary school enrollment by the state's total school-age population. The intervention variable for both models, (I), is a dummy variable valued at zero until the year that the state supreme court decision is effectuated; it is then valued at one for each subsequent year. Compliance deadlines imposed by court decisions and legislative responses influence decisions about timing the judicial impact variables for states included in this study.³¹⁷

5. *Models' Limitations.* As many scholars have noted, efforts to assess judicial impact in the school finance area face considerable methodological hurdles.³¹⁸ Professor Dayton refers to "timeline" problems,³¹⁹ Professor Hickrod to the "cumulative effects" in a

³¹⁶ See *supra* p. 603 (setting forth Equation 4).

³¹⁷ See *supra* part IV.A.1 (discussing this study's methodological approach toward timing judicial impact).

³¹⁸ See, e.g., Dayton, *supra* note 239, at 18-26 (explaining problems with determining effect of judicial intervention).

³¹⁹ *Id.* at 20.

particular state following a school finance court decision.³²⁰ In many ways, both comments pivot on a vexingly difficult question: namely, how best to empirically characterize and statistically express the nature and timing of judicial intervention.

The approach taken in this study, a step function, treats state supreme court decisions as abrupt and permanent. Although such an approach possesses important limits, three factors support such treatment. First, the step function captures, at least on one level, crucial aspects of the underlying court decisions. Each of the respective courts entered their decisions at distinct and identifiable points in time. Second, the courts did not overrule or modify their decisions in any way that compromises the original holding. Finally, it is important to note that the terms “abrupt and permanent” as used in this study are not meant to suggest that efforts to reform school finance systems began only after a state’s supreme court invalidated a school finance system. Rather, the terms are meant to suggest only that the courts’ decisions signal states’ formal legal recognition of a constitutional problem. Such recognition is important to legal and non-legal efforts to fashion school finance reform efforts.

That said, the step function employed in this study is not without possible limitations. For example, the time-line and “cumulative” concerns raised by Professors Dayton³²¹ and Hickrod,³²² respectively, are valid and limit the generalizability of this study’s results. Their comments on how to best empirically operationalize judicial impact reveal a crucial tension underlying much empirically based legal impact research. On the one hand, a broad interpretation of judicial impact risks conflating judicial and non-judicial factors. On the other hand, a narrow interpretation of judicial impact poses an equally troubling risk—namely, excluding actual results of court decisions that might reside just outside an unduly narrow definition of “impact.”

Of course, no single, “correct” answer to this question exists. As Professor Hickrod notes, “[n]either design is wrong; they are just

³²⁰ G. Alan Hickrod et al., *The Effect of Constitutional Litigation on Educational Finance: A Further Analysis*, in NATIONAL CTR. FOR EDUC. STATISTICS, SELECTED PAPERS IN SCHOOL FINANCE 1995, at 41, 42 (1996).

³²¹ Dayton, *supra* note 120, at 182.

³²² Hickrod et al., *supra* note 320, at 41-42.

different.³²³ Differences aside, the step function approach is preferable, particularly for those interested in seeking to emphasize the possible independent influence of a court decision rather than, for example, actual educational spending levels. Estimates from research designs treating a court decision as a discrete event and expressing whatever influence it might exert within a reasonable period of time, such as no more than twenty-four months after the actual decision, will, all else being equal, be more conservative. The potential cost, of course, is the threat of a type II error. More specifically, such a research design might miss court decisions that may have exerted some influence. Researchers ultimately more interested in school finance variables rather than court decision related variables may be better served by the alternative ("climate") design Hickrod described.³²⁴

Moreover, the four limitations on states eligible for inclusion in this study, as identified earlier,³²⁵ limit this study in important ways. The need for adequate post-decisional data points precludes the inclusion of the more recent adequacy court decisions. Although some scholars might quibble over the precise case in which school finance adequacy theory emerged, most agree that such decisions did not appear until 1989.³²⁶ Thus, adequacy court decisions' relatively recent emergence precludes their inclusion in this study. Their absence from this study should not be interpreted to suggest that adequacy court decisions might not influence centralization and total educational spending levels. Indeed, anecdotal evidence from various states suggests the contrary.³²⁷

³²³ *Id.* at 42.

³²⁴ *Id.* at 41-42.

³²⁵ See *supra* part IV.A.4 (outlining four criteria for time service panel data).

³²⁶ Much of whatever dispute exists focuses on the proper interpretation of *Helena Elementary Sch. Dist. No. 1 v. State*, 769 P.2d 684 (Mont. 1989). A more thorough discussion of this dispute appears elsewhere. See, e.g., Heise, *supra* note 6, at 1163 (stating that some commentators view *Helena* "as the first example of an adequacy court decision that ushered in the third wave" while other commentators see *Helena* as part of second wave). Regardless of how one might interpret *Helena* or determine which case, *Helena* or *Rose v. Council for Better Educ.*, 790 S.W.2d 186 (Ky. 1989), ushered in adequacy theory, that school finance adequacy theory emerged in 1989 is well-settled.

³²⁷ See, e.g., Alexander, *supra* note 92, at 363 (outlining effect of 1989 Supreme Court of Kentucky holding); Ronald G. Dove, Jr., *Acorns in a Mountain Pool: The Role of Litigation, Law and Lawyers in Kentucky Education Reform*, 17 J. EDUC. FIN. 83, 102-09 (1991) (discussing *Rose* and its effects on Kentucky schools); Heise, *supra* note 172, at 316-17

However, analyses of adequacy-based court decisions employing the models presented in this study, although certainly important, will not be possible for a few years due to the models' data requirements.

