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1968-2021

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Incidence and Outcomes of School Finance Litigation: 1968-2021
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ABSTRACT

School finance court cases have proceeded one or more times in all but two states. Plaintiffs ask the courts to rule that the existing funding formula is unconstitutional under state constitutions, and the defendants call for continuation of the existing finance formula. By compiling and analyzing the universe of such cases, we can accurately describe the nature of the cases, the decisions made, and the long run impact on overall financing of schools. Defendants win a slight majority of decisions with, surprisingly, their victories coming most frequently in low spending states and in low achieving states. And, while plaintiff victories on average yield an immediate increase in funding, they have no influence on long run growth in school spending.

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Fifty years ago the U.S. Supreme Court closed the federal door on litigation over school finance issues, but this simultaneously opened the doors to state courts. Since then, the nature of state court cases has changed, the volume of cases has increased, and the spread of cases has expanded to virtually all states. This paper constructs a unique database on timing and results for the universe of state school finance cases from 1968-2021. This allows us to assess the finance conditions at the outset of each court action and to investigate the overall impact of these cases on subsequent spending patterns.

All of the school finance court cases relate to the level and distribution of funding across districts within states. The underlying plaintiff arguments are that inequity in funding or insufficiency of funding entail constitutionally unacceptable differences in educational opportunities. These differences in opportunities are posited to relate to differences in student achievement and other outcomes and require court intervention. And the remedy sought generally but not always involves a change in funding levels across the districts within a state. The defendants in these lawsuits are typically one or more state government officials in the executive or legislative branch, and they simply seek to maintain the existing system.

Because school finance litigation has traversed 48 states, missing only Utah and Hawaii, the history is scattered across the separate state court regimes, and no comprehensive database of cases has been available. Various aspects of specific legal exemplars have been extensively studied, and subsets of the decisions themselves have been inputs to a variety of other analyses. Here we locate the universe of cases and summarize the specific nature of each court case along with the decisions reached at each stage of the litigation. As part of this, we provide an annotated data base covering each of the cases since the original *Serrano* litigation.

A total of 205 distinct school finance lawsuits have been adjudicated and plaintiffs have prevailed in slightly less than half (48 percent). The underlying perspective in the suits is that low spending and the resultant low student achievement violate the state constitutions, but the court decisions are decidedly mixed on this proposition. Finance law suits are slightly more likely to be launched in states with spending per pupil below the national average, but defendants win 54 percent of the cases in low spending states. The decisions are more evenly split in states spending above the national average even though defendants are still slightly favored.

Similar patterns are observed when the court outcomes are arrayed by state achievement on NAEP tests. Defendants win 60 percent of cases that originate in states with below average achievement, but

plaintiffs win 54 percent of cases that originate in states with above average achievement. These achievement results nonetheless pertain just to a more recent set of decisions because of the lack of complete test data.

As one might expect, spending growth tends to be greater in the immediate aftermath of a decision for the plaintiffs, although even decisions calling for increased spending do not always lead to any legislative action. More interestingly, however, court decisions do not change the long run spending picture. The growth in state per pupil spending between 1970-2019 is unrelated both to whether states had a decision calling for an increase in spending and to the number of court cases in each state. Thus, while the litigation may be responsible for the general increase in the relative importance of state funding and may alter the between-district spending patterns in individual states, no overall impact of the court cases on spending is apparent.

The next sections provide background about the nature of the court cases and a description of the search and coding protocols employed in constructing the database. These are followed by a description of the pattern of cases and decisions since their origin. Finally, we consider how the prevalence of cases and their decisions relate the spending and achievement that motivate the law suits in the first place.

Background

The era of court involvement in school finance decisions can be traced to two influential books that provided the legal and analytical backdrop. Arthur Wise (1968) developed the legal argument that the U.S. Supreme Court should find the pattern of local variations in school funding to violate the equal protection clause of the Fourteenth Amendment to the U.S. Constitution. Heavy reliance on local property taxes was a significant contributor to wide variations in the ability of individual districts to raise funds, and Wise argued that the case for federal court involvement in education funding was like the case for desegregation or for voter rights.

The publication of *Private Wealth and Public Education* by John Coons, William Clune, and Stephen Sugarman came soon after in 1970 (Coons, Clune, and Sugarman (1970)). This massive volume produced the legal case against unequal funding based on local property taxes. Linking the variation in educational spending to wealth differences in the local property base, they argued for changing funding

to equalize the ability to fund schools either by changing the finance formula to one of “district power equalizing” or by moving to individual choice of schools.¹

These arguments for federal court involvement in school funding were, however, put to rest when the U.S. Supreme Court ruled in 1973 in *San Antonio v. Rodriguez*² that education funding was not a fundamental right under the U.S. Constitution. As such, the state funding in Texas that was at issue in the case should not be examined under principles of strict scrutiny but instead it was just necessary to show that there was a rational basis for the reliance on the local property. This 5-4 decision held that the Texas funding system, even if imperfect, did not violate the equal protection clause of the U.S. Constitution.

This federal ruling turned the focus to state courts, where state constitutions invariably had their own equal protection clauses.³ In fact, state cases, heavily subsidized by the Ford Foundation, had already begun to work through their courts.⁴ After the first California decision in *Serrano v. Priest* in 1971 (and the post-*Rodriguez* second *Serrano* decision in 1976),⁵ groups in additional states quickly entered into litigation. The history and results of these court cases are the focus of this article.

This analysis does not attempt to address directly questions of the impact of the courts on school finance policy or on school performance.⁶ Instead, it pursues the more modest goal of identifying and classifying the universe of state court decisions.

One recent outgrowth of the court cases is the use of the policy responses to court decisions as a tool for addressing the perennial issue of how funding affects student outcomes. This debate, sometimes labelled ‘Does money matter?’, has been rekindled by modern empirical studies that focus explicitly on

¹ District power equalizing is a form of variable matching grants that reflects both property wealth and local preferences for funding education through the choice of tax rates. This differs from the more common foundation system that does not take into account the tax rate choices of the district (Strayer and Haig (1923)). Coons and Sugarman (1978) went on to emphasize school choice by parents as their preferred way to deal with the inequities of the existing funding systems.

² *San Antonio Independent School District v. Rodriguez*, 411 U.S. 1 (1973)

³ Justice William J. Brennan, Jr, one of the dissenting judges in the *Rodriguez* case, suggested in a 1977 *Harvard Law Review* article that a focus on state courts might be a strategic way of securing an expanded set of individual rights because the U.S. Supreme Court was no longer being very expansive in those areas (Brennan (1977)).

⁴ Goodman (2022), Kelly (1980)

⁵ The first *Serrano* decision (5 Cal.3d 584 (1971)) found the state funding formula unconstitutional under both the Fourteenth Amendment and the California constitution. The second *Serrano* decision (18 Cal.3d 728 (1976)) found the violation of the California constitution on equal protection grounds was not affected by the *Rodriguez* decision and went on to set a standard that district spending per pupil could not diverge by more than \$100.

⁶ For a summary and evaluation of the various aspects of school finance policy, see Ladd and Goertz (2015).

identification of the causal impact of added resources. The range of these newer studies of spending impacts is reviewed and summarized in Jackson and Mackevicius (2021) and in Handel and Hanushek (2023), but an important subset has concentrated to understanding the impact of changed resources through analysis relying on court school finance decisions. Specifically, six of 16 estimates of spending on test scores and four of 18 estimates of spending on school attainment come from studies that build on court-induced spending changes (Handel and Hanushek (2023)). If the incidence and/or timing of court-induced spending is exogenous from other factors affecting achievement, analysis of this spending can provide evidence on what outcomes might be expected from more general increases in resources to schools. The methodology of this subset of research depends crucially on having accurate information about when and where court decisions occur – the subject of this paper. And generalizations from these studies will be affected by the overall state pattern of court-induced spending changes.

An interesting sidelight of the court activities was their role as a catalyst for the development of a professional organization related to school finance reform. As Carolyn Herrington (2013) states:

By far the most immediate impetus for forming a professional association in educational finance was two now landmark court decisions, both handed down in the early 1970s, that dramatically changed the range of considerations required for state financing and created a demand for analytical work and well-trained fiscal and legal analysts. Those decisions [*San Antonio Independent School District v. Rodriguez* (1973) and *Serrano v. Priest* (1971, 1976)] ushered in a still active stream of litigation, continuously applying pressure to states in educational finance and fueling a demand for finance studies and reports.

The American Education Finance Association (AEFA) was founded to meet these new demands and met for the first time in 1976. “Two areas that were consistently well covered in the first few decades and that were in many respects core to the association and its founding were a focus on state litigation and its impacts, and how states implemented court-ordered remedies.” (Carolyn Herrington (2013), p. 9)

Along with the development of AEFA came the *Journal of Education Finance* that, as indicated by its name, published research on education finance. In 2006, a second journal, *Education Finance and Policy*, was introduced with a mandate to provide more extensive coverage of broader education policy issues. In 2010, AEFA formally changed its name to the Association of Education Finance and Policy (AEFP) in order to reflect the expanded policy issues of its members.

School finance policy is obviously a broad area of research including analyses both in the specialized journals and in more general journals, and there is no way to summarize adequately the range of studies

borne out of the court cases. Reviews and analyses of the court cases and their results are found in increasingly sophisticated, and at times contentious, policy discussions.⁷

One final part of the background for this discussion is the changing environment of these court cases. Because all of the state finance court cases are focused on the funding among the districts within a given state, it is useful to note that even the number of separate school districts has changed over time. While there were 22,010 school districts at the beginning of the court period in 1968, there were only 13,349 districts in 2020.⁸

More importantly, school spending levels, the sources of school revenues, and the distribution of funds across districts have all changed significantly over time. These changes may partly be the result of the court cases that have changing funding as their objective and partly the result of independent legislative and executive decisions in the states. But, from the vantage point of litigation, the underlying funding conditions surrounding litigation will differ by when and under what circumstances new law suits enter the courts.

Figure 1 provides a macro overview for the nation of both the level of funding and its source – state, local, or federal. There are several significant changes found in the past funding patterns in Figure 1. First, the overall level of funding has dramatically increased over the period 1960-2019. Real spending per pupil has steadily increased, only falling briefly in the post-2008 recession period. Second, the driving force of these increases has been state and local revenues with federal revenues contributing less than 10 percent of total revenues over the period. Third, and likely related to the increase in school finance court cases, between 1960-2020 the share of state revenues grew from 39.1 percent in 1960 to 47.5 percent of total revenues while state revenues commensurately fell from 56.5 percent to 44.9 percent of the total over the same period.⁹ These changes are important because local revenues that are closely related to property tax bases and to local funding decisions tend to be regressive, while state revenues and federal revenues are progressive.¹⁰ Specifically, while still an important revenue source,

⁷ Some indication of the range of issues and disagreements can be found by comparing Rebell (2009) and Hanushek and Lindseth (2009).

