The Fiscal Consequences of Special District Consolidation: Evidence from California*

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Abstract

The number of governments in the United States has increased steadily since the 1970s, driven by the proliferation of special districts. This growth has fueled concerns over the efficiency of public service provision, as many metropolitan areas rely on a fragmented network of jurisdictions to deliver services. However, due to a lack of exogenous variation in the number of districts, identifying the causal impact of government fragmentation is challenging. To address this challenge, this paper exploits California's Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, which established procedures for the consolidation and annexation of cities and special districts. Using synthetic control methods, I show that the Act reduced the number of special districts in the state by more than 30 percent. Despite this consolidation, the total amount of local government spending in the state remained unchanged, with the decrease in the number of governments offset by a corresponding rise in spending among the surviving districts. Efforts to reduce fragmentation may have limited fiscal impact unless they target districts where overlapping functions or scale inefficiencies are most pronounced.

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1 Introduction

Since the 1970s, the United States has seen a persistent rise in the number of its local governments, driven by the proliferation of special districts – such as park districts and water supply authorities – that carry out a narrow set of functions (Smaldone and Wright, 2024). This expansion has contributed to greater fragmentation in the provision of government services, particularly in large metropolitan areas such as Chicago, Pittsburgh and St. Louis, where hundreds of overlapping jurisdictions now share responsibility for basic public functions (Hendrick and Shi, 2015). Although school districts – the most common form of special purpose entity – have consolidated significantly over time, fragmentation among other special purpose entities has continued to increase, reflecting legal frameworks that encourage the creation of independent government entities to bypass general tax and debt limits (Foster, 1997; Goodman, 2019; Berry, 2009).

This trend has fueled ongoing debates about the potential benefits and harms of fragmentation. On one hand, an increase in the number of governments enhances consumer-voter choice by enabling residents to select jurisdictions that best match their preferences and leads to more efficient allocation of local public goods (Tiebout, 1956). Polycentric systems can provide enhanced local representation and responsiveness and generate healthy competition between multiple service providers (Ostrom et al., 1961). On the other hand, government fragmentation – be it vertical fragmentation, with multiple levels of governments, or horizontal fragmentation, with many governmental units at the same level – prevents governments from taking advantage of economies of scale and may lead to administrative redundancies, which in turn contribute to "overfishing" from a common tax base (Berry, 2008). Recent empirical studies focusing on the United States have generally found that fragmentation leads to inefficient increases in the size of the public sector (Goodman, 2019, 2015; Berry, 2008; Dolan, 1990). However, some of this work finds important distinctions across forms of governments, with the expansion of special districts in particular an inefficient driver of bloat (Zax, 1989; Hendrick et al., 2011). International evidence from Indonesia and sub-Saharan Africa also finds support for the idea that high levels of regional fragmentation reduce administrative capacity and diminish scale efficiencies in service provision (Grossman and Lewis, 2014; Grossman et al., 2017; Lewis, 2017).

One of the most commonly suggested urban reforms, consolidation, offers a potential remedy to these challenges, promising greater economies of scale and fewer redundancies. Consolidation can take many forms, including city-county (vertical) consolidation, school district consolidation, municipal consolidation, and the consolidation of special districts, each of which raises distinct concerns about administrative capacity and the effects on the quality of service provision (Jimenez and Hendrick, 2010). Amalgamation reforms suggest that mergers of general-purpose municipalities often succeed in reducing administrative expenditures (Blom-Hansen et al., 2014; Reingewertz, 2012; Blesse and Baskaran, 2016). Evidence from school district consolidations similarly points to cost efficiences from economies of scale in operating expenditures (Duncombe and Yinger, 2007). In contrast, studies of city-county consolidation find little impact on per capita spending (Carr and Feiock, 2004; Faulk and Grassmueck, 2012) Despite its breadth, the consolidation literature has little to say about the consolidation of special districts, despite the fact that the growth of single-function governments has driven most of the expansion in the number of local governments over the past half century (Smaldone and Wright, 2024) and remains central to debates over cost efficiency.