Notwithstanding some drawbacks, the absence of equity-based school finance court decisions from this study offers some advantages. Notably, it allows this study to focus on the influence of one particular school finance litigation theory, equity theory, without the potentially confounding influences that might be introduced into a study that combines equity and adequacy court decisions. Given the important differences that distinguish equity and adequacy school finance lawsuits, studies that conflate the two types risk ignoring important differences in outcome that stem from distinct aspects of the two theories. Indeed, that the school finance litigation world changed dramatically in 1989 with the emergence of adequacy theory (or the "third wave"³²⁸ of school finance decisions) might itself provide indirect evidence relating to potential differences between the two types of court decisions. Whether the two school finance litigation theories differ in ways that render one theory more amenable to judicial influence is one possible difference with important implications. Such a difference, if it exists, might help explain the emergence of school finance adequacy theory and the simultaneous decline of equity theory.

B. RESULTS AND DISCUSSION

1. *Centralization.* A visual inspection of centralization trends over time for all three states provides helpful context to discussions about any relation between court decisions and centralization levels. Moreover, another useful comparison involves centralization trends for the states included in this study with national centralization trends.³²⁹

(discussing *Herschler* and its effects on Wyoming schools and educational spending).

³²⁸ See, e.g., Heise, *supra* note 6, at 1152 n.9 (citing other authors who have written about third wave); Thro, *supra* note 2, at 598 n.4 (discussing origin of third wave); Levine, *supra* note 6, at 507-08 (describing waves of litigation).

³²⁹ See *supra* Part I.B.1.a. fig.1, at 560 (illustrating school centralization trend).

FIGURE 3
ARK. PERCENTAGE OF EDUC. REVENUE FROM STATE

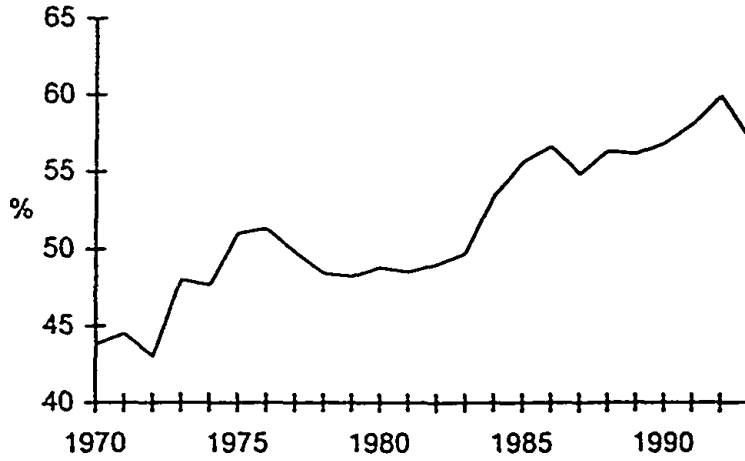


FIGURE 4
CONN. PERCENTAGE OF EDUC. REVENUE FROM STATE

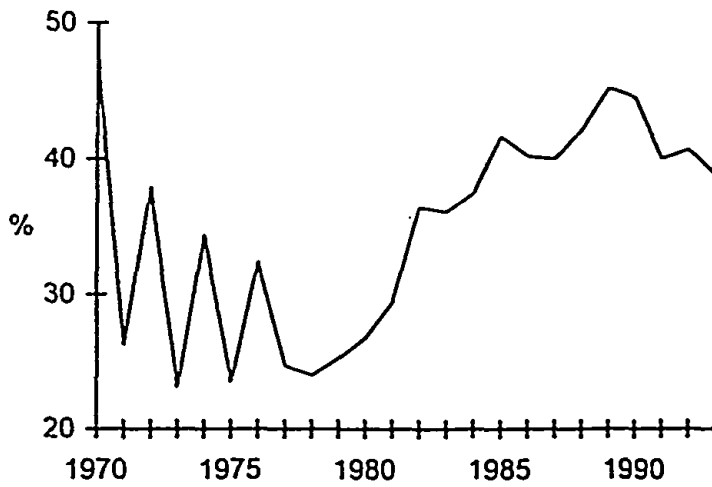
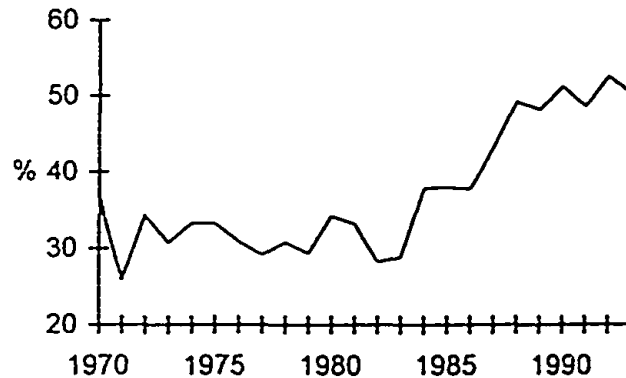


FIGURE 5
WYO. PERCENTAGE OF EDUC. REVENUE FROM STATE



As Figure 1³³⁰ illustrates, the relative contribution of school funding from state sources has increased across the country over time, though that level has dropped somewhat since the late 1980s. Although the trend is far from smooth, the increased proportion of total educational funding attributable to state level funds since the early 1970s through today is unmistakable.

Arkansas (Figure 3) comes closest to mirroring the national trend. Although not entirely smooth, Arkansas school districts have increasingly begun to rely on state funding during the past two decades. Connecticut and Wyoming, in contrast (Figures 4 and 5, respectively), do not closely parallel the national trend. Centralized school funding in both states, particularly Connecticut, displays marked instability, at least until about 1980. Moreover, between the mid-1960s and 1980, centralization levels in Connecticut decreased. Wyoming's pre-1980 experience is comparatively less volatile, but that state also experienced a reduction in centralization during those years. Interestingly, after 1980 both states more closely resemble the national trend of increased centralization.

Why centralization trends in Connecticut and Wyoming diverge from the national trend is far from clear. More clear, however, is that dramatic changes in student enrollment during the 1970s are not likely to emerge as a major explanatory factor. Enrollment

³³⁰ See *supra* p. 560 (setting forth Figure 1).

data from Connecticut and Wyoming point in different directions. During the 1970s, when Connecticut's state contribution to total education spending fell by more than forty-three percent, its public elementary and secondary enrollment also fell by more than twelve percent. The relation between centralization and enrollment in Wyoming, however, differed. During the 1970s, centralized school funding in Wyoming dropped by seven percent, while enrollment grew by ten percent.