⁸ District counts do not include charter schools that in some states are treated as separate districts but in any even complicate the funding picture. See U.S. Department of Education (2022) and various years: https://nces.ed.gov/programs/digest/2022menu_tables.asp.

⁹ U.S. Department of Education (2022), Table 235.10.

¹⁰ Summarizing the impacts of the different revenue streams on the distribution of funding within states has been the subject of much research, starting with the classic work of Berne and Stiefel (1984). The measurement of distributional patterns depends on the precise definitions and focus, but there are now readily available

reliance on the local property tax has fallen with the increase in state share of revenues and with state finance formula that offset variations in local tax capacity.

These aggregate figures, however, mask wide variation across states in both spending and its distribution. The court cases as noted are about within-state funding and not about funding across states. The states differ dramatically by the source of revenues for schools, as seen in Table 1. While varying over time, by 2019, the state share of spending ranges from 27 percent in Illinois to 91 percent in Vermont. The federal funding, which tends to be the most progressive, ranges from 4 to 15 percent of the total. Thus, the spending basis for a court case will depend clearly directly on the specific state.

The Nature of the Court Cases

The first round of school finance cases involves *equity* cases. These have been brought under the equal protection clauses – originally of the U.S. Constitution and more relevantly the individual state constitutions – and have a unifying theme of focusing on variations in educational spending across districts.¹¹ The standard is subject to varying interpretations in part because poor districts defined in terms of property tax base are not synonymous with poor children defined in terms of household income, and the relationship between the two varies by state. Additionally, because all states pursue to some extent district equalization of funding, a central issue in most state equity cases is whether the compensatory funding by the state is sufficient or not.¹²

Over time the litigation changed, leading to the second type of school finance cases labelled *adequacy* cases. These state cases frame the finance issue as whether the funding levels in districts are adequate to meet the constitutional obligations and derive their legal basis from the “education clause” that again is found in every state constitution.

summaries for all states. See Baker, Carlo, and Weber (2022) at: <https://www.schoolfinancedata.org/the-adequacy-and-fairness-of-state-school-finance-systems-2023/> and Chingos and Blagg (2017) with interactive data at: <https://apps.urban.org/features/school-funding-trends/>.

¹¹ The definition of variation in spending is not completely straightforward and is frequently an element of the court dispute. Specifically, if students differ in costs to educate, equity would call for providing them with greater revenues. Common adjustments are made for poverty status, English language learners, and special education among other factors.

¹² Because of the heavy reliance on the property tax for local funding, the size of the local tax base (which includes both residential property and commercial and industrial property) directly impacts the ability of individual districts to raise funds. With foundation funding that is used by the vast majority of states, the states fill in gaps between local ability to raise funds and the amount of base or foundation funding the state sets. The precise options and requirements of local districts differ across states. See the Education Commission of the States, <https://reports.ecs.org/comparisons/k-12-and-special-education-funding-2021> [Accessed 4/9/2023].

The adequacy era is generally dated as the late 1980s with decisions in *Rose v. Council for Better Education*¹³ (Kentucky), but there were clearly elements of this argument in many earlier cases. The ruling in the *Rose* case declared the state’s school system to be unconstitutional and provided a list of capacities that students should obtain in an adequate school system. These enumerated capacities remained vague and detached from any funding rules.¹⁴ While there often is not clean separation of equity and adequacy grounds in the court cases, the basic perspective of the adequacy cases is that, even if spending is equitably distributed across districts, the level may not be enough to achieve the constitutional goals.

The variation in the nature of the adequacy cases across states is more stark than with the equity cases because the underlying constitutional clauses are both vaguer, more varied, and often more aspirational than for the equal protection clauses. The variability in wording and requirements across state constitutions is best illustrated by a few examples: “complete and uniform system of public instruction” (Wyoming); “a thorough and uniform system of free public schools throughout the state” (Colorado); “a uniform, efficient, safe, secure and high-quality system of free public schools that allows students to obtain a high quality education” (Florida); “an efficient system of high-quality public educational institutions and services” (Illinois); and “a system of education which will develop the full educational potential of each person. Equality of educational opportunity is guaranteed to each person of the state ... a basic system of free quality public elementary and secondary schools” (Montana).

The constitutional language of these mandates for the creation of public schools has been the basis for school finance court cases in many states. But this variation highlights the need for the courts to interpret constitutional wording such as “complete,” “efficient,” high-quality,” “safe,” and “full educational potential of each person.” It also underscores why state court cases are specific to the state and why decisions in one place have little to no influence on decisions elsewhere.

Finding and Coding the Court Cases

The data base that underlies this analysis involves the coded summary of existing cases, beginning in 1968 and following actions through 2021. There are two key elements to the development of the

¹³ *Rose v. Council for Better Educ.* - 790 S.W.2d 186 (Ky. 1989)

¹⁴ For a description of the evolution of these cases and some of the constitutional language, see Minorini and Sugarman (1999). As an example of one of the seven identified capacities, the *Rose* decision called for “sufficient training or preparation for advanced training in either academic or vocational fields so as to enable each child to choose and pursue life work intelligently” (Minorini and Sugarman (1999), p. 195).

database. First, it is necessary to find the complete set of state cases. This is not an easy task because they proceed under the auspices of the fifty state court systems and there is no central register for these cases. Second, having located the judicial actions, it is necessary to record the salient elements of each court experience. While some aspects are straightforward – e.g., when did the case get filed in court and when did it reach a conclusion – other aspects are less clear and require some judgment – e.g., what was the overall type of lawsuit (equity or adequacy) and was the primary objective securing additional funding of schools. This section describes the search for cases and the coding of the key elements.

Search Methodology and the Definition of a Case

The development of the database of **School Finance Court Decisions (SFCD)** followed a multipronged approach in order to find the universe of relevant state court decisions. Our study began with the extensive information developed by the Center for Educational Equity at Teachers College, Columbia University, and made available through [SchoolFunding.Info](https://www.schoolfunding.info/).¹⁵ We used this database as the first step to identify key school funding court cases across the states. We supplemented these cases using the WestLaw Precision database of Thomson Reuters,¹⁶ Google search, and prominent and local newspapers. For search, we used key words such as “education finance [court] case [state name]”, “education finance trial [state name]”, “school financing [court] case [state name]”, “school financing trial [state name]”.

As we describe below, choosing relevant cases does involve some judgment. We exclude all cases that have no available documentation in the WestLaw database. We also exclude cases that do not mention money and finance in the complaint.

Coding the Cases

A prime activity is putting the universe of court cases into a searchable data base that records the main attributes of each case. The obvious basic data include the original filing date for the case and the relevant decisions by courts at different levels (lower, intermediate, high as variously labeled in each state). Two other factors, unique to the school finance cases and requiring some judgment as described below, were the type of case (equity, adequacy, or both) and whether the decision called for an increase or no change in funding.

¹⁵ <https://www.schoolfunding.info/>

¹⁶ <https://legal.thomsonreuters.com/en>

Thomas Reuters Westlaw was the primary research database for analyzing case file dates, court jurisdiction, and rulings. The “Synopsis” section under the “Document” tab served as the initial point of review to determine plaintiff, defendant, court jurisdiction (lower, intermediate, high), filing date, specific court rulings, constitutional relevance (equality, adequacy, both), and funding outcome (increase or no change). The “Opinion” section under the “Document” tab can validate the understanding of the “Synopsis” section and provide further clarity related to the case background, court discussions, and conclusion. When further clarity was needed beyond the “Synopsis” and “Opinion” sections, the “Dissent” and “Concurrence” sections under the “Document” tab were reviewed to understand the varied opinions of judges further.

The “History” tab, like the “Document” tab, was essential to the case analysis process. “History” provides a visual flowchart that depicts the progression of a case through the years with notations for cases being affirmed, reversed, and connected to cases with differing case names. Plaintiffs are often the parents of children who have aged-out of the K-12 system. These plaintiff parents are replaced with parents of children still enrolled in the relevant school. Similarly, defendants are often elected officials who have ended their tenure. Current elected officials are substituted for the prior officials.

The School Finance Court Decisions (SFCDD) database follows a case through the history tree by citing the most recent ruling at the lower, intermediate, and state high court. These courts are often referred to as the district, appellate and supreme courts. Cases can span many years with outcomes that advance a case to a higher court or remand the case back to a lower court. Cases that have some relation in content, but are presented on separate WestLaw history trees are reflected in the *SFCDD* database as separate cases.

Equity and Adequacy Cases

Our database classifies the type of a case as “Equity”, “Adequacy”, or “Both”. Cases are classified on the basis of the original complaint and not on the wording of the court’s decision. We use inclusive definitions of these terms to classify cases. If a case has a comparison to another school district or outcomes of another demographic group and references the state’s equal protection clause, the case is classified as “Equity.” If a case has arguments directly related to the quality of the educational system and references the state’s education clause, the case is classified as “Adequacy”. If elements of both classifications appear, the case is classified as “Both”.

Decision to Increase or Not Change Funding

A decision to increase or to not change funding is coded based on court rulings. Some courts will specify a particular amount of required funding to rectify an inequity. More often, courts require that the legislature, school board, or elected officials rectify a funding discrepancy tied to an identified inequity while not specifying an amount (since appropriation decisions are the responsibility of the legislature). In both scenarios, the case would be coded a decision to “increase funding.” No attempt was made, however, to assess whether the court directive was satisfied, although we do analyze below how the funding levels changed after a court decision. Further, the funding response to a case may lead to a subsequent court case which is followed as a new case. The court often retains the right to review whether the ruling is adequately carried out. This type of judgment also allows for plaintiffs to bring a case back to the court to ensure the initial ruling is carried out.

A court rarely rules to decrease funding but will occasionally vacate a prior ruling to increase funding. Courts often rule for “no change” in funding because a court finds that constitutional rights have been met by the existing system. In such a case, even if the legislature or executive chooses to increase funding, the case would still be coded as “no change” because the court did not mandate increasing funding. While the activity associated with the case may have raised the political will to increase school funding, it is only when a court specifically states a need to increase funding that “increase” is designated.

An Extended Example: *Abbott v. Burke*

Abbott v. Burke, a New Jersey court case with hearings spanning 1984 to 2011, illustrates the complexity of cases. Following Westlaw designations, *Abbott v. Burke* court filings were divided into three sets of rulings: *Abbott I* ran from 1984 to 1990; *Abbott II* ran from 1993 to 1994; and *Abbott III* ran from 1996 to 2000. As noted below, however, we code *Abbott III* as having three separate cases, and we add one case in the subsequent period (*Abbott 2002*). The criteria leading to defining a case as “new” rather than a continuation of existing case included a change in the complaint topic and the subsequent progression each of the court levels.