To address this gap, and to provide causal evidence, I exploit a state law that led to an exogenous change in the number of jurisdictions, and I leverage this change to study the effects of consolidation. In 2000, California passed the Cortese-Knox-Hertzberg (CKH) Government Reorganization Act, which established procedures for changes of organization to local governments, including city incorporations, annexations to a city or special district, and city and special district consolidations. This Act, as well as the commission that preceded it, was borne out of a concern for California's rapid population growth and the ensuing increase in overlapping service boundaries and urban sprawl. Among other things, the Act empowered local agency formation commissions (LAFCOs) in each county to review and initiate changes of organization so as to avoid excessive fragmentation and encourage local governments to be as effective and responsive as possible.

To assess the impact of the law, I use the synthetic control method (SCM). First developed by Abadie and co-authors as a means of assessing the causal impact of a policy change affecting a single treated region (Abadie and Gardeazabal, 2003; Abadie et al., 2010, 2015), the approach involves the construction of a synthetic control group – a weighted combination of comparison units chosen to minimize the root mean square error (RMSE) of key predictor variables – which enables one to compare the evolution of key outcomes in the treated region with those in a counterfactual region over time. Indeed, the SCM is well-suited for evaluating the effect of state laws that apply only to one state and for which it is otherwise difficult to construct a counterfactual. In addition to the SCM, I also conduct supplementary analyses that draw on 1) a balanced panel of local governments, and 2) within-state variation in the extent of consolidation.

Using these methods, I show first that the number of local governments in California decreased in the aftermath of the law by more than 20 percent relative to its counterfactual trajectory. This decrease was driven primarily by a decline in the number of special districts, and in particular by districts that provide safety and community services to small local areas, such as fire protection districts and library districts. Next, I show that this decline had no discernible effect on the state's finances; per capita spending and own-source revenue at the local level remained unchanged. These results are robust to a series of specification checks that vary the size of the donor pool and the number and type of predictor variables. They are also confirmed by the supplemental analyses, which show that surviving governments increased spending as they absorbed the responsibilities of the consolidated districts, and counties that experienced more consolidation than others failed to reduce spending. These results suggest that the districts most frequently targeted for consolidation – those with highly localized services and proximate capital assets – may in fact be limited in their ability to realize economies of scale, consistent with prior work on efficiency constraints among special districts (Duncombe and Yinger, 1993).

This paper proceeds as follows. Section 2 provides background on the growth in the number of governments in the United States and the California law that established procedures for the annexation and consolidation of local governments. Section 3 outlines a conceptual framework for thinking about jurisdictional overlap at the local level and its role in economies of scale. Section 4 outlines the data, while Section 5 discusses the methods. The results are presented in Section 6. Section 7 present the results from a complementary set of analyses. Section 8 concludes.

2 Background

2.1 Growth in the Number of Governments

Between 1972 and 2022, the number of local governments in the United States increased by 14 percent, from roughly 78,000 to nearly 89,000. As Figure 1 shows, this increase was entirely attributable to growth in the number of special districts, which grew by more than 50 percent even as the number of school districts and general-purpose governments declined. While special districts represented less than a third of total governments in 1972, there are now nearly as many special districts as there are general purpose governments. School districts, once the dominant form of local government in the country in the 1940s, continued a trend of consolidation that began in earlier decades (Smaldone and Wright, 2024).

This increase in the number of governments has translated to a high degree of fragmentation of government services. The Chicago metropolitan area alone includes more than 1,500 jurisdictions (McCasland et al., 2023), and taxpayers living in major metropolitan areas frequently belong to a large number of taxing jurisdictions. While scholarship attributes much of this fragmentation to a desire among households for homogenous communities and the exclusion of minorities and low-income households from access to high-quality public goods (McCasland et al., 2023; Alesina et al., 2004; Monarrez and Schönholzer, 2023), there is less consensus as to why the number of special districts in particular has continued to increase – or what gains may be achieved through consolidation (Goodman, 2019, 2020).

