

How State Takeovers of School Districts Affect Education Finance, 1990 to 2019

Melissa Arnold Lyon
University at Albany, SUNY

Joshua Bleiberg
University of Pittsburgh

Beth E. Schueler
University of Virginia

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Abstract

State takeover of school districts—a form of political centralization that shifts decision-making power from locally elected leaders to the state—has increased in recent years, often with the purported goal of improving district financial condition. Takeover has affected millions of students throughout the U.S. since the first takeover in 1988 and is most common in larger districts and communities serving large shares of low-income students and students of color. While previous research finds takeovers do not benefit student academic achievement on average, we investigate whether takeovers achieve their goal of improving financial outcomes. Using an event study approach, we find takeovers from 1990 to 2019 increased annual school spending by roughly \$2,000 per pupil after five years, on average, leading to improvements in financial condition. Increased funding came primarily from state sources and funded districts' legacy costs. However, takeover did not affect spending for districts with majority-Black student populations—which are disproportionately targeted for takeover—adding to a growing literature suggesting that takeover unequally affects majority-Black communities.

Introduction

State takeover of local school districts is a controversial form of political centralization that involves removing the decision-making authority of locally elected school board leaders and instead placing that power in the hands of the state. Historically state takeover has often occurred in response to purported fiscal distress, fiscal mismanagement, or even fiscal crisis. Though takeover is a relatively rare intervention, generally reserved as a reform of last resort, it has become an increasingly common response to both fiscal and academic challenges since the first documented case in the late 1980s (see Figure 1 and Appendix Table A1). Takeover has also more commonly occurred in larger districts, such that over the past 30 years takeover has affected millions of students in districts including New York City, Chicago, Philadelphia, Detroit, Cleveland, El Paso, and Newark.

It remains unknown why takeovers have become more common over the last 30 years. This is particularly puzzling given that prior work has found that they do not, on average, benefit students, at least in terms of standardized test scores (Schueler and Bleiberg 2021; Wong et al. 2007). Takeovers are also known to generate resistance from members of the targeted communities, which tend to be home to disproportionate numbers of low-income residents of color (Morel 2018; Schueler and West 2021). The present study allows us to investigate a possible explanation that has not yet been considered empirically: state takeovers may persist because they achieve their purported goals of dealing with fiscal distress or mismanagement.

Despite its increasing use, very little is known about how state takeover impacts school district finance. Wong and Shen (2003) find that takeovers in the 1990s were associated with lower overall per pupil spending while Schueler and Bleiberg (2021) find no evidence that takeovers from 2011 to 2016 affected educational expenditures. We attempt to reconcile these

findings by examining takeovers over a longer period, using a larger sample of treated districts, and estimating effects on both expenditures *and* fiscal condition. This allows us to delve deeper into important questions of fiscal responsibility and management.

In this paper, we use an event study approach with an original dataset tracking all state takeovers of school districts through 2019 combined with district-level finance information from the National Center for Education Statistics's Common Core of Data and the U.S. Census. We observe 104 first-time takeovers during the 29-year period in which school finance data are available (1990 to 2019). The data cover a near census of takeovers, which began in 1988 (Oluwole and Green 2009). The relatively detailed finance data in F-33 surveys allow us to comprehensively examine district financial condition, defined as the ability of a government to provide adequate services while meeting both current and future financial obligations. However, there is no agreed upon measure of fiscal health for local school districts, and so, based on public finance literature, we propose a three-pronged approach involving cash, budgetary, and long-term solvency (Wang, Dennis, and Tu 2007). To understand how these financial outcomes are achieved, we also analyze the sources of revenues and the types of expenditures.

We find that, on average, state takeovers increased school spending substantially and led to improvements in financial condition. Specifically, takeover increased annual per-pupil spending by over \$2,000 per student after five years, leading to improvements in both budgetary solvency and long-run solvency. We find that takeover increased expenditures to a larger degree when combined with performance accountability measures. Takeover effects were also strongest in large school districts and those with high levels of initial debt. A deeper investigation into how the money was spent suggests that takeover led to increased expenditures on legacy costs such as employee benefits and debt retirement. We also find that state takeover has functioned as a

means of providing financial assistance to the district by the state (i.e., a bailout), as takeover resulted in an increase of state revenues to targeted districts. Nevertheless, the impact of takeover on the fiscal status of districts has not been consistent. Notably, takeover did not have a favorable impact on school expenditures in districts that serve a majority-Black student population, which have been disproportionately targeted for takeover. Our analysis reveals that political centralization in the form of state takeover of school districts can improve local fiscal condition, although not across all types of communities and not without substantial costs to both state budgets and local leaders.

The present study extends prior research by investigating whether takeovers achieve one of their most commonly stated goals—dealing with fiscal distress in local school districts. We find that they do, on average, lead to increased school spending and improve fiscal condition, thus providing a possible explanation for why takeovers continue, despite opposition from local communities (Schueler and West 2021). However, it remains a puzzle why they continue to occur in contexts where they have not historically been effective. At least part of the explanation is likely related to both race and political empowerment (Morel 2018).

Our findings indicate that takeovers have a positive impact on fiscal condition, in part, by securing additional state resources. Nonetheless, takeovers may be an undesirable form of bailout, as the extra funding comes at the cost of local political autonomy. This is especially true in majority-Black communities (Morel 2018), where our results suggest that takeovers are less effective than in communities with lower concentrations of Black students. This corroborates a growing trend in takeover research, which suggests that the impact varies depending on the racial and ethnic composition of the communities being taken over. Specifically, takeovers in majority-Black communities are the least effective in terms of boosting academic performance for

students (Schueler and Bleiberg 2021), disempower Black elected officials politically (Morel 2018), do not change per-pupil expenditures, and generate fewer improvements to fiscal condition. As a result, takeovers pose a particularly high risk for majority-Black communities.

Centralization and Fiscal Condition

In recent years, there has been a shift towards greater centralization in education, including federal legislation, increased policymaking roles for state legislatures and city mayors, and state takeovers of struggling school systems (Henig 2013; Morel 2018; Peterson 1995). However, with the 2015 Every Student Succeeds Act, some authority was delegated back to states and local governments (Wong 2020), highlighting the ongoing debate over the proper roles of federal, state, and local authorities in education governance. These shifts provide valuable opportunities to study whether centralizing and decentralizing education policies achieve their goals (e.g., improving fiscal condition in the context of state takeover). While there are strong theoretical reasons to suggest that centralization could either harm or improve fiscal condition, it remains unclear which is more likely to occur.

How Centralization Could Harm Fiscal Condition

On the one hand, centralization—particularly from the local to the state level—might harm fiscal condition within localities. First, scholars from the classical liberal economics tradition have argued that decentralization encourages efficiency because of increased responsiveness and accountability at lower levels of government, as well as greater competition between localities (Hayek 1939; Tiebout 1956). In short, state leaders may have fewer incentives than local ones to tax efficiently because they perceive that there is less of a risk that residents will exit their jurisdiction, given it is typically more challenging to move across state lines than across city, county, or school district boundaries.

Second, state leaders are typically less representative of local communities than local leaders and therefore may be less responsive to constituents or disincentivized to foster fiscal health. For these reasons, proponents of “progressive federalism” argue that minoritized groups can gain greater power and influence at more localized levels of government, particularly in contexts where they represent a minority at the state but not at the local level (Gerken 2012). In the case of state intervention into school systems, state takeover of school districts has been shown to decrease the descriptive representation of Black citizens in local elected office when it occurs in majority-Black school districts (Morel 2018).¹ Decreased descriptive representation could be harmful to fiscal well-being, given that scholars have documented that decreases in non-White political representation on school boards lead to decreased spending on non-White students (Fischer 2020; Kogan, Lavertu, and Peskowitz 2021).

Furthermore, state intervention may be destabilizing or disruptive to local communities (Henig et al. 2001) and is typically most unpopular among members of the targeted local communities because local actors lose political and economic power as a result of such reforms (Morel and Nuamah 2020; Schueler and West 2021). Additionally, shifting the venue of decision-making from the local to the state level could reduce the power of interest groups with established influence at the current level of government, such as teachers’ unions (Anzia 2013). This may, in turn, decrease overall spending on education in the local district, given unions are some of the most powerful advocates for increased education spending (Burns 2003). If spending increases are helpful for promoting fiscal health, centralization could therefore be detrimental.