Figures 3 through 5 also suggest a possible connection between centralization levels and successful school finance lawsuits that invalidated school funding systems on equity grounds. The three states studied present three distinctly different scenarios. Arkansas's general and relatively smooth trend toward increased centralization began well before and continued after the *DuPree* decision³³¹ presumably took effect. Little in Figure 2 suggests that the court decision did much to influence that state's twenty year progression toward increased centralization.

Connecticut and Wyoming data are less clear. Due to substantial volatility during the 1970s, the Connecticut data permit few comfortable inferences. On the one hand, the *Horton* decision³³² marks the beginning of a discernible trend toward increased centralization. On the other hand, once data from the mid-1960s are also considered, the present level of centralization just barely exceeds mid-1960s' levels. At the descriptive level, the Wyoming data present the strongest support for those who argue that successful equity school finance litigation stimulates increased centralization. Prior to the *Herschler* decision,³³³ centralization levels in Wyoming, although not entirely stable, remained essentially flat. It was not until the mid-1980s, coinciding with the court decision invalidating Wyoming's school funding system, that a discernible centralization trend emerged.

Empirical analyses can uncover statistical relations among and between variables not discernible from descriptive analyses. The fully specified centralization model, (Equation 2),³³⁴ endeavors to

³³¹ *DuPree v. Alma Sch. Dist. No. 30*, 651 S.W.2d 90 (Ark. 1983).

³³² *Horton v. Meskill*, 376 A.2d 359 (Conn. 1977).

³³³ *Washakie County Sch. Dist. No. One v. Herschler*, 606 P.2d 310, 340 (Wyo. 1980).

³³⁴ See *supra* p. 601 (setting forth Equation 2).

explain the degree to which educational funding is centralized at the state level. More specifically, the inclusion of the dummy variable, (I), offers probative evidence on the potential independent influence of successful equity school finance lawsuits on centralization levels. The dependent variable, (P_i), is a state's percentage contribution to overall educational funding. The results, although generally mixed, offer mild support for the model. Many of the estimated parameters are in the expected direction, but few achieve statistical significance. The regression coefficients, (adjusted R²), are strong. Their strength, however, might reflect the relatively high ratio of independent variables to the sample size, (N=23), which could exert upward pressure on the regression coefficients.³³⁵

³³⁵ See LEWIS-BECK, *supra* note 289, at 53 (noting high rates of independent variables can raise statistical significance).

TABLE 1

IMPACT OF STATE SUPREME COURT SCHOOL FINANCE
DECISIONS ON PERCENTAGE OF STATE FUNDS TO TOTAL
EDUCATION SPENDING[†]

	ARK	CONN	WYO
Court Decision (D)	.04 (.05)	-.12 (.16)	.26* (.12)
Ttl. St. Spend (T_{t-1})	.10 (.20)	-.35 (.50)	-.17 (.83)
Enrollment (E_{t-1})	-1.21* (.43)	-1.75* (.67)	-.64 (2.44)
Ttl. Educ. Spend (Y_{t-1})	-.06 (.25)	.58 (.69)	.37 (.69)
St. % of Educ. Spend (P_{t-1})	.34 (.28)	-.22 (.17)	.32 (.19)
(constant)	18.37* (6.63)	21.95 (12.05)	6.12 (27.46)
R ² (adj.)	.88	.64	.77
Std. Error	.03	.14	.11
F-Stat.	33.85**	8.9**	15.81**

[†] Each equation is based on data from the years 1971 to 1993, with N=23 due to the use of lagged variables.

* $p < .05$; ** $p < .01$

Results for the background independent variables are mixed; results for the lagged endogenous variable, (P_{t-1}), are surprising. Put slightly differently, a state's relative contribution to total educational spending in any given year does not emerge as a strong

predictor for the subsequent year. None of the estimated parameters for a state's prior year percentage contribution to education spending is significant. Moreover, Connecticut's negative estimate is particularly unexpected and, therefore, warrants additional exploration. As discussed previously, volatility distinguishes Connecticut's centralization levels, (Figure 4).³³⁶ Although Connecticut's centralization levels smoothed after the late 1970s, changes in earlier years were erratic. The series of constant and sharp changes in Connecticut's centralization levels for almost a decade might have destabilized its estimated parameters and, perhaps, contributed to its negative sign.

Less surprising, but also generally mixed, are estimated parameters for total state spending, ($T_{t,j}$). Estimates for two of the three states (Connecticut and Wyoming) are negative, but estimates for none of the states are significant. The negative estimates suggest that increases in centralization correlate with decreases in total state spending. To the extent that total state spending serves as one approximate, albeit crude, proxy for a state's economic health,³³⁷ this might be welcome news for school finance reformers. This finding offers indirect evidence of state educational spending's inelasticity, or ability to withstand drops in overall state spending. Specifically, data in Table 1 evidence that a state's relative contribution to educational spending increases while total state spending decreases. Thus, educational spending might absorb less of an economic hit during tough economic times than other recipients of state funds. Other factors, however, blunt this interpretation. One such factor is that a state's relative contribution to educational spending does not reveal much about overall educational spending. A state's contribution could remain constant (as a percentage) or even increase while total educational spending declines in absolute terms.

Perhaps more predictable are the estimates for the state educational spending variable, ($Y_{t,j}$). Similar to the estimates discussed thus far, none of the state education spending estimates achieves statistical significance. Although the coefficient in one

³³⁶ See *supra* p. 610 (setting forth Figure 4).

³³⁷ It is at least plausible to assume that a downturn in a state's economic health will express itself in terms of reduced total state spending.

state (Arkansas) is negative, the other two states report positive coefficients. Results for Connecticut and Wyoming, at least, suggest that a disproportionate amount of increased educational spending comes from state sources. Given states' increasingly prominent and active role in education reform generally, especially since the 1980s,³³⁸ that states' financial contribution to school funding also has increased is not surprising. Moreover, this finding comports with Figures 1 through 4.