Abbott I: 1984 to 1990

In 1984, students brought action seeking judgment declaring that finance provisions of the state statutory system of elementary and secondary public school education violated the education clause of the New Jersey Constitution and the equal protection clauses of both the New Jersey and United States

Constitutions by producing gross disparities in financial resources for education. In a continuation of the case at the Supreme Court level in 1990, the Supreme Court held that the Public School Education Act was unconstitutional as applied to poorer urban school districts and had to be amended to assure funding of education in poorer districts at the level of property-rich districts. The Supreme Court further held that funding could not be allowed to depend on the ability of local school districts to raise tax revenues but had to be guaranteed and mandated by the state with a level of funding adequate to redress the extreme disadvantages of the poor urban districts. The SFCD database codes an original filing date in 1981, a lower court decision in 1983 favoring the defendant, a 1984 appellate court decision favoring the plaintiff, and a final higher court decision in 1990 favoring the plaintiff. Because of the emphasis on applying sufficient funding to redress previous inequities, we record this case as considering both equity and adequacy.

[Abbott II: 1993 to 1994](#)

In 1993, plaintiffs filed a new case in the lower court alleging that the funding adjustments required from the 1990 *Abbott v. Burke* Supreme Court decision had not been enacted to address the needs of at-risk schools sufficiently. In 1994, the Supreme Court held that New Jersey's Quality Education Act failed to assure substantial equivalence in expenditures per pupil between special needs school districts and richer districts as required by Constitution. In December 1996, the Legislature enacted its second funding law – the Comprehensive Education Improvement and Financing Act – in response to the Court's 1994 decision. This case was coded as a second and new *Abbott v. Burke* case as it began in the lower court, alleged new issues, and resulted in a new Supreme Court decision. Notably, *Abbott II* also defined the set of school districts (the "Abbott districts") that would be affected by these rulings.

[Abbott III: 1996 to 2000](#)

In 1996, another motion was filed alleging that the Comprehensive Educational Improvement and Financing Act, enacted by state legislature in response to previous orders of the state Supreme Court (1994), failed to remedy constitutional deprivations. This case resulted in several Supreme Court decisions, each of which is coded according to our methodology as a separate case. These cases are coded as *Abbott v. Burke (III)* 1997, *Abbott v. Burke (III)*, 1998, and *Abbott v. Burke (III)*, 2000. The 1997 case raised new issues related to the legislature's failure to remedy constitutional requirements. The Supreme Court justices ordered a parity in foundation funding for the 1997-98 school year, resulting in an immediate state aid increase of \$246 million. In 1998, the Supreme Court found the state's plan facially constitutional but unconstitutional as applied to "the Abbott Districts" and recommended

whole-school reform, full-day kindergarten for five-year-olds, full-day pre-kindergarten, summer school, school-based health and social services, an accountability system, and added security. In 2000, when asked to redefine the districts once again, the Supreme Court looked to the Legislature to add or remove a school from the Abbott district and required funding for necessary facilities remediation and construction in the Abbott districts.

Abbott v Burke: 2002 to 2011

Several Abbott v. Burke filings occurred from 2002 to 2011. Abbott v. Burke (2002) ruled that the Department of Education (DOE) must finalize preschool curriculum strategies before the start of each school year. If preschool enrollments fall short of goals, the DOE must create corrective action plans. The DOE must supplement resources and facilities to meet state standards and maintain staff at Head Start and community providers. Budget requests and DOE's responses should be clear and not based on arbitrary amounts. While we largely exclude cases that are not centrally related to funding issues, Abbott v. Burke, 2002 presents a borderline case which we include as a case in the database because of the requirement to supplement several programs and staff budgets to meet state standards.

All other cases from 2002 to 2011 were not included in the SFCD database because the filings were not funding related and were focused on administrative issues. Administrative issues related to topics such as implementation dates, curriculum requirement for preschool, preschool teacher certification requirements, criteria for identifying underperforming schools, or clarification of federal vs state funding source from prior orders.

Interpreting and Coding Abbott v. Burke

The Abbott v. Burke 1990, 1994, and 2000 cases are each coded as an increase in funding. In each, the Supreme Court found the existing funding formula to be insufficient to meet the constitutional requirements, and the Legislature subsequently responded.

The Abbott v. Burke 1990, 1994, and 2000 cases raised both adequacy and equity claims and was coded for "both." Students brought action declaring that finance provisions of state statutory system of elementary and secondary public school education violated the education clause of the New Jersey Constitution and the equal protection clauses of the New Jersey and United States Constitutions in that the entire state system of financing public education produced gross disparities in financial resources for education. Coding is based on what is alleged in the claim by the plaintiff, rather than the court's

interpretation and ruling on the equity and adequacy claims. Note also that *Abbott I* preceded the *Rose* decision in the realm of school finance adequacy.

The Pattern of Cases and Decisions

There has been a total of 205 court cases since 1968. As Figure 2 shows, while initially developing relatively slowly, they proliferated in the 1990s and beyond. While the number of cases involved fewer than 20 states in the decades of the 1970s and 1980s, that grew to over 50 state cases in each of the first two decades of the Twenty-first Century. The types of cases also changed over time. The original cases were dominated by pure equity cases, but this evolved with the introduction of adequacy cases. While adequacy cases are frequently linked to the 1989 Kentucky decision in the *Rose* case, we find that the ideas of adequacy came earlier and were much more ubiquitous. Many of the early complaints as typified by the *Abbott* complaints went beyond simple variations in spending across districts but also emphasized the level of spending.

Cases do not have any clear regional basis as seen in Figure 3 that portrays the cumulative number of cases in each state. The most litigious states have been California, New Jersey,¹⁷ Kansas, and New York – each with ten or more cases. But the distribution and density of these cases does not follow any simple geographic pattern.

Court cases take varying amounts of time to conclude. On average a case takes 3.5 years from the filing date to its conclusions (Figure 4). The average, however, masks wide variation with half of the cases resolved within 2.8 years but other cases lasting more than a decade and a half (e.g., *Tennessee Small School Systems v. McWherter* at nearly 15 years, *Durant v. State of Michigan*, 1997 at 17 years, and *Zuni School District v. Dept of Educ.* at 18 years).

Figure 5 shows the time pattern of court decisions along with whether the decision favored the plaintiffs or the defendants.¹⁸ (Cases are arrayed here according the date of their latest decision). Decisions across time show a relatively even split overall of decisions between plaintiffs and defendants, but the defendants have consistently had the larger share of decisions in each decade except at the start of this century when adequacy arguments were most significantly highlighted. This imbalance for the

¹⁷ We previously discussed the six cases extracted from the *Abbott v. Burke* litigation, the most impactful set of decisions. But New Jersey has had an additional five school finance cases.

¹⁸ Note that we plot the total of 187 cases with decisions for plaintiffs or defendants and exclude 18 cases. We exclude 11 cases because their decision date occurs in 2020 or later and 7 cases that were not decided for the plaintiff or defendant.

defendants is most dramatic in the last decade with 33 decisions out of 54 favoring the defendants, i.e., favoring the retention of the existing school finance system in the relevant states. There is, however, the possibility of an end to this pattern as six of the 11 decisions in 2020 or later are for the plaintiffs.

There is another interesting pattern in the decisions across states by the level of the court decision. At the lowest level (generally labeled the district level), courts are noticeably more likely to rule in favor of the plaintiffs (Figure 6).¹⁹ After the district court decisions, not all cases were appealed to a higher level. When appealed, cases frequently went directly to the supreme court, leaving just about one-quarter of the cases going through the intermediate court level. At the intermediate or appellate level, the defendants were twice as likely as plaintiffs to win. At the highest court level, 90 of the 159 cases were decided for the defendants.

When we combine rulings by type of case in Figure 7, we see that both pure equity cases (59 percent) and pure adequacy cases (63 percent) are likely to be ruled in favor of the defendants. Plaintiffs, however, prevail in 63 percent of the cases that combine equity and adequacy arguments.

Litigation and Expenditures

School finance litigation is inherently about spending. As noted, the cases are framed differently in terms of equity or adequacy and in terms of the state constitution and state educational circumstances. Here we provide overall conclusions about spending patterns that cross the individual states.

We have coded each of the case decisions by whether the court calls for an increase in spending by the state. Figure 8 displays calls for increases in funding by decade, again showing a slowing in court pressure for added spending in the most recent decade.

We start with the simplest question of whether court cases are initiated in states with the greatest needs as defined by spending levels. We array each of the state cases by whether the state is above or below average spending for the nation at the time of the case filing. Table 2 provides a summary of cases viewed from the circumstance at filing. It also breaks down cases into the type of case (equity, adequacy, or both) and then by whether the highest court decision was for the plaintiffs or defendants.

¹⁹ Of the 204 cases decided at the district level, the balance of court decisions was 94 to 89 in favor of defendants. There were 21 cases that did not reach a decision because the parties settled or there was an agreement not to pursue the case further, at times because of intervening legislative actions. The *Abbott v. Burke* (2002) case did not go to the district court.

The incidence of school finance law suits is slightly higher in low-spending (below average) states, but the differences are not huge. Somewhat surprisingly given the focus on spending inequities, a slightly lower proportion of overall cases in below-average spending states are subsequently decided for the plaintiffs (46 percent) compared to those in above average spending states (49 percent). Pure equity cases, however, are less likely to succeed in the high spending states.

The detail by state of decisions for increased funding is seen in the map in Figure 9. As compared to the distribution of total cases across all but two states, there are now 14 states where there has been no decision favoring increased spending.

Looking at the circumstances leading up to state cases does not provide direct information on how expenditures evolve after court decisions are made. Court decisions favoring the plaintiffs generally call for increased spending, and decisions favoring the defendants find the existing financing at the time of decision to be constitutionally acceptable. But the decisions by themselves do not map easily into spending changes, because spending requires legislative appropriations. The timing, magnitude, and even the existence of a legislative responses vary. Sometimes there are standoffs where the legislature takes no action to a court mandate. Sometimes they delay with lengthy phase-ins of changes – perhaps long enough as to incite the plaintiffs to return to court seeking enforcement of a court decision. And, sometimes the legislature acts before a court decision because it believes change is indeed appropriate or because it wants to preclude a more extensive court mandate.

We begin with by linking spending changes to individual court decisions. We place the decisions in an event study format and look at how spending five years before a decision compares to spending five years after the decision. By averaging spending per pupil (in real terms) over these five year periods, we do not have to specify any uniform time path of response across states but can include plausible legislative responses to court decisions.²⁰

There are very different spending growth patterns both across states and by plaintiff v. defendant decisions. The pattern in each state is shown in Appendix Table A2 along with the number of cases decided each way in each state.²¹ On average, the five-year spending growth for plaintiff decisions is

²⁰ This analysis of spending at the state level does not, of course, consider either the movement to a greater role of the state (which has more progressive spending patterns) or the details of the within-state patterns of school spending.