How Centralization Could Improve Fiscal Condition

¹ Although the reverse is true when takeover occurs in majority-Latino communities.

On the other hand, there are several reasons to believe that centralization might improve fiscal condition. First, some scholars of fiscal federalism suggest that decentralization encourages fiscal irresponsibility among localities because local leaders believe they will be bailed out by higher levels of government if they run into major financial troubles (Rodden 2006; Singla, Spreen, and Shumberger 2023). Creditors may also expect local governments to be bailed out by higher levels of government and will therefore be more willing to take on risky endeavors with decentralized governments. In contrast, without an equivalent bailout option, states may act more fiscally responsible than localities. Fiscal irresponsibility among localities may be especially likely to arise in the case of special function jurisdictions—which in the U.S. are most commonly school districts—because shared fiscal authority among a variety of functions of local governments representing a range of priorities can lead to “overfishing”—or overtaxing and overspending—as each authority seeks to maximize funding for its own priority (e.g., school boards for education; Berry 2008). In contrast, more centralized state policymakers must negotiate a broader agenda of priorities reducing ambiguity and the likelihood of overfishing.

Third, to the extent that higher spending levels promote fiscal health, centralization could facilitate greater financial well-being at the local level through redistribution across localities. This may be true given that possibilities for redistribution are limited at lower levels of government both because there are greater amounts of inequity across than within localities and because localities do not have incentives to distribute resources outside of their own boundaries. Localities may also be unlikely to pursue policies that distribute resources to low income individuals out of a concern that high income (and therefore high tax-paying) individuals and businesses may exit the local community as a result (Peterson 1981). Indeed, school finance reforms from 1989 to 2010, which were intended to address unequal levels of funding across

local districts due to inequity in local property wealth, centralized and redistributed resources across localities (Candelaria and Shores 2019). State funding formulas have counteracted regressive local funding schemes, on average, raising spending in traditionally disadvantaged communities (Chingos and Blagg 2017).

A fourth reason that centralization could improve a district's fiscal condition is if the interests of residents are better represented at the state than local level. In contrast to the progressive federalism argument, McDermott (1999) among others, argues that local school district governance has not lived up to its promise of allowing for citizen voice in the policymaking process. Centralization can shift the venue of decision-making to one in which teachers' unions have less influence, and some argue that this shift would improve fiscal condition in cases where union influence has led to inefficient or unsustainable resources expenditures (Burns 2003). Fifth and finally, states may simply have greater administrative capacity than local governments to manage fiscal issues effectively and therefore centralizing to the state level could improve fiscal condition (Kogan 2017).

Potential Variation in the Effect of Centralization

The resolution of this puzzle about whether centralization promotes or hinders fiscal health may depend on a few factors. First, it may depend on the unit of centralization (federal versus state; Peterson, 1995; Peterson et al., 2010). Here we focus on centralization from the local to state level, though centralization from the states to the federal level could have very different consequences. Second, the effect of centralization on fiscal condition may depend on the type of centralization being deployed. Scholars have outlined three primary types of centralization: (1) political, (2) administrative, and (3) fiscal (Manna 2013).² Definitionally, state

² In short, political centralization refers to the locus of decision-making power. Administrative centralization concerns the extent to which a central authority relies on bureaucracies to implement its policies. Fiscal

takeover primarily involves political centralization, though it could be accompanied by other forms of centralization or decentralization.

Third, the effects of centralization may depend on the policy or political context. One important policy factor may be the extent to which higher levels of government have mechanisms to hold local systems accountable for the outcomes they produce, so called “performance-based federalism” (Kogan, Lavertu, and Peskowitz 2021; Wong 2013). For example, greater accountability may make states more willing to provide funding to relatively low-resource communities and focus takeover efforts on improving academic achievement rather than improving fiscal condition.

The effect of centralization on fiscal outcomes may also vary depending on the size of the locality in question. State governments may be uncomfortable with authorizing the takeover of very large school districts because of the logistical difficulty of running large systems. Larger districts have the capacity to borrow more debt and therefore may have more substantial fiscal troubles that states are less able to address, given the sheer magnitude of the debt that a district like the New York City Department of Education would be able to take on. Though states are the primary authorities controlling public education, state education agencies have tended to delegate that authority to localities and in turn tend to have relative low levels of administrative and technical capacity (Moffitt et al. 2021). Larger districts may also have more success mounting a political opposition to takeover efforts which could complicate the implementation of reforms. Superintendents of large districts are often more visible public figures than the leaders of education governance boards at the state level. Thus, the nature of takeover may be very different in a district serving millions of students, relative to one serving hundreds of students.

centralization describes the degree of responsibility for collecting, distributing, and spending public revenues assigned to different levels of government.

Finally, the effect of centralization may vary depending on the demographic composition of local communities. For example, state leaders in majority-White states, may be less responsive to the preferences of residents in localities that are home to large concentrations of people of color. State takeover may, therefore, be less about improving district conditions and more about removing political empowerment in such districts (Morel 2018). Variation in effects based on the demographic makeup of the targeted community may be especially likely in the case of state takeover of school systems where scholars have documented more negative student achievement impacts and decreased descriptive representation when takeovers have been enacted in majority-Black districts, relative to majority-Latino districts where takeover has led to more positive impacts on student achievement and increased descriptive representation (Schueler & Bleiberg, 2021; Morel 2018).

State Takeover of Local School Districts

As we have described, state takeover is a shift in decision-making power from a locally elected school board to the state. The state then has the authority to implement a variety of interventions including direct administration of the district; transferring authority to another official such as the mayor; abolishing the school board; and appointing all or some of a new school board or a new superintendent, receiver, or emergency manager to operate the system. Regardless of what the state does with its authority, takeover always involves a shift in political power from the local board to the state.

States often invoke multiple justifications for takeover including poor academic performance and fiscal condition. Fiscal distress or mismanagement had historically been the most frequent justification for district takeover (Oluwole and Green 2009), and state takeover of local governments occurs most frequently after recessions when fiscal stress is the most acute

(Kogan 2015). It can also occur when there are other forms of mismanagement. In more recent years, takeover of school districts has increasingly been undertaken to address persistently poor student academic performance (Jochim 2016).

Thirty four states have laws that specifically authorize the takeover of school districts (Jochim 2016). Every state has laws that allow for fiscal interventions; however, the scope, trigger for state action, and responsible government agencies vary widely (Bowman and Zuschlag 2022). Legislatures in some states have authorized dozens of fiscal interventions while other states permit a narrower set of responses. Twenty states have passed laws that allow the state to intervene in the finances of a local government (Huh, Fehr, and Murphy 2013) or declare a fiscal emergency (Beckett-Camarata 2004). States can also use these authorities to regulate local governments to take over school districts. Most states do not have defined indicators to measure fiscal distress; the lack of such indicators provides flexibility to take over schools due to a wide variety of fiscal conditions (Kloha, Weissert, and Kleine 2005).

Takeover is a relatively rare intervention reserved as a reform of last resort for state education leaders but has become more common over time. Figure 1 describes the number of districts taken over by states across three decades based on our own tracking data.³ About three to four districts are taken over in a typical year. The first wave of state takeovers began in the late 1980s. Takeovers increased in the periods around the passage of the national school accountability legislation No Child Left Behind (NCLB) in 2001 and after the school-improvement-focused Race to the Top reforms in 2010.

Data and Sample

³ We describe the methods for collecting these data in the “Data and Sample” section of the paper below.

We analyze district-by-year data on state takeover, school spending, and fiscal condition for the years 1990 to 2019 using an original dataset of state takeovers covering this entire 29-year panel.⁴ Our sample includes 11,034 traditional school districts.⁵ All outcome measures are from district F-33 survey data downloaded from the Common Core of Data (CCD) and the U.S. Census (2019 only). Table 1 displays baseline averages and years for districts that experience takeovers and those that do not.

Tracking State Takeovers

To track state takeovers we follow the procedure outlined in detail by Schueler and Bleiberg (2021). In short, we began by compiling pre-existing lists of takeovers that had been collected by other scholars for subsets of the period we covered. We then used Google News Advanced Search and Education Week Archives to verify this tracking and to supplement years when we had no coverage based on other researchers' work. We tracked the district, state, and first and last year of takeover for each individual takeover event.