2.2 The California Context

Following World War II, California experienced booming growth in its population, resulting in a proliferation of local governments. Many of the emergent districts were formed with little coordination or planning and with overlapping jurisdictional boundaries. In 1959, to address the problems arising from the growing fragmentation, Governor Edmund Brown appointed a commission on Metropolitan Area Problems, whose recommendations resulted in the creation of Local Agency Formation Commissions, or LAFCOs, in each county (Bui and Ihrke, 2003). Between 1963 and 1985, LAFCOs administered three different laws, each of which established different procedures for local government boundary changes. In 1985, acknowledging that the three laws were not always consistent, the Cortese-Knox-Local Government Act of 1985 integrated the three laws (Bui and Ihrke, 2003). However, this integration did not result in procedures that were any less unclear or cumbersome (California Commission on Local Governance for the 21st Century, 2000). Moreover, LAFCOs did not possess sufficient powers to adequately address the growing number of special districts; in particular, they were unable to initiate proposals for dissolution on their own, and instead had to wait for a petition to be brought (Jeffries, 1971). In 1997, the Legislature formed the Commission on Local Governance for the 21st Century, which recommended strengthening LAFCO powers and streamlining and clarifying the procedures for local government boundary changes (California Commission on Local Governance for the 21st Century, 2000). These recommendations were formally adopted with the passage of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH, or the Act, from here forward).

The purpose of the Act was to clarify the procedures for changes of local government organization, but also more broadly to discourage urban sprawl and encourage intelligent growth. In particular, the Act found that "whether governmental services are proposed to be provided by a single-purpose agency, several agencies, or a multipurpose agency, responsibility should be given to the agency or agencies that can best provide government services" (California Assembly Committee on Local Government, 2024). The Act was not expressly intended to encourage consolidation per se; in fact, it clarified procedures for a range of changes of organization, including the formation of a district or incorporation of a city. However, underlying the Act's provisions was a broad concern about fragmentation that had given rise to LAFCOs and the Commission on Local Governance in the first place.

The Act formally delegated the state legislature's boundary powers to LAFCOs, empowering a LAFCO in each county (58 in total) to determine the boundaries of city and special districts in that county, and accordingly designate the land use authority of local governments in the county as well as their taxing and corporate powers (Bui and Ihrke, 2003).[1] LAFCOs have the power not only to review and approve proposals for changes of organization but also the power to initiate proposals for the consolidation, dissolution, merger, or formation of a district (California Assembly Committee on Local Government, 2024). Importantly, voters can't use an initiative or referendum to circumvent LAFCO approval, although elections may be required in some cases (Bui and Ihrke, 2003).

One example of the type of consolidation the Act was intended to facilitate occurred in Sonoma County. In 2019, the Sonoma County Fire District (SCFD) was created through the consolidation of four separate entities: the Windsor Fire Protection District, the Bennet Valley Fire District, the Rincon Valley Fire District, and the Mountain Valley Fire Department. In subsequent years, the SCFD expanded further through the dissolution and annexation of three additional districts: the Russian River Fire Protection District, the Forestville Fire Protection District, and the Bodega Bay Fire Protection District (Sonoma Local Agency

[1] LAFCOs regulate all city and most special district boundaries, including water districts, municipal utility districts, pest control districts, and recreation and park districts, but do not regulate boundaries for counties and a small number of local governments for which the state legislature has established alternative procedures (Bui and Ihrke, 2003).

Formation Commission, 2025). In the case of Bodega Bay, the rationale for the proposed reorganization was to "achieve greater economy and efficiency in providing fire protection and emergency services for the residents of the district" (Sonoma Local Agency Formation Commission, 2022). Moreover, owners of property within the Bodega Bay district would be subject to special taxes upon annexation that would be levied at rates lower than those established by the Bodega Bay FPD (Sonoma Local Agency Formation Commission, 2022).