²¹ Because we lack spending patterns five years after decisions for cases decided after 2014, we provide the results for just 156 total cases in Appendix Table A2.

10.9 percent versus 8.7 percent in cases decided for the defendants. But, interestingly, in the 25 states that have had multiple decisions split between those going for plaintiffs and defendants, the immediate spending increases in 12 states were greater for those upholding the current system, i.e., those with a finding for the defendant. Of course, there is no causal claim here, because court decisions for the defendants can come because the legislature acted to increase spending before the case concluded.

The immediate response of spending – a decision of legislatures – to court decisions does not, however, provide the full story of impact on school finance. With multiple cases in some states and with legislative decisions made outside of that mandated by court decisions, it is useful to understand how state spending over the longer run is related to court decisions. Real spending per pupil for the U.S. in 2019 was 2.6 times spending in 1970. The question is whether this growth systematically differed by each state's litigation circumstances.

Simple accounting regressions indicate no differences in spending growth by the number and outcome of court cases in each state. The results in Table 3 show no significant difference in growth across states with more or less court pressure measured by the number of court decisions calling for increased spending (col. 1). It is, however, sometimes argued that just having a case spurs the legislature into action to raise school spending. Col. 2 adds a measure of the total number of cases in each state, but neither having court decisions to increase spending nor the total number of cases is significantly related to spending growth. Col. 3 ignores the number of plaintiff decisions and considers just the binary measure of whether or not there was ever a decision to call for increased spending (as was seen in 35 states), but again this is not related systematically to spending growth.

In summary, somewhat surprisingly there is no indication at the aggregate level of a significant influence of school finance litigation on state spending patterns. After fifty years, the pattern and extent of court decisions are not related to school spending.

Litigation and Achievement

The complaints in school finance litigation, particularly in the adequacy cases, frequently introduce data about student performance to make the case that the funding is not meeting constitutionally-required

levels. Table 4 provides data about the achievement levels in states at the time of case filing and the subsequent decisions in the cases.²²

Fewer total cases have been brought in states that were below average achievement for the nation at the time of the suit. Note, however, that we are missing a significant number of the total cases because of missing prior achievement data, so this conclusion holds just for the recent period when state testing from NAEP is available.

Perhaps surprisingly, plaintiffs have been much more successful in states that are performing above the national average achievement when the case is filed. Cases involving adequacy claims are much likely to succeed in states with above average achievement (58 percent) than in states with below average achievement (38 percent). This systematic pattern of court decisions does suggest that court outcomes are related to more deeply held political and educational views within the states. In particular, the pattern of decisions distinctly goes against the underlying argument of the cases that calls for remedying the poor achievement levels that lead to inequitable opportunities.

Identifying the causal influence of court cases and decisions on student performance is of course a very difficult task because of the multiple factors that enter into student outcomes. Thus, we make no attempt at portraying the achievement patterns that follow court decisions. The fact that the plaintiff decisions systematically differ by achievement levels in the states does have potential implications for use of court cases to identify subsequent student outcomes (Jackson and Mackevicius (2021), Handel and Hanushek (2023)). The estimated spending impact parameters in these empirical analyses are local average treatment effects, but the fact that they are conditioned by the observed court and legislative decisions found across varying educational environments raises questions about how to generalize from the specific circumstances.

²² Achievement data refer to eighth grade math scores on the National Assessment of Educational Progress (NAEP). Using NAEP achievement yields a restricted number of states because state-level testing just begins in 1990 and only 41 states participated in NAEP before 2002. We consider a starting point of 1992, when accommodations in testing were introduced. Further because NAEP testing happens at two or four year intervals over this period, we interpolate scores for missing years and report the average for the five-year period before filing. This procedure thus standardizes the score comparisons across years for the court cases.

Conclusions

Court involvement in school finance decisions has been intense and continuous over the past half century. Through compilation of the universe of over two hundred state school finance decisions, we can provide new insights into the overall incidence and impact of courts on school funding.

The judicial branch has been asked to assess the level and pattern of school spending in 205 separate court cases adjudicated across 48 of the 50 states. These court cases are based on different legal theories. Equity cases consider variations in spending across districts and have their basis in the equal protection clauses of state constitutions. Adequacy cases make the case that the level of funding is insufficient to meet the constitutionally-required levels consistent with the education clause of state constitutions. The heart of all cases, however, is funding for local districts and specifically the role of the state in determining and providing this funding.

Cases are lengthy, averaging some 3.5 years from start to finish, and the rulings have slightly favored the defendants who have supported maintaining the existing finance system. There is no distinct geographical pattern to where these court cases have been found. The prevalence of cases is almost evenly split between below-average and above-average spending states, but the success of defendants in maintaining the existing finance structures is relatively greater in low-spending states. Perhaps surprisingly, decisions in cases focused on adequacy tend to be more successful in states that are already achieving at above average levels.

Interestingly, while the court cases are focused on school spending, there is no overall relationship between spending growth and either decisions that favor the plaintiffs or the number of cases in any state. States with mandates from the courts to increase spending average somewhat larger immediate growth (within five years of the decision) than states where there is no such court mandate, but these short run changes do not lead to differences in long term growth of spending.

The involvement of the courts in school finance policy appears, if anything, to have increased in the last two decades, even though the latest decisions have tilted toward favoring the defendants. The overall impact of court involvement over the last half century may have come in ways not easily analyzed here: the within-state patterns of funding may have been altered by the increased share of funding from the states that uniformly shows progressive patterns of funding. Nonetheless, for all of the energy and activity of the courts, the overall impact on spending for schools of fifty years of litigation is surprisingly modest.

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Table 1. Distribution of funding source makeup with representative states, 2019 (percent)

| Funding Source | Mean | Minimum | Maximum |
|----------------|------|---------------------|-----------------------------|
| Local | 42.3 | 2.1 (Hawaii) | 91.97 (Washington, D.C.) |
| State | 50.1 | 26.6 (Illinois) | 90.3 (Vermont) |
| Federal | 8.6 | 4.1 (New Jersey) | 15.4 (Alaska) |

Source: Handel and Hanushek (2023)

Table 2. Expenditure Levels before Filing and Results of Litigation by Type of Case

| Type of Case | Achievement below National Average | | Achievement above National Average | | Total |
|--------------|------------------------------------|---------------------|------------------------------------|---------------------|-------|
| | Plaintiff victories | Defendant victories | Plaintiff victories | Defendant victories | |
| Equity | 4 | 5 | 2 | 5 | 16 |
| Adequacy | 5 | 9 | 6 | 10 | 30 |
| Both | 12 | 19 | 24 | 12 | 67 |
| Total | 21 | 33 | 32 | 27 | 113 |

Notes: 7 cases are excluded because they are neither decided for the Plaintiff nor the Defendant. We exclude 6 cases where we were not able to identify the original file date. 7 additional cases are excluded because of incomplete expenditure data in those states and in the relevant year.

Table 3. Accounting Regressions for State Expenditure Growth: 1970-2019

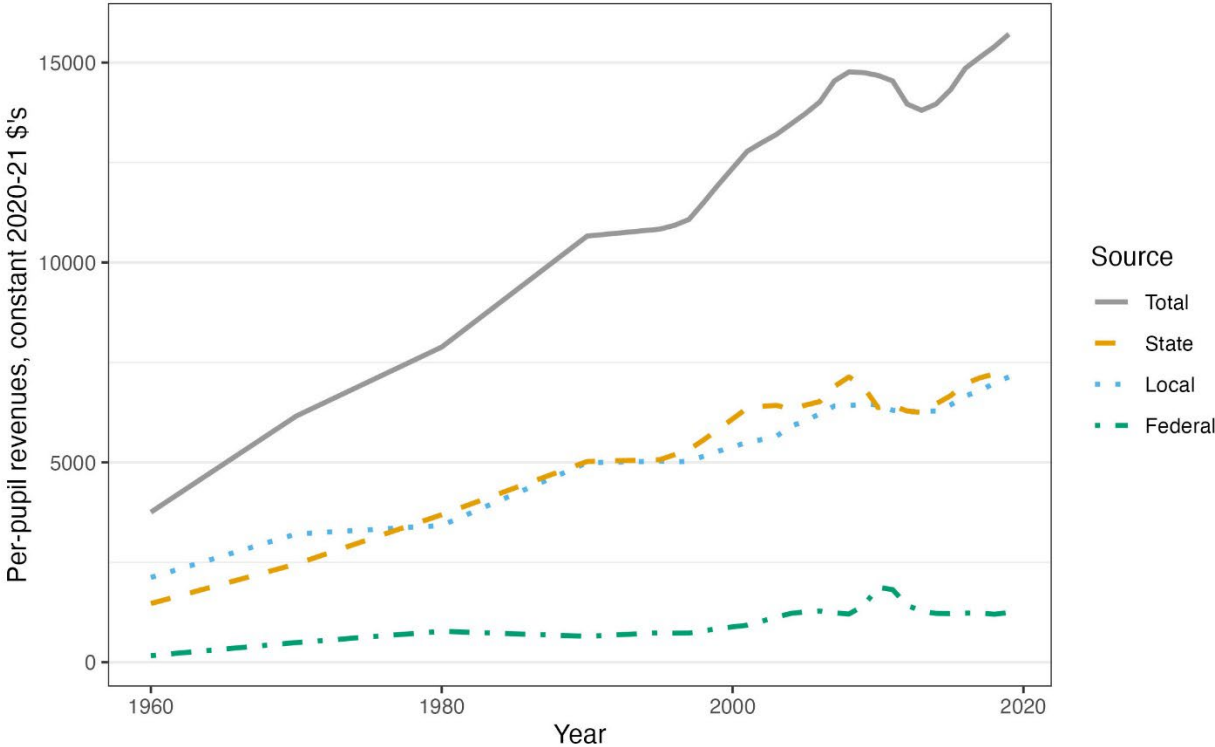
| | 1 | 2 | 3 | 4 |
|------------------------|------------------|-------------------|------------------|-------------------|
| No. increase decisions | 0.008 (0.033) | 0.047 (0.056) | | |
| No. total decisions | | -0.037 (0.043) | | -0.014 (0.028) |
| Any increase decision | | | 0.059 (0.155) | 0.094 (0.171) |
| Intercept | 2.754 (0.092) | 2.834 (0.132) | 2.727 (0.129) | 2.759 (0.146) |
| R-squared | 0.00 | 0.02 | 0.00 | 0.01 |

Table 4. Achievement Levels before Case Filing and Results of Litigation by Type of Case, 1997-2022

| Type of Case | Achievement below National Average | | Achievement above National Average | | Total |
|--------------|------------------------------------|---------------------|------------------------------------|---------------------|-------|
| | Plaintiff victories | Defendant victories | Plaintiff victories | Defendant victories | |
| Equity | 4 | 5 | 2 | 5 | 16 |
| Adequacy | 5 | 9 | 6 | 10 | 30 |
| Both | 12 | 19 | 24 | 12 | 67 |
| Total | 21 | 33 | 32 | 27 | 113 |