Ultimately, we observe 104 first-time takeovers in the panel from 1990 to 2019 and 100 takeovers from 1998 to 2019 (the period for which more detailed school spending information is available). Appendix Table A2 describes the number of districts that we observe across relative time that we use to identify the effect of takeover. Our event study has sufficient power to identify the effect of takeover for up to 10 years after state intervention. Five years after treatment we observe outcomes for 73 treated districts and 10 years after treatment, we observe outcomes for 57 treated districts. Additionally, in Appendix B we demonstrate that findings are

⁴ We restrict our analyses to include the years from 1998 to 2019 for five outcomes that are only observable in the post-1997 years (cash on hand, debt service coverage ratios, salary expenditures, benefit expenditures, and debt retirement).

⁵ We show that our results are not driven by sample missingness or sample inclusion with a series of falsification tests (see Appendix Figure B1 and Appendix C for more details).

very similar if we analyze only the takeover districts that we observe during the entire period of study (we balance the panel on relative time instead of calendar time). We observe some districts that enter, exit, and then re-enter takeover. For our analysis, once a district is taken over, we consider it to be taken over in every post-treatment year. That definition of treatment avoids the potentially confounding relationship between subsequent changes to takeover status (i.e., exiting, re-entering) with district financial outcomes. In auxiliary analyses we find that our results are robust to alternative definitions of takeover and to controlling for the number of years since exit from takeover and since beginning subsequent takeovers (see Appendix B).

We compare the baseline characteristics of takeover districts to non-takeover districts in Table 1. Takeover districts tend to be much larger than non-takeover districts, at baseline. Consistent with prior work, takeover districts also, on average, had a much lower share of White students (38% versus 83%) and a larger share of Black students (50% versus 7%) relative to non-takeover districts. However, at baseline, takeover and non-takeover districts had similar proportions of students with special educational needs and students who were eligible for free meals at school.

Measures of School Spending and Fiscal Condition

In this study, we consider four key ratios as our primary measures of district spending and fiscal condition: per-pupil expenditures, cash held per capita, the operating ratio, and the Debt Service Coverage Ratio (DSCR). Our first fiscal outcome measure is a straightforward measure of per pupil educational expenditures, operationalized with average annual public-school spending divided by total enrollment. We use a district-level measure of yearly expenditures per student in real 2019 dollars. As we show in Table 1, at baseline, takeover

districts spent slightly less (\$297 per pupil per year) than the average district that was never taken over.

Capturing organizational fiscal condition is challenging because it demands a complex and multidimensional approach (Finkler, Calabrese, and Smith 2022; Gorina, Maher, and Joffe 2018; Wang, Dennis, and Tu 2007), particularly when examining public school districts (Kim and Sorensen 2019; Ladd 1996). There is no agreed up measure of fiscal health of school districts. Building on related, public finance literature (Wang, Dennis, and Tu 2007; Kim and Sorensen 2019; Ladd 1996), we recognize that the process of financial condition ratio creation and analysis “is more of an art than a science” (Finkler, Calabrese, and Smith 2022, p.787). We use contextual knowledge about local school districts to focus on a series of ratios that are most consequential, relevant to the public education, and informative. Specifically, we propose a three-pronged approach to studying school district financial condition that measures cash solvency, budgetary solvency, and long-run solvency. In the following paragraphs, we detail each of these ratios, paying particular attention to how each ratio is calculated, as well as the information that it does and does not imply (see Appendix Table A3 for a summary).

First, we conceptualize cash solvency as a measure of liquidity and effective cash management. To operationalize this, we use a measure of cash held per capita at the end of a given fiscal year. Specifically, the F-33 surveys ask districts to report “the total amount of cash on hand and on deposit and investments in federal government, federal agency, state and local government and nongovernment securities.” This is further defined as “cash, deposits, and government and private securities (bonds, notes, stocks, mortgages, etc.), except holdings of agency and private trust funds.” They report investments at market value. Cash on hand does not include accounts receivable, value of real property, or non-security assets. We use this as our

measure of cash on hand and divide it by the total district student enrollment each year to get an indicator of cash held per capita. Higher values correspond with more cash on hand, which may not necessarily translate to improved financial condition. Though more cash on hand increases cash solvency, too much cash on hand could indicate a lack of long-term investments.

To adjust the positive skew of the distribution of cash per capita, we use an inverse-hyperbolic-sine (IHS) transformation of our cash solvency measure. This measure can be interpreted similarly to a natural log transformed measure (i.e., roughly as percent change). Unlike a natural log transformation, the IHS-transformation does not require us to drop any district-years in which zero cash was reported. As shown in Table 1, baseline average cash solvency was nearly identical for takeover and non-takeover districts (12.9 to 13.4).

We conceptualize budgetary solvency as the capacity for a district to generate sufficient revenues to run its operations. To measure this, we estimate an operating ratio of revenues to expenditures in real 2019 dollars, as recommended by Wang and colleagues (2007). Higher values on this measure generally correspond with improved fiscal condition. As shown in Table 1, on average, in 1990 both takeover and non-takeover districts generated roughly \$1.10 in revenues for every dollar spent.

Finally, we conceptualize long-run solvency as a government's ability to pay for existing liabilities (Wang, Dennis, and Tu 2007). This construct is particularly difficult to measure as school districts are government agencies for which revenues come primarily from taxes across multiple sources. We rely on the comprehensive debt service coverage ratio to measure the ability of a given school district to meet required debt service (Finkler, Calabrese, and Smith 2022). Specifically, we measure the DSCR as net operating income (total revenue – current expenditures) divided by the total debt obligations at the end of the year, including both short-

term and long-term debt. Higher values on this measure generally correspond with improved fiscal condition. Again, we use an IHS transformation to adjust the positive skew of the distribution.

How Funds Are Spent and Acquired

In addition to these financial condition ratios, we extend our analysis to understand how education funds are spent in takeover districts and the source of the funds (i.e., state vs. local). We examine major categories of educational spending including per-pupil expenditures on salaries and benefits as well as debt. To examine how much districts spent on paying off their long-term debt, we use a measure of debt service reported on F-33's as the amount of long-term debt retired (IHS-transformed). Debt service (loan repayments and interest) is considered as an expenditure in school district budgets. We also examine pupil-teacher ratios as a proxy for per capita classroom staffing. As shown in Table 1, all measures were very similar in takeover and non-takeover districts at baseline.

To understand how funds were acquired, we examine revenue levels per pupil from both state and local sources in real 2019 dollars. Notably, revenues could come from state or local taxes or debt taken out by a state or school district. As shown in Table 1, takeover districts had lower average local revenues and higher state revenues than non-takeover districts in 1990 (a pre-takeover year for all districts). This is consistent with Schueler and Bleiberg's (2021) finding that greater state contributions to a district's spending are predictive of takeover.

Analytic Approach

We estimate how state takeover affects school finances with an event study approach. Specifically, we use variation in state takeovers from two sources: (1) within-district differences in takeover status over time and (2) cross-district differences in whether and when districts were

taken over. We specify the model as follows:

$$Y_{dt} = \sum_{r=-5}^{10} \beta_r I(t - t_d^* = r) + X_{dt} + \pi_d + \delta_t + \varepsilon_{dt}$$

where, Y is a fiscal outcome for district d in year t , and t_d^* is the year of the first takeover within a given district. In this specification, β_r represents the effect of takeover r years after it began (or before if r is less than zero) relative to the year before enactment, $r=-1$, which is excluded ($r=0$ in the first year of takeover). We also include district (π_d) and year (δ_t) fixed effects that control for time-invariant districts characteristics and any year-specific events.

The term, X_{dt} , is a vector of control variables. In the main model specifications, this is simply a measure of a given fiscal outcome measured at baseline and interacted with a linear time trend. In Appendix Tables B2 and B3, we show that our models are robust to the exclusion of this time trend. We also show that the effect of takeover is robust to controlling for time varying demographic characteristics (the percent of Black students, White students, Hispanic students, students eligible for free lunch, and students with special needs). Additionally, we demonstrate the robustness of our results to controlling for contemporaneous centralizing events (school finance reforms). An additional concern is that districts might react to the threat of takeover. We find our results are robust to controlling for a measure of the prevalence of takeover within each state, which serves as a proxy for a credible takeover threat. We also demonstrate that our findings are not affected by bias from heterogenous treatment effects with staggered adoption (Goodman-Bacon 2021). Appendix B describes the full set of robustness checks in more detail, demonstrating strong support for the validity of our approach.