The estimated parameters for the enrollment variable, ($E_{t,j}$), are important for two reasons. Among the independent background variables considered in this study, only results for enrollment present directional consistency. As Table 1 illustrates, centralized funding is inversely related to student enrollment in all states. In addition, for two states (Arkansas and Connecticut) the estimates are statistically significant. These findings suggest that state-level educational funding is less sensitive to school enrollment than locally generated funds. This result makes sense to the extent that local funding sources, by virtue of their proximity to the schools served, can more accurately calibrate current, rather than prior year, student enrollment. Practical administrative realities and the need to budget in advance perhaps mandate a state's use of prior year enrollment data for budgetary purposes. Such administrative realities, however, may loosen the fit between state funds and enrollment in the event that enrollment varies from year to year. Also, state educational funds might be directed toward less enrollment-sensitive activities.

While the overall results for the independent background variables offer mixed support for the model, results for the independent variable of interest, the intervention of a state supreme court decision, offer decidedly less support. As Table 1 illustrates, results for the independent variable of interest, (I), are surprisingly inconclusive. They vary in magnitude and direction. Coefficients are significant only for Wyoming and positive for Arkansas and Wyoming. The estimate for Connecticut, while

³³⁸ See, e.g., DIANE MASSELL ET AL., CONSORTIUM FOR POLICY RESEARCH IN EDUC., TEN YEARS OF STATE EDUCATION REFORM, 1983-1993: OVERVIEW WITH FOUR CASE STUDIES apps. A-D (1994) (providing examples of state education reform); Susan H. Fuhrman & Richard F. Elmore, *Understanding Local Control in the Wake of State Education Reform*, 12 EDUC. EVALUATION & POLY ANALYSIS 82 (1990) (acknowledging 1980s state education reform movement).

insignificant statistically, is negative. The implication is that the *Horton* decision³³⁹ correlates with a decline in the centralization of educational funding at the state level. The instability of the results for the judicial intervention variable provides little, if any, support for (or against) the hypothesis that successful equity lawsuits will lead to greater school funding centralization. Moreover, the results comport with earlier studies of California and Washington.³⁴⁰ But even these mixed findings might discourage school finance litigants who seek, in part, to increase a state's relative contribution to school spending. Potential discouragement aside, what might these findings imply?

The results presented in Table 1 cannot be interpreted to suggest that centralization levels are not increasing in the three states studied. As Figures 3 through 5³⁴¹ illustrate, centralization levels are increasing. Only in Wyoming, however, can greater centralization be attributed to the independent influence of a successful school finance court decision. Court decisions in Arkansas and Connecticut may have impacted other aspects of school finance reform, but neither appear to have resulted in increased centralization levels. Given the intentions of at least some school finance litigants,³⁴² these findings might surprise school finance reform advocates and litigants.

The mixed results presented in Table 1 might also support, albeit indirectly, Professor Dayton's observation that states' particular "legal, political, fiscal, and other important variations"³⁴³ make efforts to harmonize limited states' experiences into a coherent, national perspective problematic. Thus, variations in the observed independent influence of successful school finance litigation among states might say less about the efficacy of court decisions and more

³³⁹ *Horton v. Meskill*, 376 A.2d 359, 359 (Conn. 1977).

³⁴⁰ See, e.g., Fischel, *Did Serrano Cause?*, *supra* note 77, at 485-86 (concluding, based upon California study, that courts are dubious sources of fiscal reform); Picus, *supra* note 77, at 34 (asserting that successful lawsuit was one of three events that led to "dramatic shift in the control of California school finance away from local district and to the state"); Theobald & Hanna, *supra* note 77, at 22-25 (discussing centralizing effect of school finance reform in Washington).

³⁴¹ See *supra* pp. 610-611 (setting forth Figures 3-5).

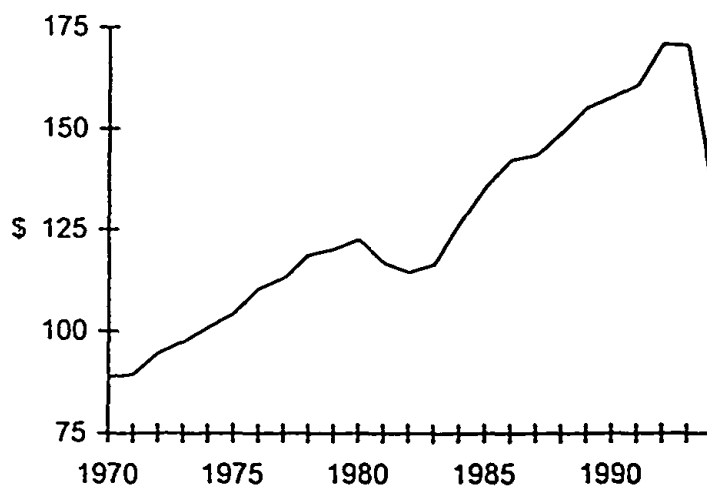
³⁴² See, e.g., *Horton*, *supra* note 73, at 717 (describing school finance lawyer's efforts at increased funding centralization through litigation).

³⁴³ Dayton, *supra* note 123, at 21.

about important underlying and non-observed differences between and among states.

2. *Total Educational Spending.* Figures 6 through 8 illustrate two main points. First, in all three states real total educational spending rose between 1970 and 1993. Although each state's experience varies, their trends comport with national educational spending trends.³⁴⁴ Second, educational spending either did not change appreciably during the presumed intervention year or, if abrupt changes occurred, they did so either well before or well after the state court school finance decision was issued in any of the three states included in this study.

FIGURE 6
ARK. TOTAL EDUC. SPENDING



³⁴⁴ See *supra* Part I.B.2. fig.2, at 566 (illustrating annual school spending).