California is not alone among states in its efforts to provide clear procedures for the consolidation of services. Several states have made efforts in line with California's to address fragmentation by streamlining the procedures by which local governments can reorganize. New York, Florida, and Colorado have all passed laws establishing procedures for the consolidation and dissolution of certain types of local governments, with the aim of minimizing duplication among service providers and avoiding double taxation.[2] Despite similar legislative efforts, Colorado and Florida both experienced subsequent increases in the number of local governments, and the fact that New York's law is relatively recent constrains the extent to which it can be empirically evaluated. These contrasts make California an especially informative setting for evaluating the impact of state-led efforts at consolidation.

3 Conceptual Framework

Let m represent the number of general-purpose governments in a region (counties, municipalities, etc.), n the number of single-function special districts before consolidation, and $\tilde{n}$ the number of special districts after some are either absorbed by general purpose governments or merged with other special districts in the region. Consolidation will reduce vertical fragmentation if it reduces the number of overlapping single-function districts that taxpayers face. It will reduce horizontal fragmentation if reduces the number of districts that compete

[2]See New York's New N.Y. Government Reorganization and Citizen Empowerment Act (2010), N.Y. Gen. Mun. Law §§ 750–793, Florida's Uniform Special District Accountability Act (1989), Fla. Stat. §§ 189.01–189.076, and Colorado's Special District Act of 1981, Colo. Rev. Stat. §§ 32-1-101 to 32-1-1807.

with each other for residents at the same governmental tier.

Assume that all services are provided by either special districts or general purpose governments. Let C_i^d represent the cost of a service provided by special district i, and C_j^g represent the total cost of services provided by general purpose government j. The total cost of government services before consolidation is $C^{pre} = \sum_{i=1}^{n} C_i^d + \sum_{j=1}^{m} C_j^g$, while the total cost of services after consolidation is $C^{post} = \sum_{i=1}^{\tilde{n}} C_i^d + \sum_{j=1}^{m} C_j^g$. The effect of consolidation on government spending is $\Delta C = C^{post} - C^{pre}$.

Assume a production cost function for each service, which depends on the quantity of service output (Q), managerial efficiency (E), and administrative overhead (A): $C = f(Q, E) + A$. If f exhibits economies of scale, i.e. marginal cost decreases with Q ($\frac{d^2 f}{dQ^2} < 0$), then larger-scale operations will reduce per-units costs, and $\Delta C < 0$. Similarly, fewer districts may mean less duplication of administrative functions (A) and thus fewer redundancies in fixed costs. Finally, general purpose governments providing multiple services may realize economies of scope over single-function districts. This may occur, for example, if the general purpose government can lower units costs through bulk purchasing of supplies that are utilized for the multiple activities.

Alternatively, if consolidation does not generate meaningful cost savings ($\Delta C \approx 0$), then the total cost of government service provision may remain approximately constant even as the number of governments declines. This may occur if, for example, the consolidated districts provide services requiring geographically proximate assets – such as fire stations – that must be maintained regardless of how many governing units exist, and administrative costs are a small share of expenditures (Duncombe and Yinger, 1993). Define average spending per government as $\bar{C}^{pre} = \frac{C^{pre}}{m+n}$ before consolidation and $\bar{C}^{post} = \frac{C^{post}}{m+\tilde{n}}$ after consolidation. In this case, since $m + \tilde{n} < m + n$, it follows that $\bar{C}^{post} > \bar{C}^{pre}$, i.e. the average spending of the surviving governments rises, reflecting the reallocation of functions previously handled by the eliminated districts. In the absence of scale economies, consolidation may simply concentrate fiscal responsibilities in a smaller number of governments.

4 Data and Variables

4.1 Census of Governments

To study the effects of CKH on government fragmentation and spending, this paper draws on data from the Census of Governments (COG). The U.S. Census Bureau conducts a complete census of the nation's state and local governments every five years (years ending in 2 and 7), collecting information on government finances and tabulating the total number of government entities.