The parameters of interest are β_0 through β_{10} , which estimate the effects of takeover in each of the ten years after enactment. We trim years for treated districts that are more than five

years before treatment and 10 years after treatment to fully saturate the model with event times. We show the full set of β estimates in figures, and we present estimated effects at prototypical years in Appendix Tables B2 and B3.

The key identifying assumption of our approach is that the trends in fiscal outcomes prior to state takeover were the same for districts that were taken over as they were for comparison districts that were not taken over in that period. β_{-5} through β_{-2} tests this assumption by estimating whether there were any differences in baseline measures of the outcomes between the treated and un-treated districts in any of the pre-takeover years. Visual inspection of these estimates allows us to look for evidence of whether the trends for the treatment and comparison groups were parallel. In addition to these visual inspections, we use an F-test to estimate whether the pre-treatment estimates (i.e., β_{-5} through β_{-2}) are jointly different from zero. The F-test is more conservative than a linear test of pre-trends because it is sensitive to non-linear pre-treatment trends and retains the same level of statistical power. Significant trend differences in outcomes between the treatment and comparison groups prior to state takeover suggest an unobserved confounding factor other than takeover could explain results. Nonsignificant pre-treatment estimates from the event study help establish that the parallel trends assumption is met.

As described in more detail in the Robustness Section as well as Appendices B and C, we further probe the robustness of our approach with several additional tests. We first show that our results are robust to alternative definitions of takeover. As noted above, we also show the results from additional specifications that remove the baseline linear time trends, control for years since exit from takeover and time relative to second takeovers, control for time-varying demographic changes, balance the panel on relative time instead of calendar time, control for concurrent school finance reforms, and control for the prevalence of takeover across the state. We also

display findings from a series of falsification tests examining the effect of takeover on missingness across each of our outcome variables and sample inclusion. Together, these robustness checks provide strong support for the validity of our empirical approach.

Results

State Takeover Increased Educational Expenditures

State takeover caused a large and durable increase in per-pupil expenditures (PPE), on average. Figure 2 shows that the effect of takeover on PPE increased monotonically. After three years, takeover increased expenditures by about \$800 per student, and seven to ten years after takeover PPE was over \$2,500 higher than we would expect had the districts not been taken over. The magnitude of this increase is about twice the size of the change in spending caused by school finance reforms in the post-1990 “adequacy” era of reform (Lafortune, Rothstein, and Schanzenbach 2018). The pre-treatment estimates are jointly nonsignificant ($p > .10$) and quite small in magnitude when compared to the size of the effect several years after treatment. The similarity in pre-takeover PPE trends for districts that were taken over and comparison districts that were not provides strong evidence that no unobserved policy changes account for the post-takeover spending increases that we observe.

State Takeover Improved Financial Condition

The spending increases caused by state takeover improved the financial condition of school districts, on average. Figure 3 shows the effect of takeover on three measures of financial condition: cash held per capita (cash solvency), the operating ratio of revenues to expenditures (budgetary solvency), and the debt service coverage ratio (long-run solvency). The post-takeover estimates suggest that state takeover increased budgetary and long-run solvency. The pre-takeover estimates are all individually and jointly nonsignificant, supporting our conclusion that

unobserved district capacity to improve financial condition cannot explain the effects of state takeover and providing some empirical evidence in favor of the parallel trends assumption.

Figure 3 Panel A shows that takeover did not have a detectable effect on district's liquidity and effective cash management (i.e., cash solvency). That is not necessarily surprising, given that takeover is a policy of last resort to address fiscal distress. Districts under state management might spend all available assets to pay off debts and improve the general financial condition of the district. Many state and federal grants also require that districts return unspent funding at the end of the fiscal year, creating a disincentive for districts—particularly those that are more dependent on state revenues—to retain cash on hand (Odden and Picus 2007).

In Figure 3, Panel B and C we show the effect of state takeover on budgetary and long-run solvency respectively. First, we find that takeover increased budgetary solvency, on average. Specifically, takeover increased the ratio of revenues to expenditures (operating ratio) by about eight cents per dollar. The positive effect of takeover on budgetary solvency grows over time and implies greater capacity to generate sufficient revenues to support district operations. Second, Figure 3, Panel C shows that state takeover also improved districts' capacity to pay off debts (i.e., long-run solvency) by about 15 percent eight to ten years after takeover.

Impacts Varied Based on Accountability and District Characteristics

We examine whether the effects of state takeover on school district spending and financial condition vary depending on the presence of performance accountability mechanisms, fiscal centralization, district size, debt prior to takeover, and the racial and ethnic composition of the district in Table 2. Overall, we find that state takeover increased education spending to a greater extent when combined with federal performance accountability. We also find that the effects of takeover on spending and financial condition tended to be positively correlated with

district size, and, as hypothesized, we find that this relationship is driven by the fact that larger districts tended to have greater amounts of debt per capita. Finally, the benefits of takeover on fiscal outcomes are smaller in districts serving larger shares of Black students, while takeover effects do not vary depending on the size of a district's Hispanic population.

In Table 2, Panel A, we show results from difference-in-differences models for which we pool all post-takeover years. Results are consistent with the event study estimates previously presented, though the estimated effect on DSCRs is somewhat higher. In this pooled model with more precision, we estimate that takeover increased long-run solvency by about 35%.

No Child Left Behind (Performance Accountability)

In Panel B, we test whether the effect of takeover varies when combined with performance accountability. More specifically, we estimate the effect of takeover before and after 2002 when federal test-based performance accountability was implemented nationwide after the passage of No Child Left Behind (NCLB). These two separate terms allow us to test whether the effect of takeover was different in years after the passage of NCLB relative to prior to its passage. NCLB provided every state the authority to take over individual schools or entire districts for weak academic performance. States built new departments explicitly to monitor achievement and were required to assess students annually. NCLB increased the organizational focus on test score measures of student academic achievement outcomes and required that states increase their capacity for administering performance accountability.

We find that takeover increased spending by \$828 more in the post-NCLB period than it did before its implementation. We also find that takeover increased cash on hand per capita by roughly 69 percent in the period after NCLB, though we do not find that this increase was statistically different from the effect in the period before NCLB (as illustrated by the

nonsignificant F-test of equivalence in Table 2). Additionally, we find that the effects of state takeover on operating ratios and DSCRs were comparable before and after NCLB.

School Finance Reforms (Fiscal Centralization)

We test whether takeover impacts vary based on the presence and implementation of school finance reforms (SFR) and provide results in Panel C of Table 2. SFRs were designed to use centralized state resources to redistribute education funds more equitably across districts than they had been under conventional funding systems that were largely determined by local property wealth and taxation effort. We consider SFRs to be a form of fiscal centralization. We observe when SFRs occurred using data from Brunner and colleagues (2020).

We find suggestive evidence that takeover led to somewhat larger increases in school spending in districts under SFR (\$826) relative to those that were not under SFR (\$613), though the difference between these two estimates is not statistically significant ($p > .10$). We also find that takeovers that occur alongside SFR led to more cash on hand at the end of the year, a result that is consistent with the mechanisms of SFR (providing greater resources to less-advantaged districts). Finally, we find that the effects of state takeover on operating ratios were comparable in districts for which takeover occurred alongside SFRs versus those that did not. We also find suggestive evidence of variation in the effect of takeover on long-run solvency, but the variation works in the opposite direction as cash solvency (i.e., takeover has a larger effect on long-run solvency in districts not under SFRs). As a result of these mixed findings, we are reluctant to draw strong conclusions about how SFR moderates the impact of takeover on fiscal condition.

District and Baseline Debt Size

Takeover of large school districts may be a distinct phenomenon from that of smaller districts. State governments may be more hesitant to takeover larger districts, having limited

capacity to oversee finances of a large district. Additionally, fiscal distress can escalate exponentially with district size due to their greater borrowing capacity. Larger districts are also more visible, and this may incentivize improvement or make states more cautious about pursuing intervention. We display variation in the effects of takeover based on district size and baseline debt per pupil in Panels D and E of Table 2. We find that spending, budgetary solvency, and long-run solvency increased more in larger districts and districts with greater initial levels of debt than districts with fewer students and less debt. We read this as suggestive evidence that takeover had a more potent effect in larger districts. We urge caution in the interpretation of these results given that district size and baseline debt would be endogenous if states are less willing to take control of larger or more debt-stricken districts.