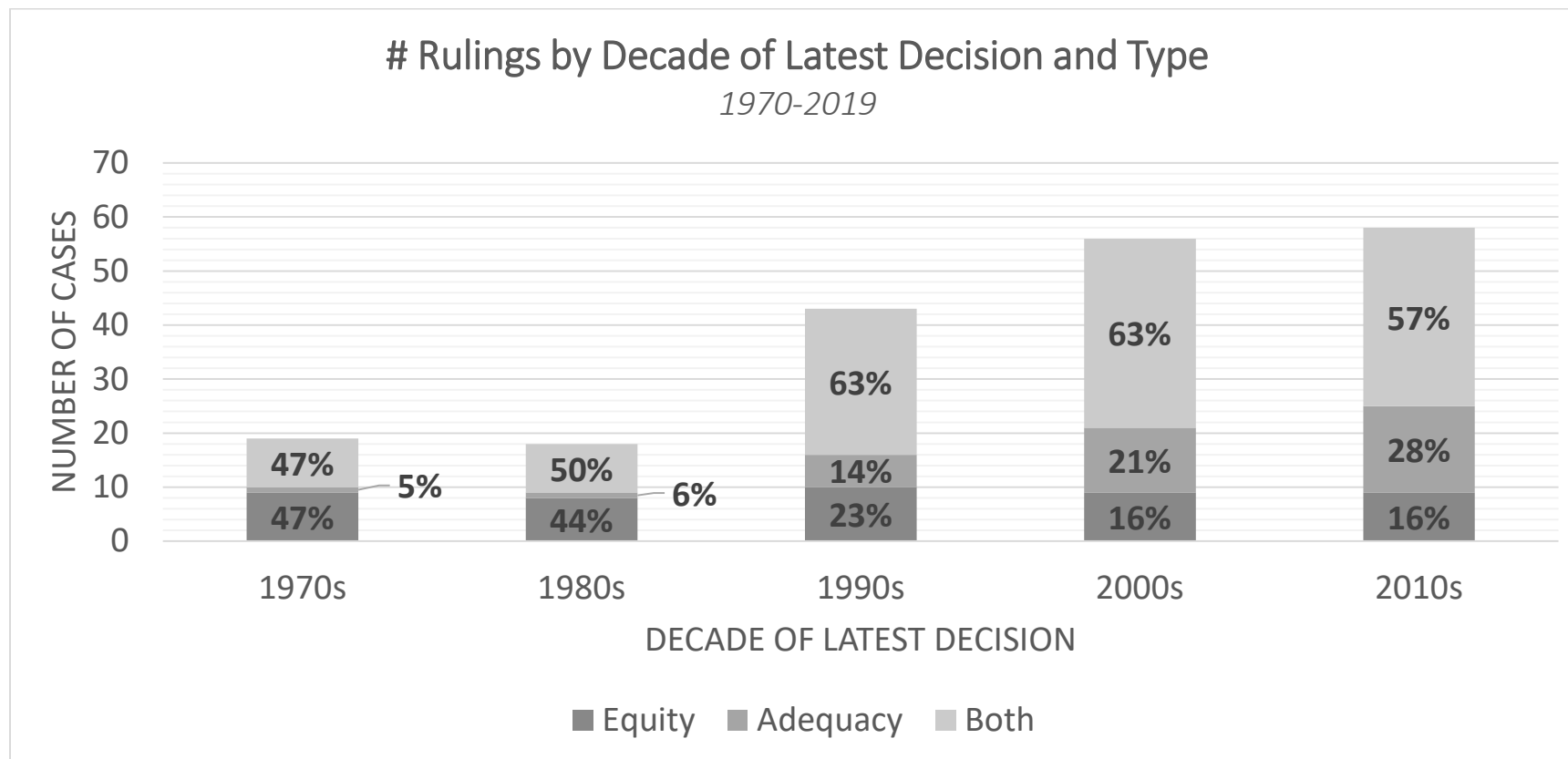
Note: Achievement is measured by the 8th grade math scores on the National Assessment of Educational Progress (NAEP). This assessment begins in 1992 and has incomplete coverage of states prior to 2002.

Figure 1. Revenue per Pupil by Source and Total, 1960-2019 (real 2020-21 \$'s)



Source: Handel and Hanushek (2023)

Figure 2. Court Cases by Decade of Filing and by Type, 1970-2019



Notes: We exclude 11 cases whose latest decision occurred in 2020 or after. Of the 11 decisions in 2020, 9% are Equity, 36% are Adequacy, and 55% are both.

Figure 3. Number of Court Cases by State, 1968-2020

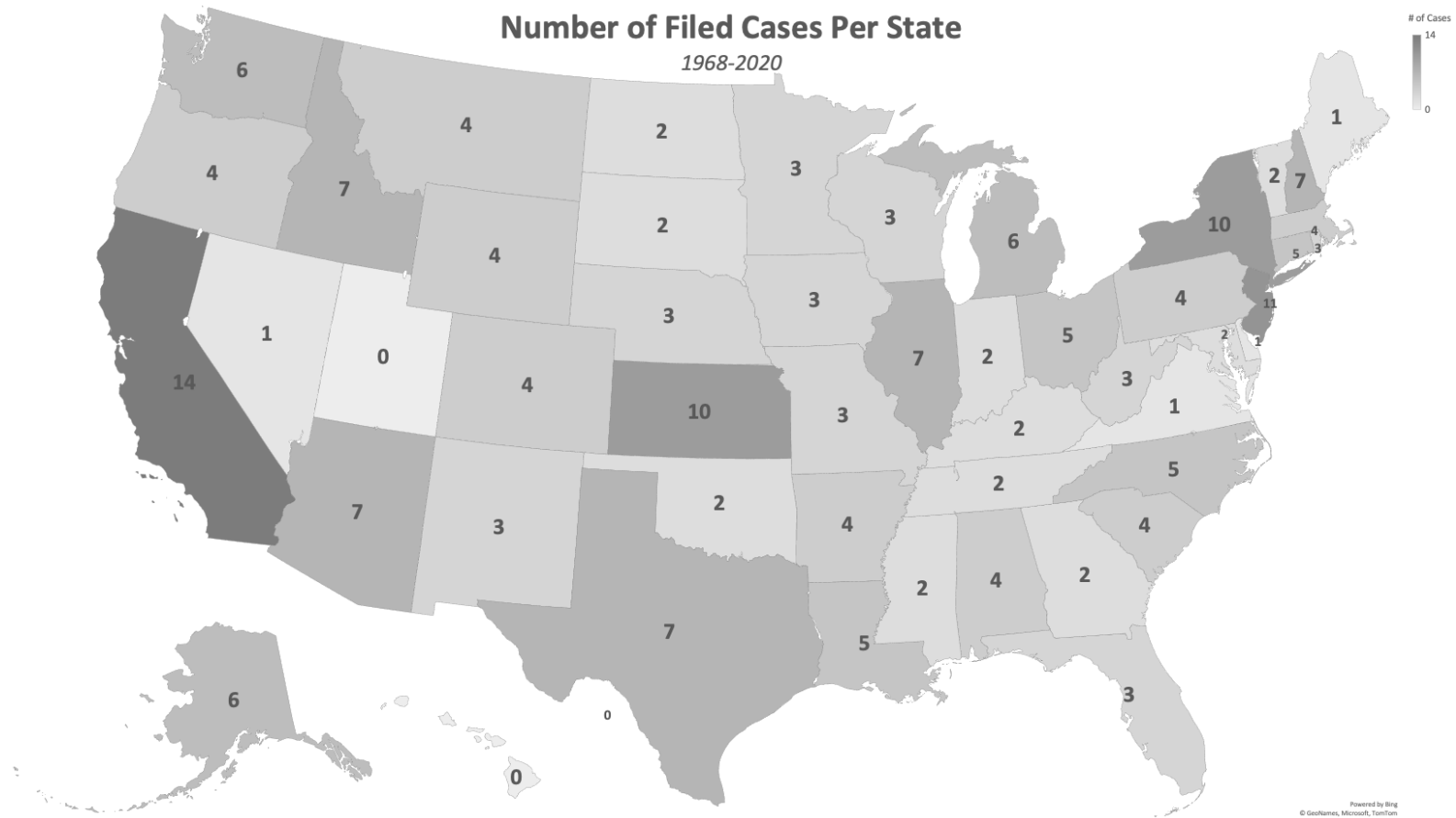


Figure 4. Length of time to verdict for cases from 1968 to 2020 with an overall mean of 3.49 years and median of 2.81 years.