FIGURE 7
CONN. TOTAL EDUC. SPENDING

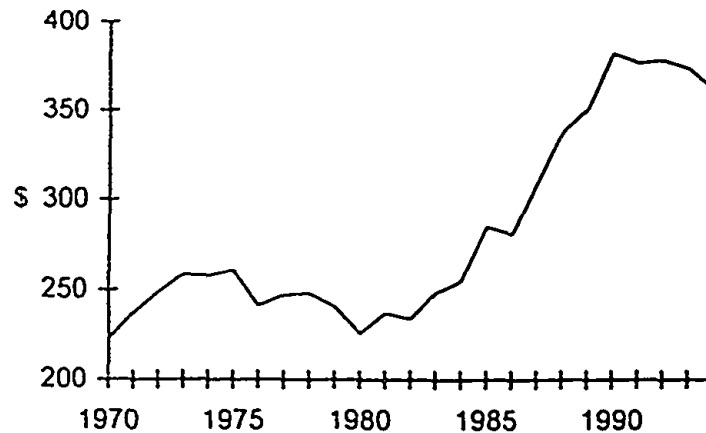
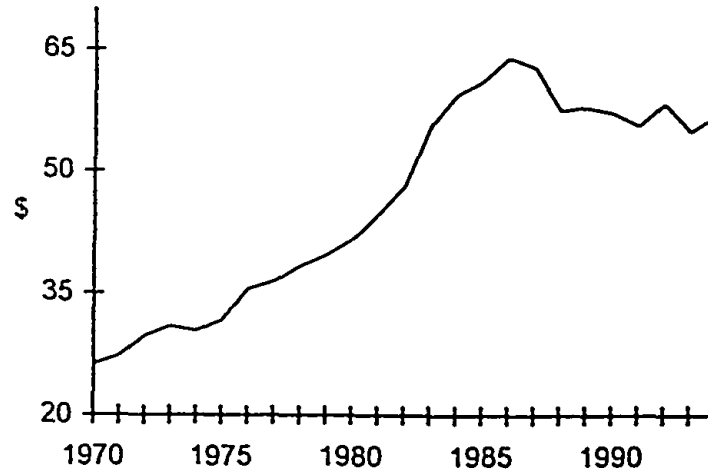


FIGURE 8
WYO. TOTAL EDUC. SPENDING



Like the treatment of centralization data, it is useful to consider general trend data on educational spending to see whether a visual inspection of raw data uncovers any relation between successful school finance lawsuits and total educational spending. Educational spending in Arkansas, (Figure 6), has risen since 1970 in a generally stable, consistent manner. A few exceptions emerge, however. One exception involves a slight dip in spending during the early to mid-1980s. A second exception to an overall pattern of

consistently increasing spending involves a rather dramatic drop beginning in the early 1990s. Both exceptions, however, occurred either prior to or appreciably after the *DuPree*³⁴⁵ decision is presumed to have taken effect.

Educational spending trends in Connecticut, (Figure 7), are considerably more ambiguous. After a dip beginning in 1975, it was not until a decade later that real educational spending in Connecticut regained its 1975 level. Between 1986 and 1990, spending increased dramatically, only to flatten (indeed, drop slightly) since 1990. However, total spending during the years just before and following the *Horton*³⁴⁶ decision is relatively stable. Moreover, no logical reason exists to presume a link between the discernible shifts in educational spending that occurred in 1975 and 1986 and a court decision that is presumed to have gone into effect in 1980.

Educational spending trends for Wyoming, (Figure 8), illustrate a smooth, sustained increase from 1970 through 1986. Since then, spending, although erratic, has been essentially flat. There is little to suggest that the *Herschler* decision³⁴⁷ ignited a trend in increased educational spending, a trend that began at least fifteen years earlier. Indeed, if a visual inspection of the Wyoming spending data and the *Herschler* decision³⁴⁸ suggests any relation at all, it is one that would link the decision and the flattening of educational spending.

The total educational spending model, (Equation 4),³⁴⁹ uses current public elementary and secondary school spending, (Y_t), as its dependent variable. Current spending is a common barometer and comprehensive measure of educational spending. Table 2 presents regression results from the three states considered in this study. The results offer general support for retaining the fully specified model, (Equation 4). Many of the estimated parameters are in the expected direction, and a few achieve statistical significance. Although a few of the results are surprising, these surprises appear to be distributed randomly among the three

³⁴⁵ *DuPree v. Alma Sch. Dist. No. 30*, 651 S.W.2d 90 (Ark. 1983).

³⁴⁶ *Horton v. Meskill*, 376 A.2d 359 (Conn. 1977).

³⁴⁷ *Washakie County Sch. Dist. No. One v. Herschler*, 606 P.2d 310 (Wyo. 1980).

³⁴⁸ *Id.*

³⁴⁹ See *supra* p. 603 (setting forth Equation 4).

states. Moreover, these results generally comport with results from a similar, preliminary study.³⁵⁰ Finally, the regression coefficients, (adjusted R^2), are robust.³⁵¹

³⁵⁰ See generally Heise, *supra* note 10 (finding little correlation between successful school finance equity lawsuits and total and per-pupil educational spending levels). However, it is crucial to note that the earlier, preliminary study used fewer states, data, and a slightly different (and less comprehensive) educational spending model.

³⁵¹ Similar to results presented in Table 1, *supra* p. 614, the robustness may also reflect, however, the relatively small ratio of independent variables to sample size. See LEWIS-BECK, *supra* note 289, at 53 (demonstrating that adding additional independent variables to model's multiple regression equation would increase R^2).

TABLE 2
 IMPACT OF STATE SUPREME COURT SCHOOL FINANCE
 DECISIONS ON EDUCATIONAL SPENDING[†]

	ARK	CONN	WYO
Court Decision (I)	.02 (.04)	-.08 (.05)	.05 (.07)
St. Educ. Spend (Y_{t-1})	.63 (.30)	.36 (.18)	.52 (.32)
Ttl. St. Spend (T_{t-1})	.20 (.15)	.38* (.15)	.17 (.34)
Enrollment (E_{t-1})	-1.40* (.60)	1.41** (.48)	.39 (.80)
% HS Grad (H_{t-1})	-.08 (.08)	.09 (.15)	.28 (.21)
Per Capita Income (A_{t-1})	-.05 (.21)	1.20** (.35)	-.00 (.16)
% in Public School (O_{t-1})	.88 (.51)	-2.45** (.65)	-1.71** (.58)
(constant)	22.77** (8.17)	-25.47* (9.30)	-.94 (9.25)
R ² (adj.)	.98	.97	.98
Std. Error	.03	.03	.04
F-Stat.	172.30	97.41	163.17

[†] Each equation is based on data from the years 1971 to 1993, with N=23 due to the use of lagged variables.