District Racial and Ethnic Composition

We find communities that were home to a greater share of Black residents were less likely to experience the benefits of takeover on education spending and improved fiscal condition. In Panels F and G of Table 2, we show how the effect of takeover varies depending on the percent of Hispanic and Black students, respectively. We find that the predicted takeover-induced increases in per-pupil expenditures and long-run solvency decline as the proportion of Black students increases. Specifically, we find that the positive effect of takeover on per-pupil expenditures in districts that are predominantly Black (75 percent) is about \$1,700 lower than a district that is predominantly non-Black (25 percent), and the effect on DSCRs is roughly 40 percent lower. Figure 5 provides visual intuition for these interactions, demonstrating that, although the effects of takeover are very large in districts with zero percent Black students, takeover has no significant effect on DSCRs and per-pupil expenditures in districts with at least 40 and 50 percent Black students, respectively. In contrast, we find no evidence of significant

interactions between state takeover and the proportion of Black students for other measures of fiscal condition. In contrast, we find that the effect of state takeover on financial condition does not vary depending on the proportion of Hispanic students in the district.

Extensions

Additional Expenditures Funded Legacy Costs

The additional expenditures caused by takeover were primarily spent on legacy costs such as staff benefits and debt retirement. Figure 4 displays the effect of state takeover on pupil-to-teacher ratios and categories of school spending (i.e., salary, benefits, debt). We find no effect of takeover on pupil-teacher ratios suggesting that takeover did not cause districts to reduce class sizes. Expenditures on teacher salaries increased after takeover, but that trend appears to have begun prior to state intervention. This implies districts may have been trying to retain teachers, perhaps to avoid state takeover related to academic performance issues.

In contrast, we find that takeover led to increases in district spending on benefits, steadily rising to about \$1,500 per pupil higher 10 years after takeover. Estimates suggest that about three quarters of the increase in school spending went to benefits. We also find evidence suggesting that takeover led districts to spend more on retiring long-term debt. Prior to takeover, we observe no differences in benefits spending or debt retired between districts that were taken over and those that were not. Then, our estimates suggest that takeover caused districts to spend about 200 percent more on retiring long-term debt, though these estimates are somewhat imprecise.

Takeover Increased State Contributions

Our results suggest that takeover involved a fiscal bailout of school districts on the part of states. In Figure 5 we show the effect of takeover on state and local revenues. We find convincing evidence that takeover increased average state revenues spent on education. In the

years leading up to state intervention, districts that would be taken over and comparison districts received about the same amount of state revenues per pupil. State revenues began to increase immediately after takeover and were about \$1,400 higher five years after takeover. In contrast, local revenues increased somewhat three years prior to takeover, and then continued to increase after takeover; five years after takeover, local revenues had increased by about \$1,800 per pupil. Overall, the state revenue increases caused by takeover are consistent with a fiscal bailout.

Robustness

The key identifying assumption of our analytic approach is that the trends in expenditures and fiscal condition prior to state takeover were parallel for districts that were taken over and comparison districts that were not taken over. The pre-takeover estimates in our event study models provide compelling, initial evidence for the internal validity of our specification. We further probe the robustness of our approach with several tests. First, in Appendix Table B1 we display results from a series alternative model specifications with differing treatment terms. We first display the overall effect of takeover using a generalized differences-in-differences framework, considering a district taken over for the entire period after the first takeover, mirroring our preferred event study specification. We then display the effect of takeover when a district is only considered taken over during the time of takeover. This allows for districts to go in and out of takeover during the period under study. Finally, in a third, censored specification, we drop takeover districts after they exit from the first takeover. Our results are robust to these alternative definitions of takeover.

Additionally, in Appendix Tables B2 and B3, we show results from additional specifications that each deal with potential threats to validity in different ways. The specification in column (2) removes baseline linear time trends to present a model with no controls,

demonstrating that our decision to control for baseline differences is not determining the results. In column (3), we account for the fact that some of the takeover districts are removed from state takeover (i.e., local control is returned) within the panel of years we observe, and some even are removed and then return to state takeover. We do this by controlling for years since exit from takeover and time relative to second takeover. Next, in column (4), we include control variables to account for any potential demographic changes in the student population before or during takeover. These include the percent of Black students, White students, Hispanic students, students eligible for free lunch, and students with special needs.⁶

In column (5), we account for the changes in the sample of treated districts that contribute to estimates of takeover effects, as shown in Table A2. Instead of allowing the sample to change, we only use districts for which we have data for the five years before and ten years after takeover. This limits our sample of takeover districts but ensures that any appearance of dynamic effects is not driven by changes to the sample composition (instead of takeover effects). In column (6), we account for concurrent shocks with a control for statewide SFR using the SFRs documented by Brunner and colleagues (2019). The specification in column (7) accounts for potential district reactions to the threat of takeover by controlling for a measure of the prevalence of takeover within each state, which serves as a proxy for a credible takeover threat. It is clear from these models that our results are very consistent even when we use these other approaches.

In Appendix Figure B1, we also display findings from a series of falsification tests examining the effect of takeover on missingness across each of our outcome variables. For all these measures, we demonstrate that takeover is not endogenously related to the likelihood of a given district-year observation being missing. In Appendix C, we discuss sample restricts in

⁶ In auxiliary analyses, we also find our main results are robust to controlling for a state having a Republican Governor, Republican trifecta control, and a Governor focused on education reform.

detail and demonstrate in Figure C1 that sample inclusion is unrelated to state takeover.

Finally, we present analytic and diagnostic results demonstrating that our findings are not affected by bias from heterogeneous treatment effects with staggered adoption. Our event study estimates improve upon the traditional “two-way fixed effects” (TWFE) approach by explicitly modeling dynamism in treatment effects over a long period of time (Goodman-Bacon, 2021). However, it is still possible that some dynamic treatment effects may lead to biased estimates due to negative weights assigned to some of the average treatment effects on the treated (ATT) for each group and period (de Chaisemartin & D’Haultfoeuille, 2020). In Appendix Figure B2, we present the weights assigned to each ATT in a simpler, generalized differences-in-difference approach that just uses the pooled estimate of the effect of state takeover to demonstrate that even in this less dynamic setting, none of the weights are negative. In Appendix Figure B3, we also estimate Cohort Average Treatment Effects which account for any bias due to heterogeneous effects across cohorts and corroborate our main findings (Sun and Abraham 2020). Together, these robustness checks provide strong support for our empirical approach.

Discussion

Takeover has affected millions of students throughout the U.S. since the first takeover in 1988, but prior research suggests that takeover has not benefitted them academically (Schueler and Bleiberg 2021). Takeovers also tend to generate resistance from within targeted communities, which are disproportionately comprised of low-income residents of color (Morel 2018; Schueler and West 2021). Given these findings, it is reasonable to ask: why do takeovers keep happening?

We investigate the possibility that state takeovers persist because they achieve their purported goal of dealing with fiscal mismanagement. Our research suggests that takeovers do

provide states a mechanism to improve fiscal condition of local districts, on average, and to address the demands of creditors. This seems to operate through a channel in which centralization facilitates greater financial well-being at the local level through greater state spending on the relatively disadvantaged districts targeted for reform. We find that takeovers increased school spending by roughly \$2,000 per pupil after five years, largely from state revenues, and led to improvements in cash and budgetary solvency. Funds were generally spent on employee benefits and debt retirement.

These findings contribute to a growing literature on centralization and decentralization in the context of public education (Burns 2010; Henig et al. 2001; Manna 2013; McDermott 1999; Morel 2018; Morel and Nuamah 2020; Peterson 1981). Much of the previous theoretical and empirical work has focused on centralization and redistribution, rather than fiscal performance or condition. This research has been helpful for understanding the consequences of local control and local funding of U.S. schools, generally showing that decentralization tends to make redistribution more difficult in theory, but not always in practice. Expanding on this line of work, we find that shifts in authority from the local to the state level can increase the resources flowing to the locality *and* improve fiscal well-being, on average.

However, our findings also highlight several reasons why states should not rush to take over all districts with fiscal challenges. First, previous research shows that takeovers do not improve the school district performance as measured by the academic achievement of students in the targeted districts (Schueler and Bleiberg 2021). Our paper provides some insight into how this could be true, despite the average spending increases that accompany takeovers and the substantial literature on the positive effect of increased spending on student achievement (e.g., Jackson, Johnson, and Persico 2015). With takeover, we observe that new funds go toward

legacy costs rather than expenditures that might be more likely to result in student academic improvements (e.g., class size reduction). Previous work also suggests that takeovers do not dramatically increase within-district funding equity (Bleiberg, Lyon, and Schueler 2022).