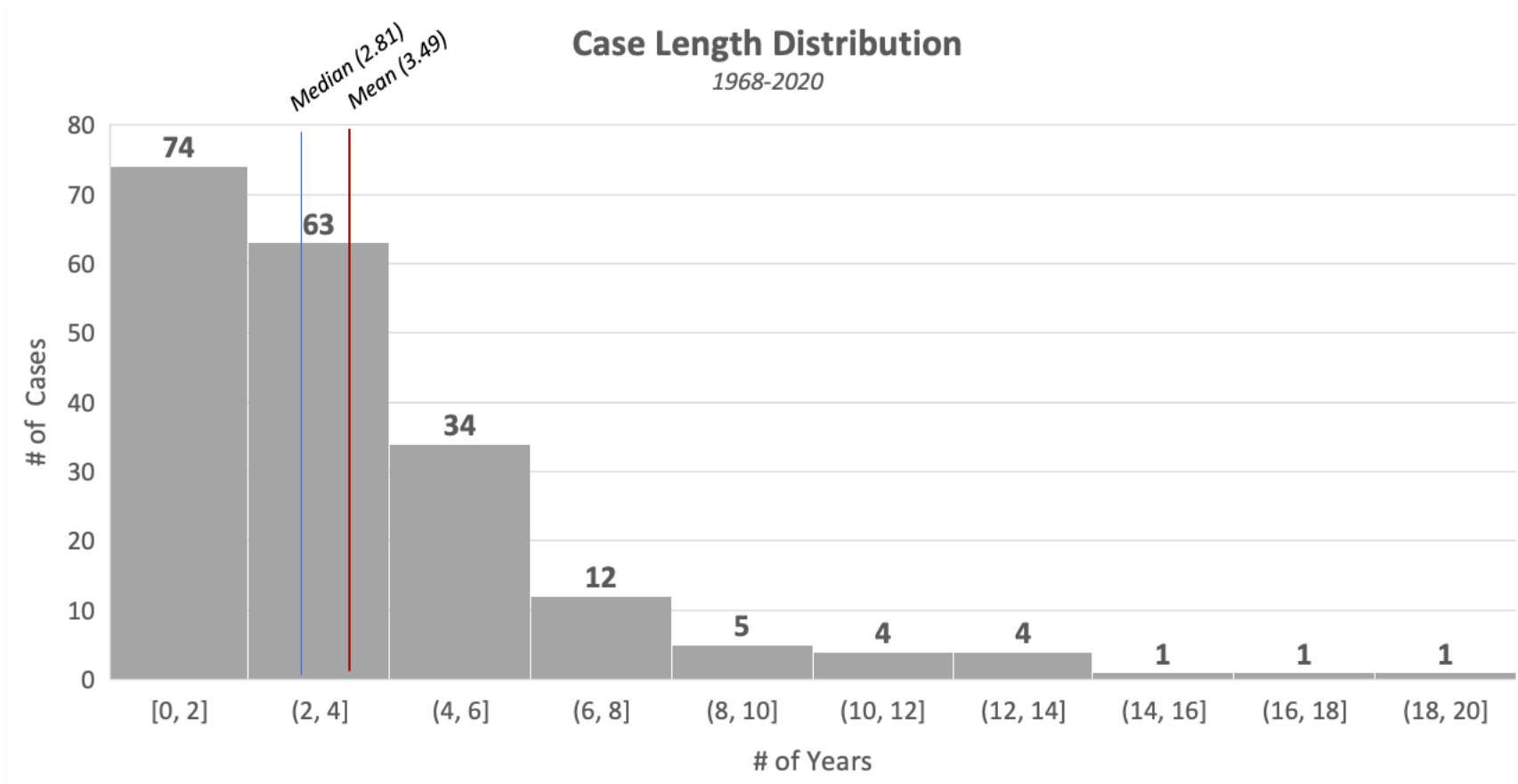
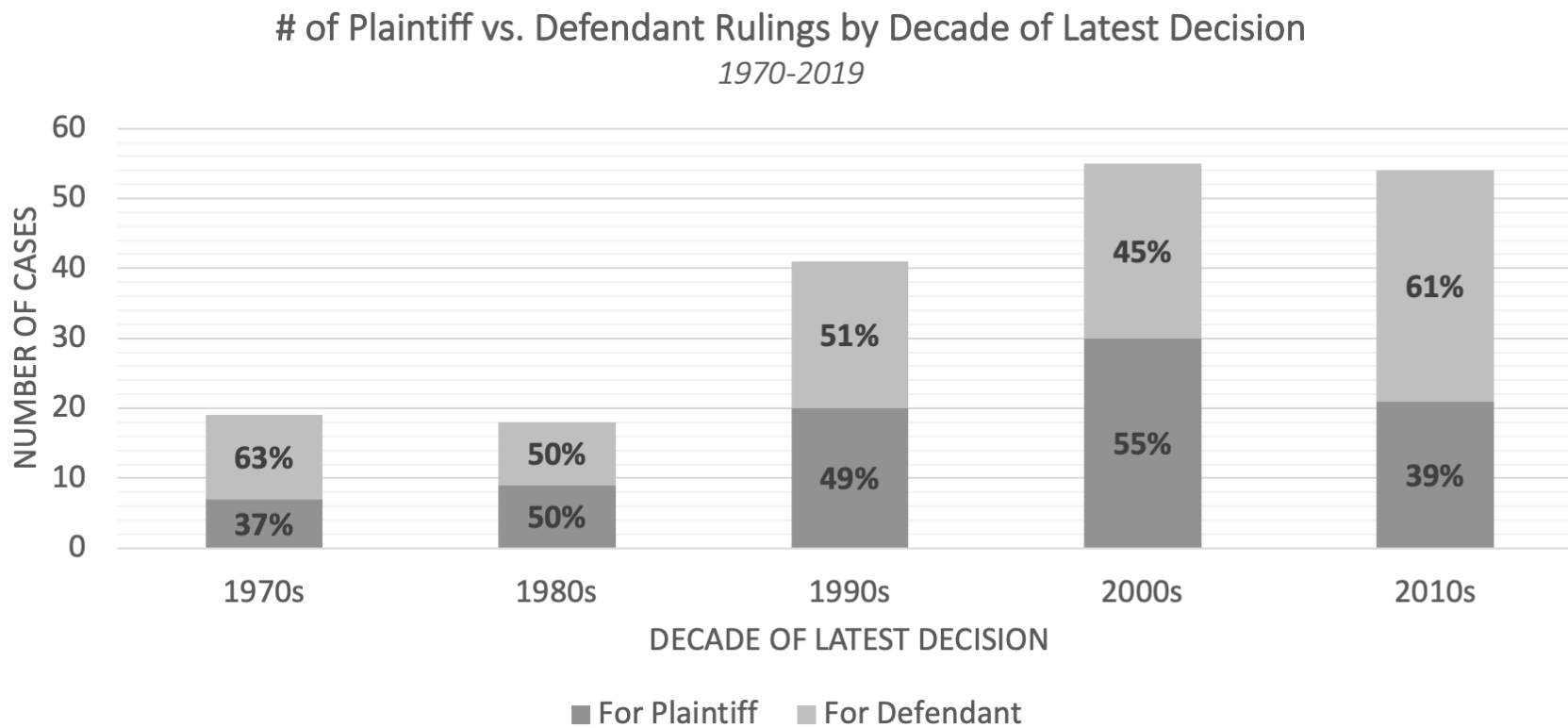
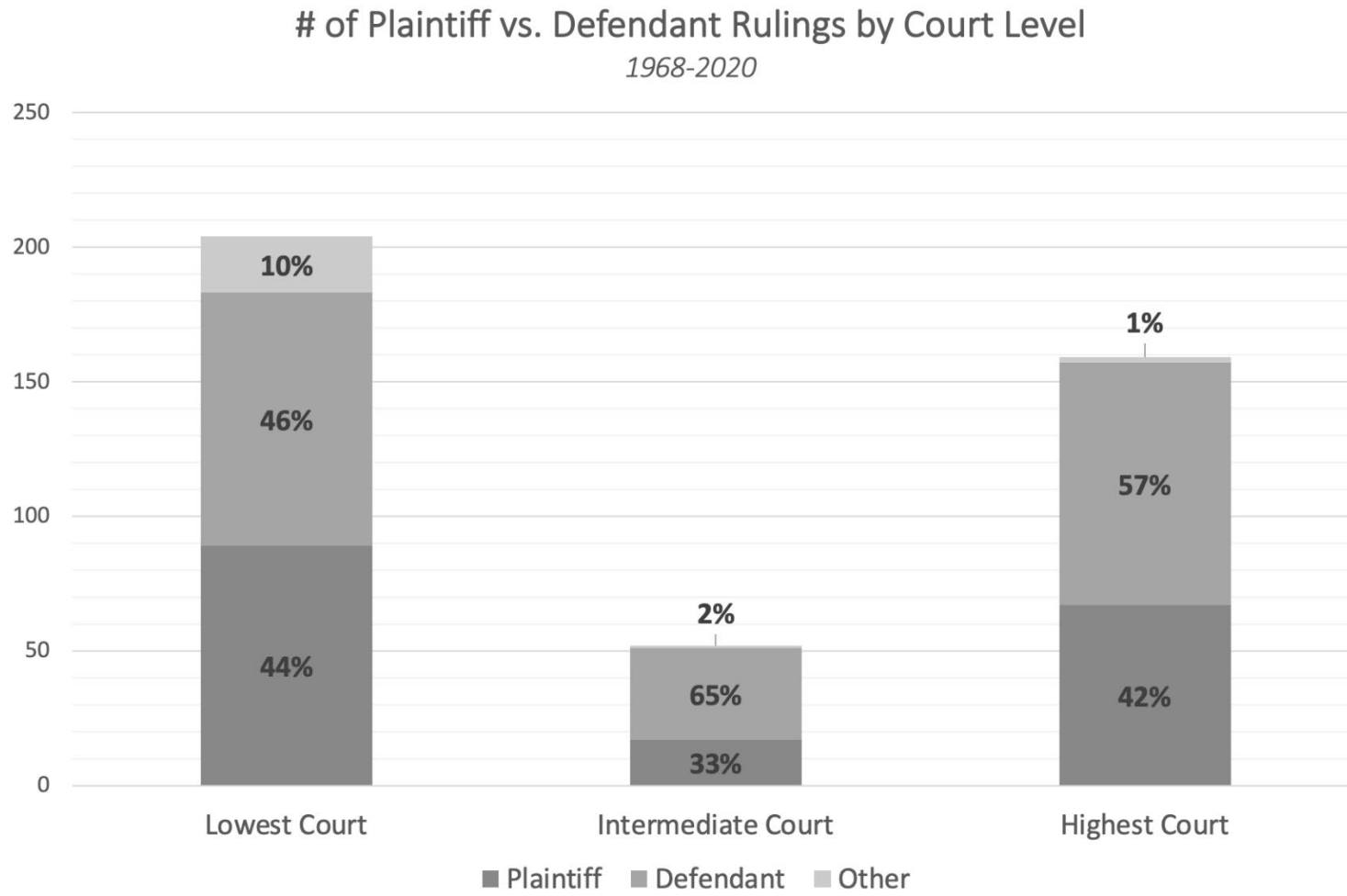