* $p < .05$; ** $p < .01$

The results presented in Table 2 are mixed; some confirm the underlying hypotheses, while others do not. The autoregressive model suggests that one predictor of a state's total educational spending is that state's prior year total educational spending.³⁵² Results for this variable offer soft support for the hypothesis. Consistent with the hypothesis, estimates for a state's prior year total educational spending, (Y_{t-1}) (a lagged version of the dependent variable, Y_t), are positive for all three states. Somewhat surprising, however, is the results' lack of intensity. That is, while all coefficients point in the hypothesized direction (positive), none reached statistical significance. As a result, random chance cannot be dismissed as explaining the relation between a state's current total and prior educational spending levels.

The share-of-the-pie model suggests a relation between a state's total, (T_{t-1}), and educational spending levels. The model pivots on the assumption that a state's spending on education remains a relatively fixed percentage of a state's total spending.³⁵³ Results in Table 2 support this assumption though, similar to the results for total educational spending, the results for total state spending are not particularly strong. The results' direction (positive) in all three states comports with the underlying expectation. This finding suggests that increases in state spending generally correlate with increases in a state's educational spending. In one state, Connecticut, the correlation achieves statistical significance. Thus, for Connecticut at least, the positive correlation cannot be explained by random chance.

The constituency model predicts a positive correlation between student enrollment, (E_{t-1}), and total educational spending. The results offer only partial support for this model's predictions. Estimates for enrollment are, as predicted, positive for two states (Connecticut and Wyoming). Moreover, the finding for Connecticut is statistically significant. However, the direction and strength of Arkansas's findings are unexpected. The Arkansas finding suggests that educational spending in that state increased as enrollment

³⁵² See *supra* p. 602 (including state's prior year total educational spending as variable in Equation 3).

³⁵³ *Id.*

declined. Although such a finding conflicts with what the constituency model predicts, it might illustrate the importance of sub-economies of scale in school administration. Although enrollment drives school aid formulas in many key aspects in all states, certain aspects relating to the delivery of educational services (e.g., labor costs) are less sensitive to student enrollment. Put slightly differently, the fit between the cost of labor and student enrollment might not be as snug as the fit between and among other educational costs.

Another assumption reflected in the total educational spending model is that an increasingly educated citizenry will demand increased educational spending.³⁵⁴ The proxy used in this study to reflect a state's educational level is the percentage of state residents holding a high school diploma, ($H_{t,j}$). Estimates for this variable point in the anticipated direction for two states (Connecticut and Wyoming). Arkansas's surprisingly negative coefficient is blunted somewhat by its lack of statistical significance. Of course, none of the coefficients for any state are significant for this variable. Accordingly, they offer little support for the hypothesis, as random chance cannot be ruled out as explaining the results.

Similar to a more educated citizenry, increased citizen's wealth, represented by personal per capita income, ($A_{t,j}$), is also presumed to increase total educational spending. Indeed, the significant result for Connecticut supports this presumption. But coefficients for both Arkansas and Wyoming are negative. Results for Wyoming and Arkansas, however, provide little, if any, support, particularly because the coefficient in neither state is significant.

The final demand variable presumed to increase a state's total educational spending endeavors to assess a state's preference for private schools. Specifically, $O_{t,j}$ reflects the percentage of a state's school-age population attending public schools. Presumably, increases in the percentage of school-age children attending public schools would increase demand for state educational spending. Interestingly (and somewhat surprisingly), the opposite relation is true for two states (Connecticut and Wyoming). What these results suggest is that increases in the percentage of eligible school-age children attending public schools correlate with decreases in total

³⁵⁴ *Id.*

educational spending. What these findings may mask, however, is slippage in or imprecision with the dependent variable. As described above, the dependent variable includes an array of items, ranging from costs of school books to those of student transportation.³⁵⁵ While the number of students attending public schools obviously affects total educational spending, it does so differently for different components of educational spending. That is, certain costs relating to the delivery of education (e.g., labor) are less sensitive to student enrollment than are other costs (e.g., student books). This variation in the range of costs included within the dependent variable might help explain some of the unexpected results.

Notwithstanding important limits to the dependent variable, (Y_i), the results for the background variables, presented in Table 2, provide general (albeit tepid) support for the fully specified total educational spending model, (Equation 4).³⁵⁶ More than seventy-two percent of the control variables' coefficients point in the hypothesized direction. Surprisingly few variables, however, achieve statistical significance. Thus, most results do not permit inferences that exclude random chance as an explanatory factor. Moreover, among the six significant coefficients, three point in an unanticipated direction.

Where the bulk of the control variables emerges as expected, results for the independent variable of interest, (I), do not. Perhaps most surprising is that results in none of the states achieve statistical significance. That is, these states' successful equity school finance lawsuits do not appear to have exerted independent influence on a state's total educational spending. More precisely, no lawsuit did so in a manner that can be safely assumed not to be an artifact of random chance. Perhaps even more dramatic is that for one state, Connecticut, the coefficient is negative. Again, because the result does not achieve significance, little can properly be inferred. But even these findings that prevent the rejection of the null hypothesis (that a successful equity lawsuit and total educational spending are *not* related) might discourage some school

³⁵⁵ See *supra* Part IV.A.4. (discussing items included and excluded from "state educational spending").