Our findings also do not necessarily imply that takeover generates improvements in fiscal efficiency or performance. Instead, it is possible that states are leveraging their more robust set of resources to pay for the legacy costs that the localities alone struggled to fund. This may be in response to pressure from powerful creditors or because states themselves lack bailout options for public education. Increases in revenues from the states persist even after 10 years suggesting that these increases in funding become institutionalized.

Furthermore, takeovers often generate political opposition within the districts that are targeted for reform largely due to concerns over the resulting loss of local economic and political power (Welsh et al., 2019; Morel and Nuamah 2020; Schueler and West 2021; Marsh et al. 2021). In majority-Black communities, takeovers decrease the descriptive representation of local elected officials, thus exacerbating race-based political inequality (Morel 2018).⁷ Our findings support these conclusions and demonstrate that the fiscal effects of takeovers also vary depending on the racial composition of the district. Takeover appears to be especially disruptive when enacted in majority-Black communities, as our research shows that takeover does not generate fiscal benefits for districts serving majority Black residents. This is concerning, especially considering that districts serving larger shares of Black students are often the targets of takeover, regardless of their academic performance (Schueler and Bleiberg 2021). Given this

⁷ However, the reverse is true when takeover occurs in majority-Hispanic communities (where takeover seems to pave the way for greater Latino descriptive representation), though the mechanisms underpinning these racial and ethnic differences are not well understood.

growing body of evidence, it is reasonable to approach the takeover of majority-Black districts with both caution and skepticism.

In sum, we find that, on average, state takeovers of local school districts achieve the purported goal of improving fiscal health. However, such improvements come at a significant cost to both states and localities. On the one hand, states are providing a large share of the funding increases, making the fiscal costs fairly diffuse, given that the costs of the increases in state revenues are distributed across the state (rather than in a smaller locality). On the other hand, takeover comes with political costs for local communities through the loss of the elected school board's decision-making power. In light of our findings, policymakers should carefully consider the trade-offs involved in state takeovers of local school districts, weighing the potential fiscal benefits against the political and educational costs for the communities they serve.

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Tables and Figures

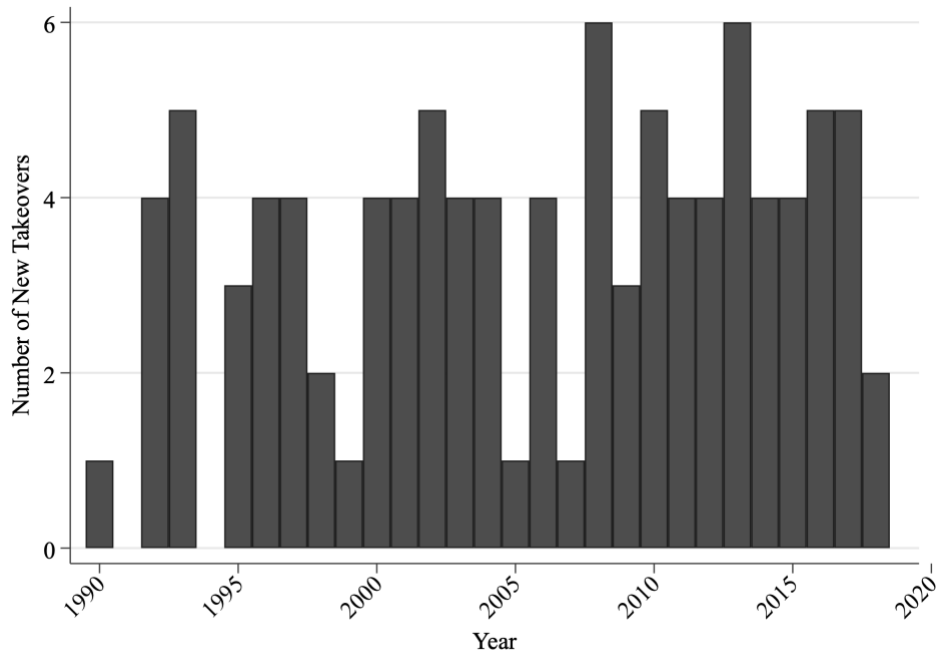


Figure 1. Number of New Takeovers over Time

Notes: During the period of study, we observe state takeovers from 1990 to 2018.

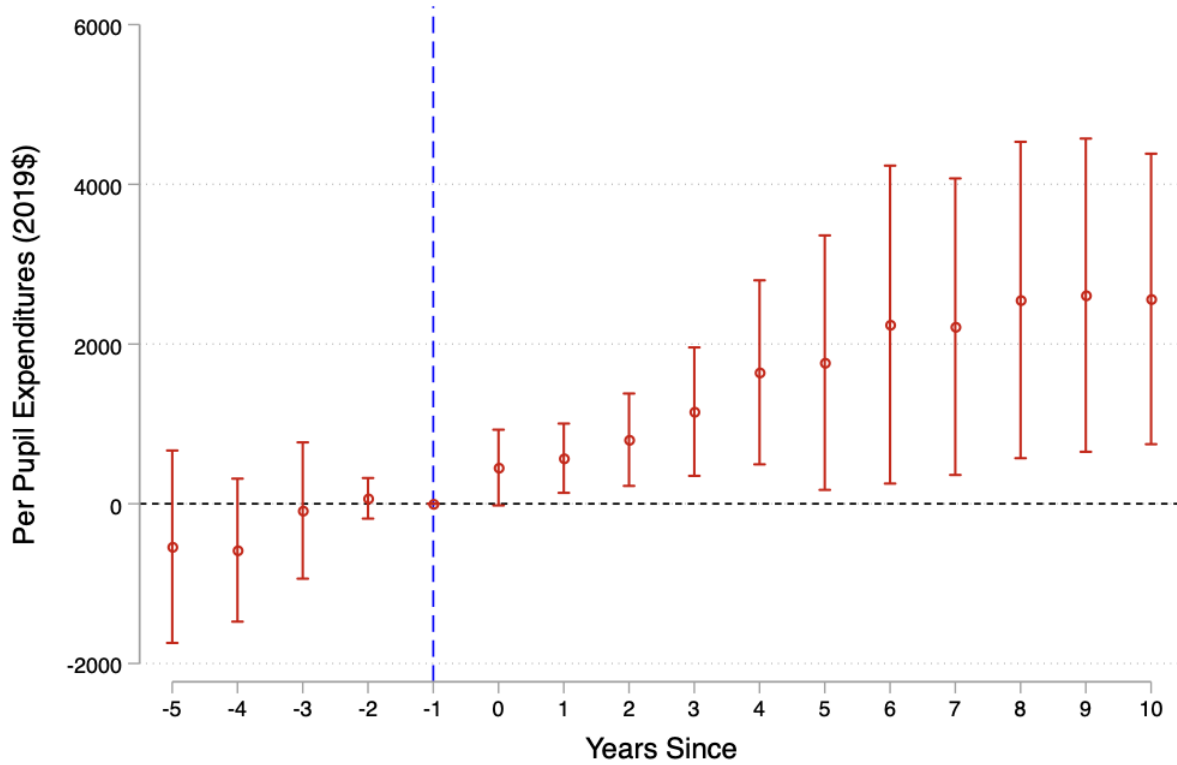


Figure 2. The Effect of State Takeover on Per-Pupil Expenditures, 2019\$

Notes: Error bars represent 95% confidence intervals. Robust standard errors are clustered at the district level. A joint significance test of the coefficients in all pre-years suggest that collectively pre-trend estimates are not different from zero ($p > .05$).