Figure 5. Latest Ruling by Decade, 1970-2019



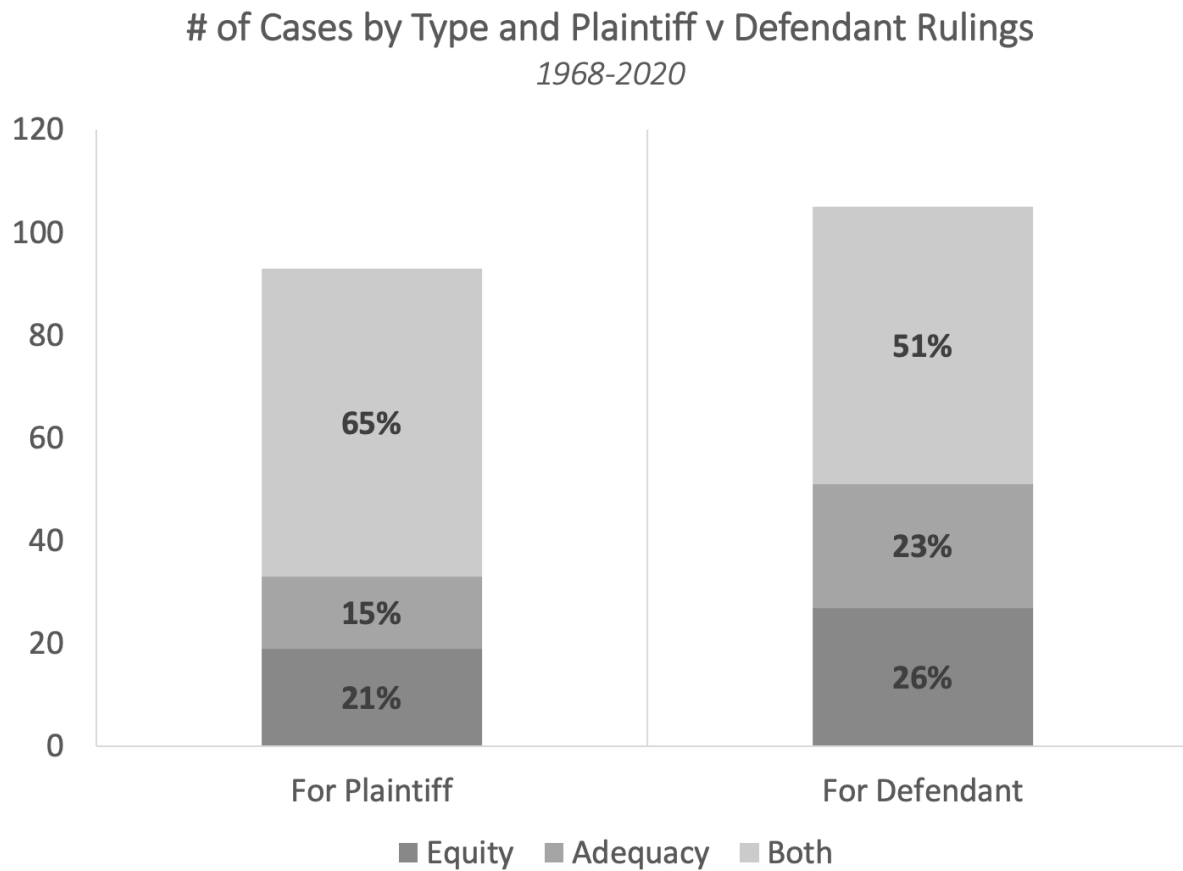
Notes: We exclude 7 cases which are coded as “Other”. A case is counted as “Other” for a variety of reasons, most notably: a settlement that is a direct result of litigation, remanding to another court, or a dismissal. We exclude 11 cases whose latest decision occurred in 2020 or after; of the 11 decisions in 2020, 55% (6 of 11) held for the Plaintiff and 45% (5 of 11) held for the Defendant.

Figure 6. Outcome of cases in favor of the plaintiff or defendant by state court level, 1969-2020



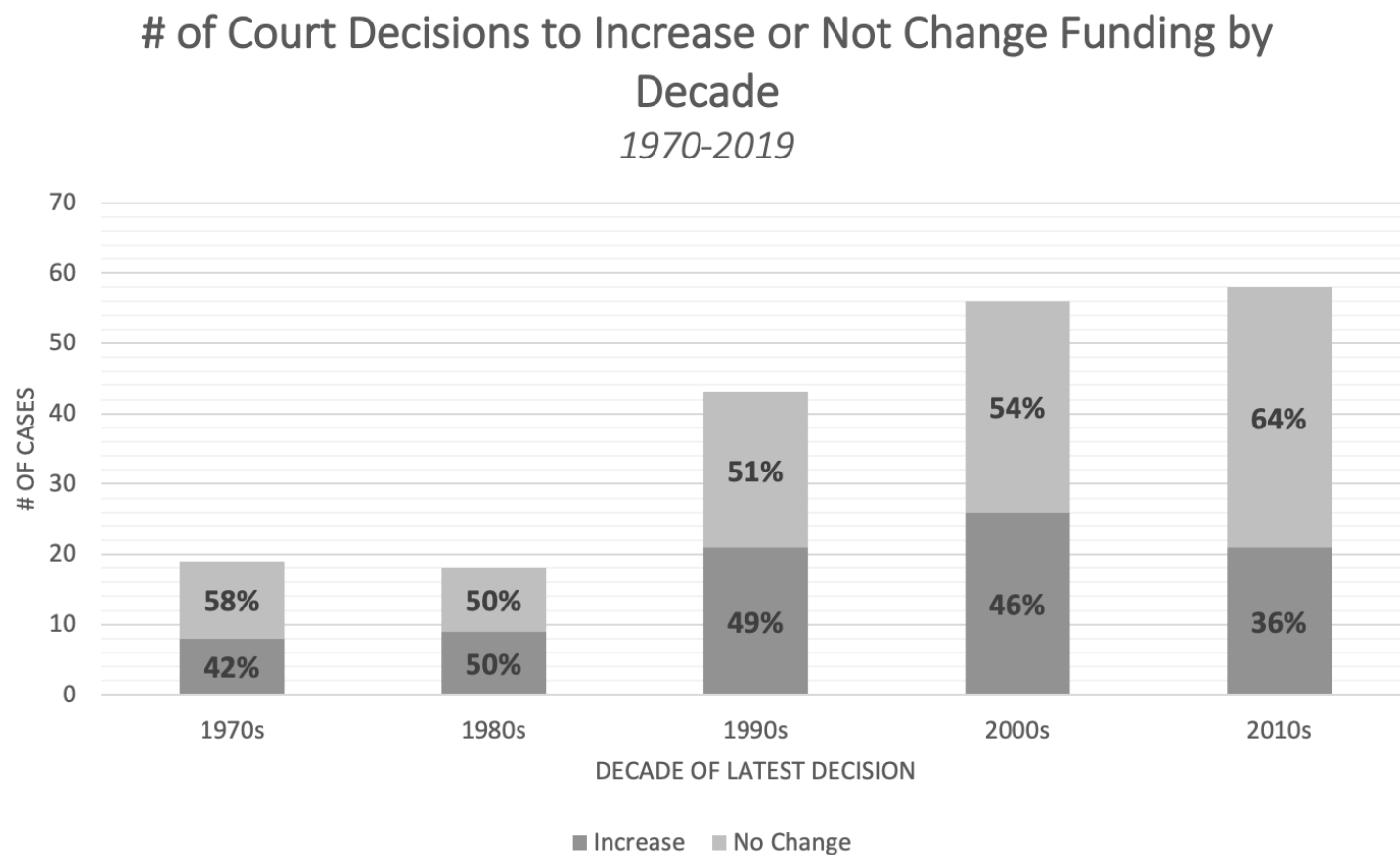
Note: A case is counted as “Other” for a variety of reasons, most notably: a settlement that is a direct result of litigation, remanding to an alternate court, or a dismissal.

Figure 7. Case Decisions by Case-type, 1968-2020



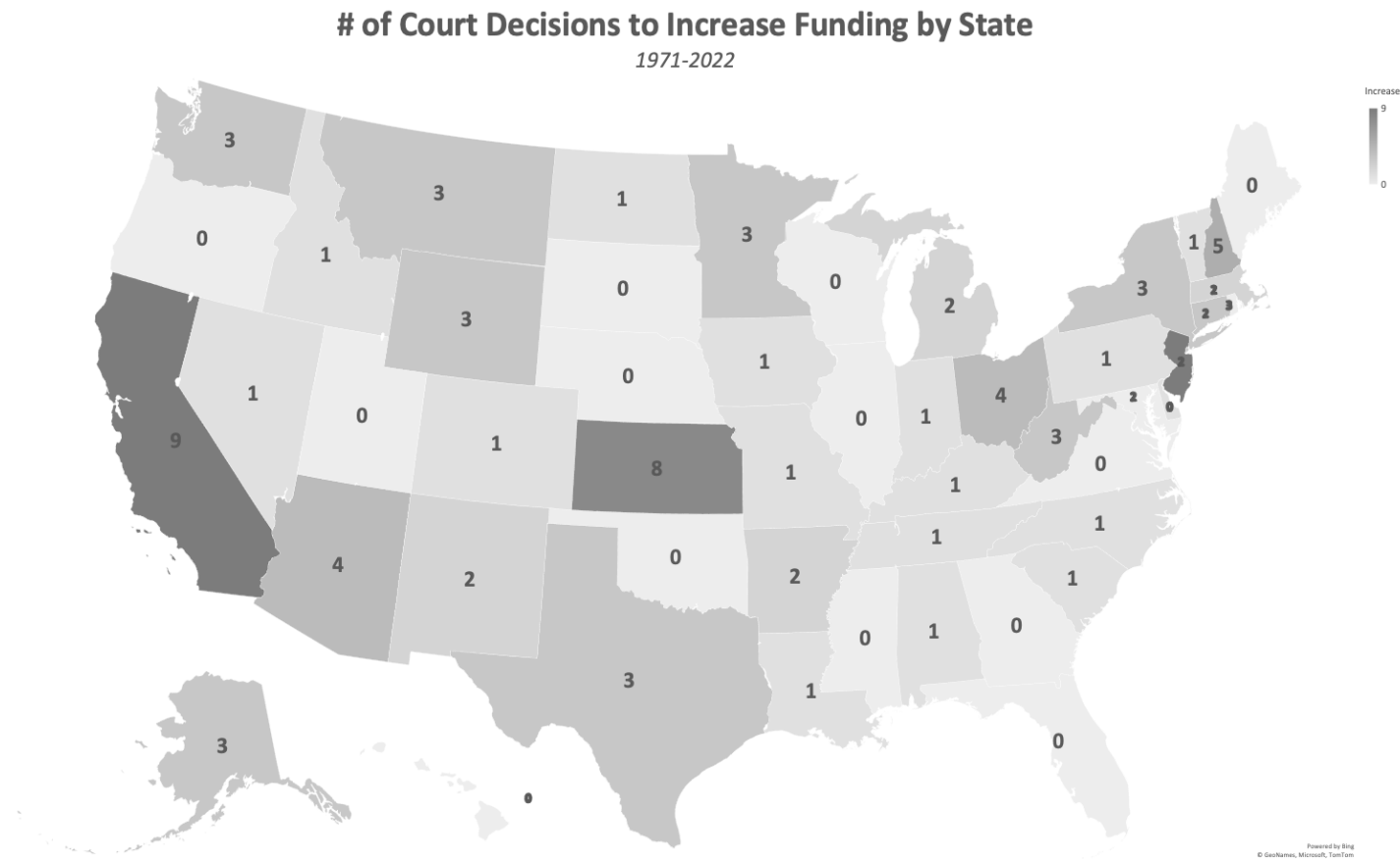
Notes: 198 cases total, seven cases were neither for plaintiff nor for defendant and are excluded from graph. We use the latest ruling of a case.

Figure 8. Counts by decade of cases with rulings to increase or not change funding



Notes: We exclude 11 cases whose latest decision occurred in 2020 or after. Of the 11 decisions in 2020, six held for the Plaintiff, but one was remanded to the lower court with no decision to increase spending; five held for the Defendant.