³⁵⁶ See *supra* p. 603 (setting forth Equation 4).

finance litigants. One crucial distinction, however, bears repeating. Namely, as Figures 6 through 8³⁵⁷ illustrate, total educational spending increased in all three states considered in this study, even after adjusting for inflation. What the results presented in Table 2 suggest, however, is that these increases cannot be properly attributed to the *independent* influence of the successful school finance equity court decisions. It remains beyond dispute that successful school finance lawsuits are important and that they influenced various aspects of school finance reform. But one important aspect, increased total educational spending, appears more resilient to court decisions anchored in school finance equity theory than many litigants perhaps thought.

3. *Implications and Caveats.* The study's results and their implications call into question two assumptions about courts' ability to influence certain aspects of school finance. At a minimum, the results suggest that school finance litigants cannot assume that successful school finance lawsuits brought under an equity theory will necessarily exert independent influence on two crucial outcome variables: centralization and total educational spending levels. Accordingly, the courts' inability to influence either centralization or spending levels warrants close scrutiny in any explanation of school finance litigation's dramatic theoretical shift from equity to adequacy. Simply put, results from this study do not preclude the possibility that inefficacy contributed to equity theory's demise in 1989.

Although Table 1³⁵⁸ illustrates that a rise in centralization levels in at least one state is attributable to the independent influence of a successful school finance lawsuit, any increase in state centralization in two other states cannot be properly attributed to the specific influence of the court decision. Again, raw centralization levels did rise in all three states during the years studied, as Figures 3 through 5³⁵⁹ illustrate. When Figures 3 through 5 are combined with Table 1, however, what emerges is a question about the court opinions' influence or role in that rise. The tentative nature of the results does not support the contrary, stronger proposition: namely, that the court decisions did not

³⁵⁷ See *supra* pp. 618-619 (setting forth Figures 6-8).

³⁵⁸ See *supra* p. 614 (setting forth Table 1).

³⁵⁹ See *supra* pp. 610-611 (setting forth Figures 3-5).

influence centralization levels. A more conservative and cautious conclusion is that the assumption that successful equity school finance lawsuits will necessarily increase centralization levels finds little empirical support.

A similar and perhaps even slightly stronger implication emerges from results on total educational spending. Similar to centralization levels, as Figures 6 through 8 illustrate, total real educational spending in all three states increased during the years studied. Yet, as Table 2 illustrates, these increases cannot be properly attributed to the independent influence of successful equity school finance court decisions in any of the states. Because none of the coefficients achieves statistical significance, random chance endures as a viable explanation for the relation between the court decisions and educational spending levels. As a result, these findings challenge the assumption that successful school finance court decisions employing the equity theory will necessarily lead to increased educational spending. Again, the results do *not* imply that court decisions in these states did not have any impact. Rather, the results support only the inference that one anticipated impact, increased educational spending, does not find empirical support.

Results for both centralization and educational spending independently call into question the assumption that successful school finance lawsuits influence centralization and educational spending levels, an assumption that underlies school finance litigation. As a result, judicial inefficacy remains a viable reason for equity theory's demise. At a minimum, and stated more precisely, judicial inefficacy, in the school finance context, is a reason that cannot be dismissed with this study's results.

Crucial limitations to this study, however, temper its implications. Successful litigation can result in a wide variety of other direct and indirect effects. Some of these effects are amenable to empirical study, while others are less so. This study's admittedly narrow focus on two particular direct effects, centralization and total educational spending levels, limits the implication of the findings.

Most importantly, this study's implications only extend to one type of school finance lawsuit, equity-based lawsuits. The nature and scope of school finance litigation and related court decisions

have evolved over time, most notably since 1989. Indeed, isolating equity from the more recent adequacy lawsuits is one of this study's strengths as it facilitates an assessment of equity litigation's efficacy. The more recent court decisions involving adequacy litigation, such as those in Kentucky,³⁶⁰ Massachusetts,³⁶¹ Wyoming,³⁶² and Alabama,³⁶³ have already proven more likely to influence educational spending. According to one commentator, for example, the *Rose* decision in Kentucky resulted in legislation responsible for generating more than one billion dollars of increased educational revenue.³⁶⁴ Why adequacy lawsuits might be more successful than equity lawsuits in increasing centralization and educational spending levels is an interesting question that warrants further study. That equity lawsuits might not have resulted in increased educational spending is yet another reason for their demise in 1989 and the more narrow focus of this study.

CONCLUSION

The pursuit of greater equal educational opportunity in this country endures, and school finance reform has emerged recently as a critical component to the related judicial project. Education's importance to individuals and society requires nothing less than an absolute commitment to ensuring greater access to equal educational opportunities. Although courts have always played a critical role in helping ensure greater equal educational opportunity, the courts' role and involvement increased dramatically after the *Brown* decision.³⁶⁵ In the decades following *Brown*, courts have been particularly focused on construing equal educational opportunity from the perspective of race. Indeed, while the courts' involvement with racial school desegregation efforts has evolved considerably

³⁶⁰ *Rose v. Council for Better Educ., Inc.*, 790 S.W.2d 186 (Ky. 1989).

³⁶¹ *McDuffy v. Secretary of Executive Office of Educ.*, 615 N.E.2d 516 (Mass. 1993).

³⁶² *Campbell County Sch. Dist. v. State*, 907 P.2d 1238 (Wyo. 1995); see also Heise, *supra* note 172, at 312 (indicating "it is clear that net education spending in Wyoming will rise" because of recent court decisions).

³⁶³ *Alabama Coalition for Equity, Inc. v. Hunt*, 624 So.2d 107 (Cir. Ct. for Montgomery County, Ala. 1993).

³⁶⁴ Alexander, *supra* note 92, at 343 n.12.

³⁶⁵ *Brown v. Board of Educ.*, 347 U.S. 483 (1954).

over the years and its intensity has lessened, race endures as an important part of the equal educational opportunity dialogue. Although not fully articulated until the 1970s, school finance, however, has emerged as perhaps the most vibrant component of the current equal educational opportunity dialogue. Moreover, its prominence will likely continue to increase before it begins to wane. As a result, school finance issues will become even more inextricably linked to broader, larger efforts to reform American education. Not surprisingly, and indeed perhaps even inevitably, the judiciary has played a central role in school finance reform's development since its emergence as a public policy issue.