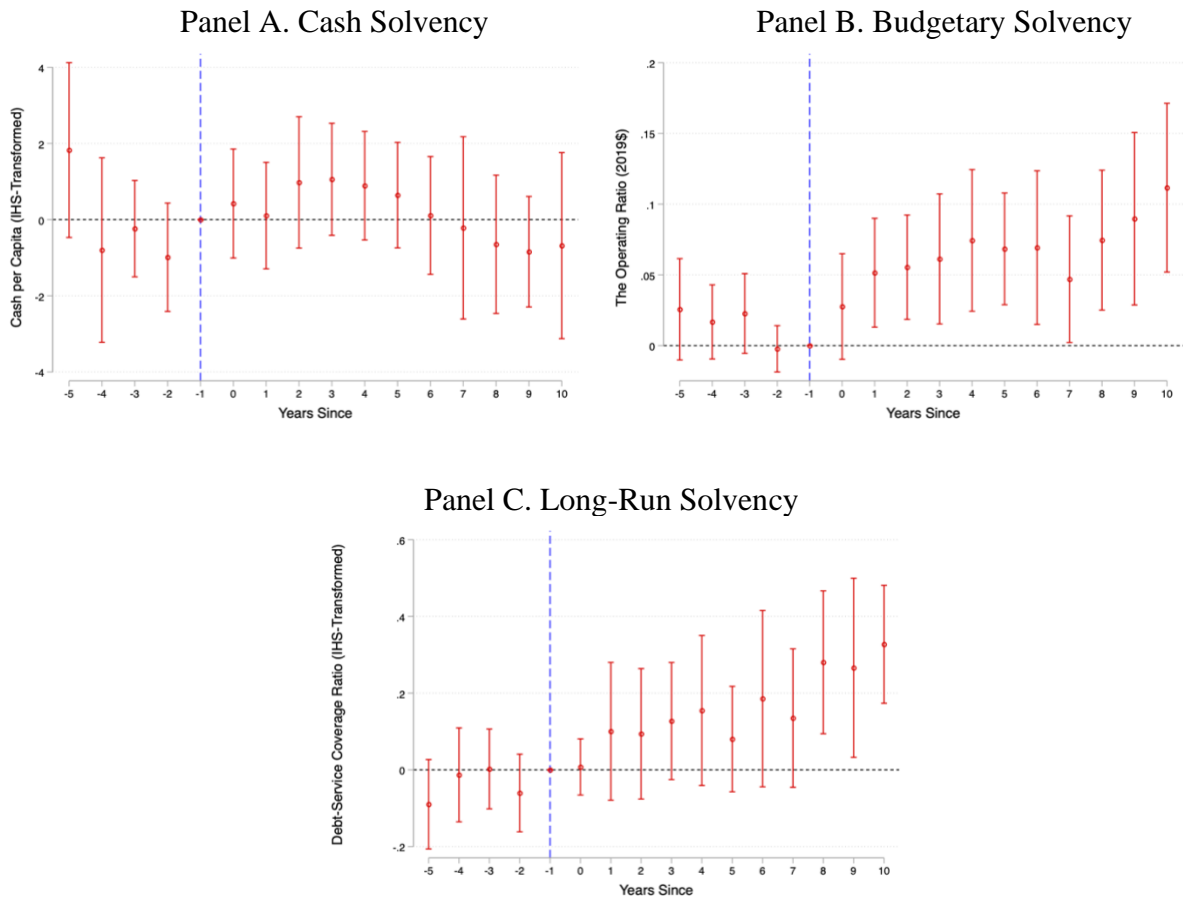


Figure 3. The Effect of State Takeover on Financial Condition

Notes: Error bars represent 95% confidence intervals. Robust standard errors are clustered at the district level. Joint significance tests of the coefficients in all pre-years for each outcome suggest that collectively all pre-trend estimates are not different from zero ($p > .05$).

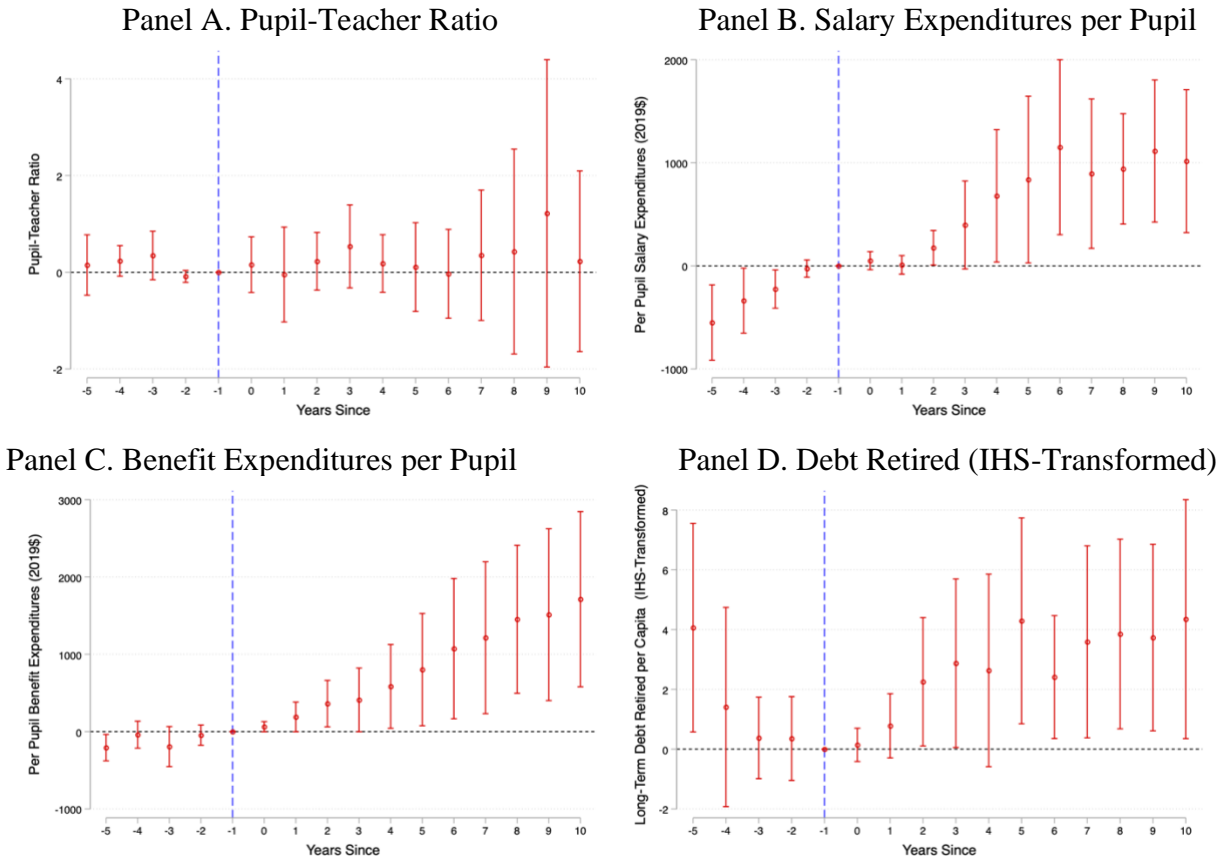
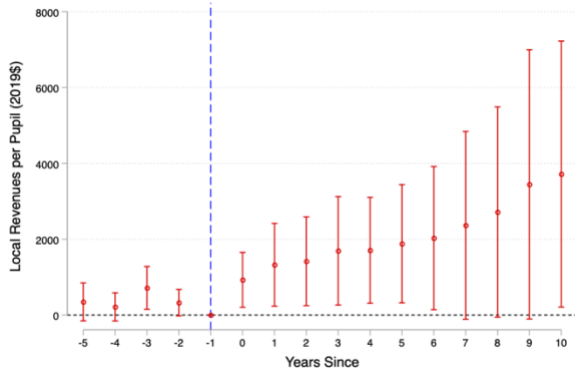


Figure 4. The Effect of State Takeover on Forms of Educational Spending

Notes: Error bars represent 95% confidence intervals. Robust standard errors are clustered at the district level. Joint significance tests of the coefficients in all pre-years for the estimated effects on pupil-teacher ratios, benefit expenditures, and debt retired suggest that collectively all pre-trend estimates are not different from zero ($p > .05$). However, for salary expenditures the joint significance test suggests that the pre-trend is different from zero ($p < .05$).