Counting the number of government entities requires defining the units of measurement. Accordingly, the Census defines a government as "an organized entity having governmental character and sufficient discretion in the management of its own affairs to distinguish it as separate from the administrative structure of any other government unit within that state" (U.S. Census Bureau, 2024, page 1). Rather than applying a single litmus test, the Census looks for indicators of these characteristics, including the possession of corporate powers, such as the right to sue, the power to levy taxes and provide services, and the ability to determine a budget without review by other local officials or governments.

In addition to tabulating the number of governments, the Census Bureau classifies local governments into five types: counties, municipalities, townships, school districts, and special districts. While the first three types of governments, all general purpose governments, do not present significant difficulties for classification, the latter two, comprising special purpose governments, are less easily defined. Special districts in particular require careful delineation due to the variation in special district legislation across states. Accordingly, the Census Bureau defines special districts as "independent, special purpose governmental units that exist as separate entities with substantial administrative and fiscal independence from general-purpose local governments" (U.S. Census Bureau, 2024). This definition may or may not overlap with state-level definitions, where state statutes outline the relevant characteristics under state law. In California, special districts are "any agency of the state for the local performance of governmental or proprietary functions within limited boundaries" and have four distinguishing characteristics: 1) they are a form of government, 2) they have governing boards, 3) they provide services and facilities, and 4) they have defined boundaries (California Senate Local Government Committee, 2010). The key distinction between California's definition and that of the Census Bureau appears to be the degree of independence from general purpose governments (Goodman, 2020).

In addition to providing a tally of the total number of governments, the COG also collects information on revenues, spending, and outstanding debt, making it the only source of nationwide data on local government finances. While the financial information is reported by districts themselves, the Census cleans the data and compares the reported information to financial statements.

For the analysis that follows, I utilize count data on the number of local governments in each state from the complete censuses, starting in 1972. For each of these same years, I also draw on related fiscal outcomes for state-level aggregates. This provides six pre-intervention outcomes (at five year intervals) and five post-intervention outcomes for key variables, covering a 50 year time span. For a supplemental analysis (outlined below), I separately draw on panel data for a subset of local governments using the Annual Survey of State and Local Finances. In non-census years, the Census administers the Annual Survey, which collects data on a sample of respondents, where respondents are stratified by government type, with the probability of selection proportional to size.

4.2 Outcomes

This paper's focus is understanding the effects of government consolidation on cost efficiencies. Thus, to understand whether CKH successfully addressed government fragmentation, I first look at the impact that the Act had on the total number of governments in California as well as the total number of special districts. To better understand the exact nature of the reform, I further drill down to investigate what types of special districts were most affected. Following this, I examine the effect of the Act on government spending and revenues. Specifically, I focus on the aggregate amount of local government spending as well as the aggregate amount of own-source revenues collected by local governments in the state. I focus on own-source, rather than total revenues, to measure the extent to which local governments draw separately from a common pool of fiscal resources rather than rely on higher-level governments (Berry, 2008). Because spending among local governments in California is larger than almost any other state in the country, I scale these fiscal variables on a per capita basis; without this adjustment, it is impossible to obtain a reasonable synthetic control for California as the optimization algorithm struggles to assign nonnegative weights.[3] I discuss the empirical methodology in more detail in the section that follows.

5 Synthetic Control

To evaluate the impact of CKH, I use the synthetic control method (SCM). Developed as a means of estimating the causal impact of a policy change when there is only one treated unit, such as a state, the SCM compares the evolution of outcomes in the treated unit with the evolution of outcomes in a "synthetic control" unit, constructed by minimizing the RMSE of predictor variables among a pool of comparison units (the "donor pool"). In this case, I evaluate the log of the number of local governments in California - along with associated fiscal metrics, such as log per capita local spending and log per capita own-source revenues – before and after CKH, and I compare these outcomes to those of the synthetic control constructed using a weighted combination of other states. The treatment effect estimates

[3]This is less of an issue for the number of governments, as three other states have a greater number local governments than California in the last pre-intervention year (1997). Nevertheless, in appendices I also present results for the number of governments that use a scaling factor.

reflect the difference in outcome between California and its synthetic control over the post-treatment observations (2002, 2007, 2012, 2017, and 2022).