Figure 9. State map of court decisions to increase school funding, 1971 thru 2022



Appendix -- States and Expenditure

Appendix Table A1. Spending Changes from Filing Date and Number of Cases by Decision
(average five years after compared to five years before)

| % Change in Expenditures (Original File Date) | | | | | | |
|--|---|---------------|---|---------------|-------------------------------------|---------------|
| State | Average % Change (Plaintiff decisions) | # of Cases | Average % Change (Defendant decisions) | # of Cases | Average % Change (All decisions) | # of Cases |
| ALABAMA | 13.90% | 2 | 11.06% | 1 | 12.96% | 3 |
| ALASKA | 2.75% | 2 | -5.79% | 2 | -1.52% | 4 |
| ARIZONA | -0.82% | 2 | 11.68% | 2 | 5.43% | 4 |
| ARKANSAS | 16.65% | 2 | 0.56% | 2 | 8.61% | 4 |
| CALIFORNIA | 14.13% | 8 | -0.58% | 4 | 8.15% | 13 |
| COLORADO | NA | 0 | 6.10% | 3 | 7.36% | 4 |
| CONNECTICUT | 36.83% | 2 | 14.27% | 1 | 29.31% | 3 |
| DELAWARE | NA | 0 | NA | 0 | NA | 0 |
| FLORIDA | NA | 0 | 3.26% | 3 | 3.26% | 3 |
| GEORGIA | 8.56% | 1 | 12.19% | 1 | 10.37% | 2 |
| HAWAII | NA | 0 | NA | 0 | NA | 0 |
| IDAHO | -0.99% | 1 | 9.40% | 5 | 7.67% | 6 |
| ILLINOIS | 14.22% | 1 | 13.17% | 4 | 13.38% | 5 |
| INDIANA | NA | 0 | -3.91% | 1 | -4.89% | 2 |
| IOWA | 7.19% | 1 | 7.39% | 1 | 7.29% | 2 |
| KANSAS | 9.42% | 6 | 4.85% | 3 | 7.90% | 9 |
| KENTUCKY | 25.57% | 1 | 9.52% | 1 | 17.55% | 2 |
| LOUISIANA | -2.75% | 1 | 12.88% | 3 | 8.97% | 4 |
| MAINE | NA | 0 | 6.98% | 1 | 6.98% | 1 |

| | | | | | | |
|----------------|--------|---|--------|---|--------|---|
| MARYLAND | NA | 0 | 20.61% | 1 | 20.61% | 1 |
| MASSACHUSETTS | 10.60% | 1 | 16.81% | 2 | 14.74% | 3 |
| MICHIGAN | 4.70% | 1 | 13.87% | 3 | 11.58% | 4 |
| MINNESOTA | 5.53% | 1 | 5.32% | 1 | 6.30% | 3 |
| MISSISSIPPI | NA | 0 | 9.94% | 1 | 9.94% | 1 |
| MISSOURI | 2.01% | 2 | 9.91% | 1 | 4.64% | 3 |
| MONTANA | 11.65% | 3 | 2.94% | 1 | 9.48% | 4 |
| NEBRASKA | NA | 0 | 13.21% | 3 | 13.21% | 3 |
| NEVADA | NA | 0 | NA | 0 | NA | 0 |
| NEW HAMPSHIRE | 11.93% | 6 | NA | 0 | 11.93% | 6 |
| NEW JERSEY | 9.11% | 7 | 18.40% | 1 | 10.27% | 8 |
| NEW MEXICO | NA | 0 | 23.72% | 1 | 23.72% | 1 |
| NEW YORK | 4.15% | 3 | 9.05% | 6 | 7.42% | 9 |
| NORTH CAROLINA | 2.91% | 1 | 14.20% | 4 | 11.94% | 5 |
| NORTH DAKOTA | 19.93% | 1 | 2.18% | 1 | 11.05% | 2 |
| OHIO | 15.93% | 4 | 12.01% | 1 | 15.15% | 5 |
| OKLAHOMA | NA | 0 | 15.48% | 2 | 15.48% | 2 |
| OREGON | NA | 0 | 8.00% | 4 | 8.00% | 4 |
| PENNSYLVANIA | 10.33% | 1 | 3.21% | 3 | 4.99% | 4 |
| RHODE ISLAND | NA | 0 | 2.00% | 2 | 2.00% | 2 |
| SOUTH CAROLINA | 6.74% | 2 | 36.92% | 1 | 14.18% | 4 |
| SOUTH DAKOTA | 4.92% | 1 | 7.51% | 1 | 6.22% | 2 |
| TENNESSEE | 23.99% | 1 | NA | 0 | 13.58% | 2 |
| TEXAS | 17.43% | 4 | 15.29% | 2 | 16.72% | 6 |
| UTAH | NA | 0 | NA | 0 | NA | 0 |
| VERMONT | 1.23% | 1 | NA | 0 | 1.23% | 1 |
| VIRGINIA | NA | 0 | 7.14% | 1 | 7.14% | 1 |
| WASHINGTON | 11.27% | 3 | 8.84% | 1 | 10.67% | 4 |
| WEST VIRGINIA | 11.75% | 3 | NA | 0 | 11.75% | 3 |

| | | | | | | |
|-----------|--------|----|--------|----|--------|-----|
| WISCONSIN | NA | 0 | 15.68% | 2 | 15.68% | 2 |
| WYOMING | 13.96% | 3 | 20.71% | 1 | 15.65% | 4 |
| AVERAGE | 10.45% | 79 | 10.14% | 85 | 10.30% | 170 |

Note: Total cases limited by missing state expenditure data.

Appendix Table A2. Spending Changes from Decision Date and Number of Cases by State and Decision
(average five years after compared to five years before)

| % Change in Expenditures (Latest Decision Date) | | | | | | |
|--|---------------------------------|---------------|---------------------------------|---------------|---------------------------|---------------|
| State | Average % Change (Plaintiff) | # of Cases | Average % Change (Defendant) | # of Cases | Average % Change (All) | # of Cases |
| ALABAMA | 13.51% | 2 | 7.71% | 2 | 10.61% | 4 |
| ALASKA | 11.55% | 2 | -2.67% | 1 | 6.81% | 3 |
| ARIZONA | 5.18% | 2 | 6.24% | 3 | 5.81% | 5 |
| ARKANSAS | 15.07% | 2 | -1.76% | 2 | 6.65% | 4 |
| CALIFORNIA | 12.10% | 6 | 3.99% | 1 | 9.40% | 8 |
| COLORADO | NA | 0 | 11.47% | 3 | 11.92% | 4 |
| CONNECTICUT | 29.49% | 2 | NA | 0 | 29.49% | 2 |
| DELAWARE | NA | 0 | NA | 0 | NA | 0 |
| FLORIDA | NA | 0 | 3.81% | 2 | 3.81% | 2 |
| GEORGIA | -2.35% | 1 | 15.86% | 1 | 6.76% | 2 |
| HAWAII | NA | 0 | NA | 0 | NA | 0 |
| IDAHO | -0.99% | 1 | 11.21% | 4 | 8.77% | 5 |
| ILLINOIS | 12.97% | 1 | 14.36% | 4 | 14.08% | 5 |
| INDIANA | NA | 0 | -5.31% | 1 | -5.06% | 2 |
| IOWA | 7.26% | 1 | 3.21% | 1 | 5.24% | 2 |
| KANSAS | 10.17% | 7 | 3.33% | 3 | 8.11% | 10 |
| KENTUCKY | 31.80% | 1 | 10.18% | 1 | 20.99% | 2 |
| LOUISIANA | NA | 0 | 19.53% | 3 | 19.53% | 3 |
| MAINE | NA | 0 | 9.78% | 1 | 9.78% | 1 |
| MARYLAND | NA | 0 | 22.89% | 2 | 22.89% | 2 |

| | | | | | | |
|----------------|--------|---|--------|---|--------|---|
| MASSACHUSETTS | 4.44% | 1 | 12.57% | 2 | 9.86% | 3 |
| MICHIGAN | 8.70% | 1 | 14.20% | 3 | 12.82% | 4 |
| MINNESOTA | NA | 0 | 3.06% | 1 | 7.43% | 2 |
| MISSISSIPPI | NA | 0 | NA | 0 | NA | 0 |
| MISSOURI | 4.47% | 2 | -0.63% | 1 | 2.77% | 3 |
| MONTANA | 5.06% | 3 | 2.23% | 1 | 4.35% | 4 |
| NEBRASKA | NA | 0 | 9.93% | 3 | 9.93% | 3 |
| NEVADA | 7.99% | 1 | NA | 0 | 7.99% | 1 |
| NEW HAMPSHIRE | 14.31% | 5 | NA | 0 | 14.31% | 5 |
| NEW JERSEY | 8.96% | 7 | 15.44% | 1 | 9.77% | 8 |
| NEW MEXICO | NA | 0 | NA | 0 | NA | 0 |
| NEW YORK | 19.53% | 1 | 17.00% | 5 | 17.42% | 6 |
| NORTH CAROLINA | 5.07% | 1 | 24.79% | 3 | 19.86% | 4 |
| NORTH DAKOTA | NA | 0 | 3.64% | 1 | 3.64% | 1 |
| OHIO | 17.13% | 4 | 7.40% | 1 | 15.18% | 5 |
| OKLAHOMA | NA | 0 | 4.65% | 2 | 4.65% | 2 |
| OREGON | NA | 0 | 4.00% | 4 | 4.00% | 4 |
| PENNSYLVANIA | NA | 0 | 7.31% | 3 | 7.31% | 3 |
| RHODE ISLAND | NA | 0 | 5.66% | 2 | 5.66% | 2 |
| SOUTH CAROLINA | 6.74% | 2 | 23.41% | 1 | 14.01% | 4 |
| SOUTH DAKOTA | -0.73% | 1 | -4.75% | 1 | -2.74% | 2 |
| TENNESSEE | 9.02% | 1 | NA | 0 | 6.09% | 2 |
| TEXAS | 6.16% | 4 | 11.26% | 2 | 7.86% | 6 |
| UTAH | NA | 0 | NA | 0 | NA | 0 |
| VERMONT | 15.39% | 1 | NA | 0 | 15.39% | 1 |
| VIRGINIA | NA | 0 | 2.61% | 1 | 2.61% | 1 |
| WASHINGTON | 7.92% | 3 | 8.30% | 2 | 8.07% | 5 |
| WEST VIRGINIA | 18.19% | 3 | NA | 0 | 18.19% | 3 |
| WISCONSIN | NA | 0 | 11.84% | 2 | 11.84% | 2 |

| | | | | | | |
|---------|--------|----|--------|----|--------|-----|
| WYOMING | 23.23% | 3 | 20.71% | 1 | 22.60% | 4 |
| AVERAGE | 10.91% | 72 | 8.68% | 78 | 10.14% | 156 |

Note: Total cases limited by missing state expenditure data.