Panel A. Local Revenues per Pupil, 2019\$



Panel B. State Revenues per Pupil, 2019\$

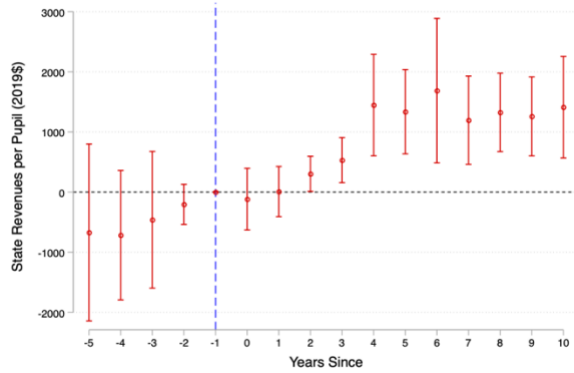


Figure 5. The Effect of State Takeover on Revenues

Notes: Error bars represent 95% confidence intervals. Robust standard errors are clustered at the district level. A joint significance test of the coefficients in all pre-years for the effect on state revenues suggest that collectively the pre-trend estimates are not different from zero ($p > .05$); however, for local revenues the joint significance test, suggests that the pre-trend is different from zero ($p < .05$).

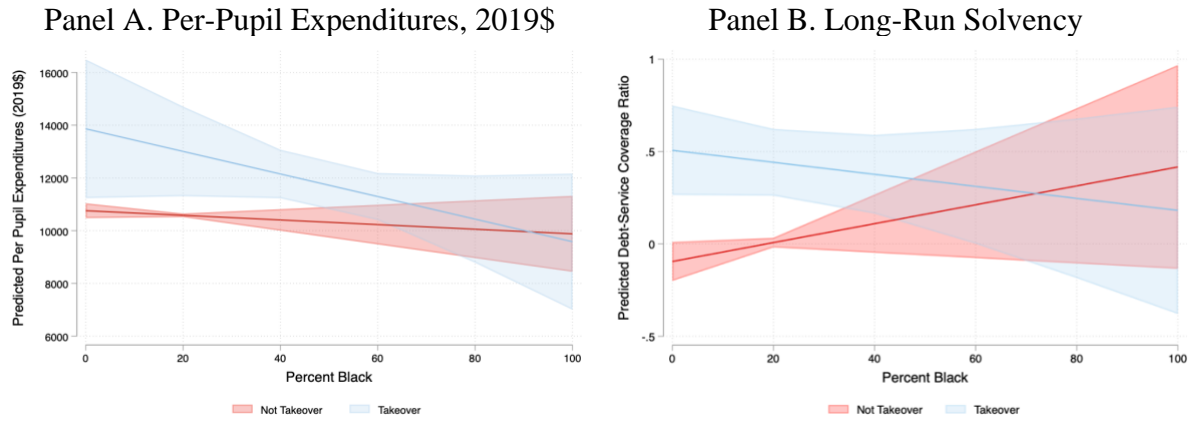


Figure 5. Heterogeneity in the Effect of State Takeover by the Proportion of Black Students

Notes: Error bars represent 95% confidence intervals. Robust standard errors are clustered at the district level.

Table 1. Baseline Characteristics of Takeover and Never Takeover Districts

	Takeover		Never Takeover		Baseline Year
	Mean	SD	Mean	SD	
Panel A. Student Characteristics					
Enrollment	27,992.2	101,226.6	2,960.8	9,570.7	1990
Percent White	37.9%	34.2%	83.2%	22.6%	1990
Percent Hispanic	11.2%	21.5%	7.0%	15.7%	1990
Percent Black	49.9%	35.2%	6.8%	15.2%	1990
Percent Special Education	11.3%	5.4%	10.4%	4.6%	1990
Percent Free Lunch	10.8%	20.9%	7.7%	13.7%	1990
Panel B. Measures of School Spending and Fiscal Condition					
Per-Pupil Expenditures, 2019\$	8,112.28	2,609.77	8,409.22	2,726.02	1990
Cash Held per Capita, IHS-Transformed	12.89	5.29	13.41	5.11	1998
Operating Ratio, 2019\$	1.11	0.12	1.14	0.14	1990
Debt Service Coverage Ratio, IHS-Transformed	0.28	1.24	0.44	1.49	1998
Salary Expenditures per Pupil, 2019\$	3,836.28	1,059.17	3,868.71	1,030.59	1998
Benefit Expenditures per Pupil, 2019\$	1,030.11	370.61	962.77	372.75	1998
Pupil-Teacher Ratio	17.61	2.95	16.20	4.02	1990
Debt Retired, IHS-Transformed	5.30	1.23	5.62	1.21	1998
Local Revenues, 2019\$	2,782.61	1,954.08	4,319.41	2,608.25	1990
State Revenues, 2019\$	5,135.10	1,663.60	4,696.91	2,091.94	1990
Observations	104		11,034		

Notes: Data are from F-33 Surveys and summarized at the district level. Cash held per capita is a ratio of total cash on hand at the end of a given year over student enrollment and is used to measure cash solvency. The operating ratio is a measure of revenues to expenditures and is used to operationalize budgetary solvency. The debt service coverage ratio is a ratio of net income over long-term liabilities and is used to operationalize long-run solvency. Inverse Hyperbolic Sine (IHS) Transformations are used in place of natural log transformations to preserve the values of zero.

Table 2. Variation in the Effect of Takeover on School Expenditures and Fiscal Condition

	Per Pupil Expenditure s	Cash Held per Capita	Operating Ratio	Debt Service Coverage Ratio
Panel A. Main Model				
Effect of Takeover (all post years)	3478.5* (1478.1)	0.144 (0.629)	0.0810*** (0.023)	0.358*** (0.109)
Panel B. Federal Performance Accountability				
Takeover Effect Pre-NCLB	-90.14 (360.5)	0.475 (0.657)	0.079*** (0.023)	0.513 (0.420)
Takeover Effect Post-NCLB	737.6** (272.7)	0.687** (0.253)	0.060*** (0.011)	0.199* (0.098)
<i>F-Test of Equivalence</i>	0.004	0.714	0.384	0.440
Panel C. School Finance Reforms				
Takeover Effect, Under SFR	844.1* (364.7)	1.495** (0.478)	0.051*** (0.014)	0.011 (0.094)
Takeover Effect, No SFR	628.7+ (362.0)	0.144 (0.235)	0.067*** (0.015)	0.353* (0.148)
<i>F-Test of Equivalence</i>	0.662	0.010	0.423	0.041
Panel D. District Size				
Takeover Effect, Big Districts	4417.2** (1453.6)	-0.453 (0.979)	0.088** (0.031)	0.446*** (0.087)
Takeover Effect, Small Districts	1014.2+ (569.2)	0.650 (0.452)	0.062*** (0.0120)	0.122 (0.079)
<i>F-Test of Equivalence</i>	0.026	0.273	0.406	0.010
Panel E. Baseline Debt				
Takeover Effect, Large Baseline Debt	4295.2** (1323.1)	-0.193 (0.684)	0.113***	0.426*** (0.088)
Takeover Effect, Small Baseline Debt	516.4 (600.8)	1.194 (1.192)	0.037** (0.014)	0.037 (0.014)
<i>F-Test of Equivalence</i>	0.011	0.314	0.013	0.010
Panel F. Percent Hispanic Students				
Takeover Effect	1332.1+ (682.9)	0.632 (0.685)	0.0705+ (0.0368)	0.148+ (0.0820)
Takeover Effect*Percent Hispanic	749.9 (1765.0)	-1.097 (1.283)	-0.0365 (0.0646)	0.272 (0.340)
Panel G. Percent Black Students				
Takeover Effect	2773.1* (1086.6)	-0.612 (0.710)	0.0723+ (0.0379)	0.520*** (0.108)
Takeover Effect*Percent Black	-3402.0+ (2036.2)	2.486 (1.762)	-0.0323 (0.0423)	-0.837*** (0.220)
District Fixed Effects	X	X	X	X
Year Fixed Effects	X	X	X	X
Baseline Outcome Linear Time Trends	X	X	X	X

Notes: Per-pupil expenditures are in real 2019 dollars. Cash held per capita is a ratio of total cash on hand at the end of a given year over student enrollment (IHS-transformed) and is used to measure cash solvency. The operating ratio is a measure of revenues to expenditures in real 2019 dollars and is used to operationalize budgetary solvency. The debt service coverage ratio (DSCR) is a ratio of net income over long-term liabilities (IHS-transformed) and is used to operationalize long-run solvency. Panels F and G include control variables for the percent of Hispanic and Black students in the district, respectively. The sample size varies across models because for some measures the baseline year is 1998 (see Table 1). Robust standard errors clustered at the district level are in parentheses. + p<0.1, * p<0.05, ** p<0.01, *** p<0.001.