5.1 Predictors

Although data-driven, the SCM does require require various specification choices on the part of the researchers. First among these is the set of predictor variables. Although it is common to use only the set of pre-intervention outcomes as predictors to reduce specification searching (McClelland and Mucciolo, 2022; Ferman et al., 2020), using all outcome lags does not necessarily produce the most accurate prediction of posttreatment values and can increase the bound on the bias (Abadie, 2021; Kaul et al., 2022). Thus, to predict the number of local governments in California - and related fiscal outcomes – I use a combination of pre-treatment outcomes and other variables. Specifically, to estimate the impact of CKH on the log of the number of governments, I use three years of pre-pretreatment outcomes (1977, 1987, and 1997), the level of population (averaged over the pre-treatment period), the size of the land area, and per capita income (also averaged over the pre-treatment period). These covariates capture key structural determinants of local government formation and thus help improve the fit of the synthetic control by accounting for relevant cross-sectional variation; population size and land area account for the demand for government services and geographic dispersion respectively, while per capita income reflects fiscal capacity (Ladd, 1992; Dincecco and Katz, 2016; Musso, 2001). For per-capita spending and revenues, I use three years of pre-treatment outcomes (1977, 1987, and 1997), the level of per capita income (averaged over the pre-treatment period), and the percentage of families with children (averaged across the 1990 and 2000 censuses). These covariates account for the fact that demand for government services increases with income (Shelton, 2007) and that K-12 education makes up a high component of local government budgets (Poterba, 1997). In additional tests, I vary the sets of predictor variables to assess robustness.

5.2 Donor Pool

The SCM also requires the researcher to select the donor pool. In this case, the set of state governments provides a natural comparison set. However, in order to ensure that each unit in the donor pool is a reasonable control for California, I exclude those states that have enacted laws similar to CKH. This excludes the states discussed above in Section 2 – New York, Florida, and Colorado. I also exclude Georgia, which passed a law, the Service Delivery Strategy Act (1997), aimed at minimizing the duplication of services, as well as Oregon, cited by Clarke (2014) for having especially clear merger statutes. In robustness tests, I explore specifications with alternative restrictions on the donor pool.

5.3 Bias-Correction

One recent development in the SCM literature is the use of bias-correction procedures that adjust for differences in the predictors of the treated unit and its synthetic control donors (Abadie and L'hour, 2021; Ben-Michael et al., 2021). If the predictor values for the treated unit are not closely reproduced by the synthetic control, then bias corrections can improve on the classical SCM by reducing the estimated bias from predictor variable discrepancies. Thus, in addition to graphically showing the results from "classical" SCM, I also produce bias-corrected treatment effect estimates using the allsynth command in STATA (Wiltshire, 2022).

5.4 Inference

For the purpose of quantitative inference, as originally conceived by Abadie and Gardeazabal (2003) and Abadie et al. (2010), the SCM conducts placebo tests in space by computing the treatment effect for every potential comparison unit in the donor pool. P-values are based on the size of the treatment effect estimate relative to the distribution of placebo effects. One complication to this approach is that the SCM may not necessarily produce strong matches for all of the units in the donor pool, thereby producing placebo effects that are quite large. For this reason, Abadie et al. (2010) propose an alternative test-statistic that scales the treatment effect by the pre-treatment fit. More recent work on inference for the SCM includes Li (2020), Cattaneo et al. (2021), and Chernozhukov et al. (2021). Because I use bias-corrected treatment effect estimates that adjust for discrepancies between the treated unit and its synthetic control in the pre-treatment period, I rely on the original permutation test proposed by Abadie et al. (2010). Furthermore, because the sample of states is small, and because it is implausible that CKH could increase government spending, I report one-sided rather than two-sided p-values, as suggested by Abadie (2021). Thus, for average treatment effects, I restrict the placebo-year estimates that contribute to the posttreatment RMSE to those with negative values, and I calculate p-values as $\frac{R}{J+1}$where J is the number of placebo units and R is the ranking of the treated unit's posttreatment RMSE relative to the distribution of placebos. For annual effect sizes, R is based on the rank of the estimated annual treatment effect relative to the distribution of placebo effects in the same year.