School finance reform activities proceed on legislative fronts as well. State legislatures, sometimes in response to actual or potential litigation, have enacted an array of widely varied reform measures. In 1993, for example, Indiana lawmakers passed the Reward for Effort legislation that reformed the funding of Indiana's K-12 schools in exchange for the withdrawal of a school finance lawsuit.³⁶⁶ Indiana's legislative effort did little to alter the pivotal relation between a school district's per-pupil expenditure and taxable property wealth. Even more recent was Wyoming's legislative response to a state supreme court decision invalidating its school finance system.³⁶⁷ Wyoming's legislation includes a broad array of reform measures that reach well beyond its school finance formula.³⁶⁸ In stark contrast to legislative activity in Indiana or Wyoming, Michigan lawmakers recently eliminated local property taxes as the primary source of operating revenue for its public schools.³⁶⁹ Kentucky lawmakers' response to that state's supreme court decision in *Rose*³⁷⁰ included the development and

³⁶⁶ See generally IND. CODE ANN. § 21-3-1.7-9.7 (Michie 1996) (explaining how funding is allocated among schools).

³⁶⁷ H.B. 1001, 54th Leg., Spec. Sess. (Wyo. 1997) (amended and signed into law by Jim Geringer, Governor of Wyoming, on June 20, 1997). For a more complete discussion, see Heise, *supra* note 172, at 298-300.

³⁶⁸ Wyo. H.B. 1001.

³⁶⁹ See Addonizio et al., *supra* note 91 (discussing fall-out from Michigan's elimination of property tax as source of educational funding); Courant & Loeb, *supra* note 69, at 122-23 (exploring property taxes in Michigan and education funding); see also, MICH. CONST., art. IX, §§ 8, 10, 11 (providing that source of money for state school aid fund shall be derived from sales tax and sales and use tax).

³⁷⁰ *Rose v. Council for Better Educ., Inc.*, 790 S.W.2d 186 (Ky. 1989).

passage of the Kentucky Education Reform Act of 1990 ("KERA")³⁷¹ and illustrates yet another point on the multi-faceted school finance reform continuum. KERA reflects a total overhaul of Kentucky's public elementary and secondary school code.³⁷² School finance reform issues attract federal lawmakers' attention as well. In the recently enacted *Goals 2000: Educate America Act*,³⁷³ Congress established such research initiatives as the National Institute on Educational Governance, Finance, Policy-Making, and Management.³⁷⁴ In part, the legislation is designed to spur research efforts that explore such issues as "disparity in school financing."³⁷⁵

Concurrent with increased judicial and legislative attention, school finance reform is attracting growing scholarly attention. One subtle sign that bodes well for the future of school finance scholarship is that research questions are beginning to attract attention from a widening array of scholars drawn from a larger number of disciplines and fields, including law,³⁷⁶ economics,³⁷⁷ education,³⁷⁸ and political economy.³⁷⁹ Special symposium issues in law reviews and public policy journals are frequently devoted to school finance topics.³⁸⁰ Moreover, discrete subsets of school finance research questions have received considerable recent attention, particularly questions relating to judicial impact and school finance.

³⁷¹ Kentucky Education Reform Act of 1990, 1990 Ky. Acts 476 (codified at KY. REV. STAT. ANN. §§ 156.005-156.990 (Michie 1990)).

³⁷² *Rose*, 790 S.W.2d at 212-25.

³⁷³ *Goals 2000: Educate America Act*, Pub. L. No. 103-227, 108 Stat. 125 (1994) (codified as amended at 20 U.S.C. §§ 5801-6804 (1994)).

³⁷⁴ 20 U.S.C. § 6031(a)(3).

³⁷⁵ 20 U.S.C. § 6031(g)(2)(K).

³⁷⁶ *See, e.g.*, Heise, *supra* note 10.

³⁷⁷ *See, e.g.*, Evans et al., *supra* note 263; Fischel, *Did Serrano Cause?*, *supra* note 77, at 465 (discussing economic effects of law on education).

³⁷⁸ *See, e.g.*, Hickrod et al., *supra* note 62; Hickrod et al., *supra* note 320; Picus, *supra* note 77; Theobald & Hanna, *supra* note 77.

³⁷⁹ *See, e.g.*, Dennis Patrick Leyden, *Court-Mandated Changes in Educational Grant Structure*, 47 PUB. FIN. 229, 230 (1992) (analyzing "state legislature's response to court-mandated changes in educational grant structure").

³⁸⁰ *See, e.g.*, 24 CONN. L. REV. 674 (1992) (special symposium issue on equitable financing of public schools); 28 HARV. J. ON LEGIS. 293 (1991) (symposium on school finance reform in 1990s); 16 J. POL'Y ANALYSIS & MGMT. 1 (1997) (special issue focusing on 25th anniversary of *Serrano* decision); 28 U. MICH. J.L. REFORM 481 (1995) (symposium issue on school finance adequacy litigation).

American school districts continue to become more reliant upon state revenues for funding, and the school finance reform debate continues to focus on questions surrounding equitable and adequate funding levels. Both aspects, centralization and total educational funding levels, are frequent targets of school finance reform litigants. Expected results, that successful equity lawsuits will increase centralization and educational spending, receive at best, only tentative support from these data. As a result, judicial inefficacy warrants careful consideration as one reason helping to explain school finance litigation's dramatic theoretical shift in 1989 from equity to adequacy.

Less clear, and only hinted at, is the need for a more nuanced understanding of the precise policy consequences generated by school finance lawsuits, particularly, but not exclusively, successful ones. That school finance lawsuits pursuing one particular theory—equity—might be less efficacious than a competing theory—adequacy—arises as a particularly provocative research question. It is also a research question with implications that quickly spill into broader questions about the nature and interactions between law and policy more generally. Why some court decisions in certain areas achieve their desired outcomes and others do not warrants careful, empirical study in the future.