6 Main Results

6.1 Validation

Before presenting results, I first assess the quality of the synthetic control by evaluating its predictive power in the pre-intervention period. This follows Abadie and Vives-i Bastida (2022)'s suggestion to use out-of-sample prediction as an important validity check. Figure 2 shows three main outcomes of interest for California – the log of the total number of local governments, the log of total local spending per capita, and the log of total local own-source revenues per capita – alongside the corresponding synthetic controls. I divide the pre-intervention periods into two halves, using the first three observations to fit the synthetic control, and the remaining three to evaluate the fit. The predictor variables are the same as those outlined above for the main results, except they include only two lags of the outcome variable (in 1972 and 1982) and omit all covariates from after 1982. Figure 2A shows the log of the total number of jurisdictions in California over this period alongside the synthetic control. Figure 2B shows the bias-corrected treatment effect estimates, with the grey lines representing placebos. Figures 2C-F show the corresponding figures for the log of per-capita spending and the log of per-capita own-source revenues.

In both cases, the synthetic controls closely mirror the actual outcomes in California. Consequently, the treatment effect estimates are close to zero and bounded by the placebos, indicating that the synthetic control correctly estimates a zero effect in the absence of an intervention. The associated p-values are 0.57, 0.48, and 0.39.[4]

6.2 Number of local governments

Next, I estimate the effect of CKH on the log of the number of local governments in California. Figure 3A shows the log of the number of governments before and after the passage of CKH in 2000. Prior to 2000, the synthetic control provides a close match for California, with the exception of 1992 where there is a discrepancy of approximately 0.1 log points. After CKH, the two systematically diverge, with the log of the number of governments in California remaining stable while the synthetic control grows over time. Figure 3B shows the

[4] Another means of validating the quality of the synthetic control is to examine which units in the donor pool receive positive weights. This helps to ensure that the comparison pool is qualitatively similar to the treated unit with respect to the outcome of interest. Table A1 shows the states that receive positive weight in the synthetic control constructed using the log number of general purpose governments. As expected, the states that receive positive weight are primarily those such as Texas and North Carolina with fragmented systems of local governments where fiscal activity is concentrated at the local rather than the state level (with the notable exception of Alaska).

bias-corrected treatment effect estimates, with the grey lines again representing the set of placebo estimates. Consistent with Figure 3A, the treatment effect grows in magnitude over time to a 24 percentage point reduction in the number of jurisdictions by 2022. In the last two post-intervention years, the treatment effect estimates are both statistically significant with p-values of 0.043. On average, CKH reduced the number of governments by 13 percent across 2002-2022 (p-value of 0.065). Table 1 provides the treatment effect estimates of the intervention in the last post-intervention year (2022) along with the associated p-values. Figure A1 shows that the effects are similar when the number of governments is scaled by either the state population or land area.

Figures 3C and 3E show the effect of CKH on the log of the number of general purpose governments and the number special districts respectively. Because special districts are the majority of local governments in the state as well as the primary driver of growth in local governments nationally, any law that incentivizes merging or consolidating districts should act primarily through its effect on special districts. Figure C shows a strong degree of correspondence between California and its synthetic control prior to the intervention in 2000. The correspondence is less strong in Figure E. The effect on the number of general purpose governments (Figure 3D) is small in magnitude (an average effect of -0.045 percent) despite being statistically significant in four of the five post-intervention years. On the other hand, in Figure 3F, as in Figure 3B, the treatment effect estimates grow in magnitude over time, such that by 2022, the effect of CKH is to reduce the number of special districts in the state by 36 percent (p-value of 0.043). Thus, Figure 3 shows that CKH was effective in reducing the number of local governments in the state, and that it did so primarily by reducing the number of special districts.

In order to further unpack the results depicted in Figure 3, I also examine the effect of CKH on special districts of different types. I assign special districts in the state to one of four categories based on the functional codes used by the census: 1) those pertaining to local safety or community service, such as fire protection, library, or park districts, 2) those providing services related to health, welfare, or community well-being, such as hospital, ambulance, or emergency services districts, 3) those related to the environment or water and resource management, such as water, drainage, sewerage, or conservation districts, and 4) those related to infrastructure, utilities, or economic development, such as airport authorities, port authorities, housing and community development authorities, or transit districts. I exclude districts with missing functional codes and those that are classified as unallocable. In principle, districts that operate at small scales, such as library districts, may be more likely to be targets for consolidation, while districts that finance or regulate large-scale infrastructure or utility systems, such as transportation authorities, may be less likely to fall within the scope of consolidation reforms.

Table A2 shows the treatment effect in 2022 for all four categories of special districts. As expected, the reform had little impact on districts providing services related to infrastructure, utilities, or economic development, which actually increased in number by a statistically insignificant eight percent by 2022. On the other hand, the reform had the biggest effect on districts providing local safety or community services such as fire protection or library districts, which declined in number by 80 percent by 2022 (p-value of 0.022). Taken together, these results suggest that the reform had the biggest effect on special districts providing highly localized, place-based services.

6.3 Fiscal Outcomes

The above results confirm that CKH was successful in reducing fragmentation in California, ultimately reducing the number of local governments by roughly a quarter relative to its counterfactual trajectory. Was this reduction in the number of districts accompanied by a reduction in government spending? Figure 4 shows the impact of CKH on the log of total per capita local government spending. As noted above, I scale spending by population because of the SCM's requirement that the predictors of the treated unit fall inside the convex hull of the values for the donor pool. As in Figure 3, the results are shown for all districts as well as general purpose governments and special districts. In each case, the synthetic control plot is shown alongside a plot of the treatment effect estimates. In Figures 4A, 4C, and 4E, the synthetic controls are reasonable matches for California in the pre-intervention period, though there is less correspondence in the earliest pre-intervention year (1972). In the plot of all districts, the estimated treatment effect is *positive* in every post-intervention year (Figure 4B). For general purpose governments and special districts, the effects hover close to zero and always appear in the center of the placebo distribution. The associated p-values for the average treatment effects depicted in Figures 4B, 4D, and 4F are 0.67, 0.57, and 0.76. Thus, there is no indication that CKH lowered total spending among local governments in the state, despite substantially decreasing the number of special districts.

Figure 5 shows the results for the log of total own sources revenues collected by local governments. Own-source revenue may be a more precise way of measuring the effects of CKH as it is uncontaminated by transfers from higher level governments. As in Figure 4, there is a fairly reasonably correspondence between California and the synthetic controls in the pre-treatment period. However, once again there is little evidence of a reduction in the size of local governments in the state. Figure 5B shows a trend of *increasing* own source revenues over time, highlighted by a transitory uptick in 2007 that is driven by an increase among general purpose governments (Figure 5D). However, the average effects are close to zero and statistically insignificant. Special district revenue does decline slightly, but this effect too is not significant. The fact that there is no significant decline in spending or revenues for special districts suggests that the eliminated governments may have transferred their functions to other special districts, as in the example cited in section 2.2, rather than to general purpose governments.

6.4 Robustness

In this section, I assess the robustness of the above estimates. Specifically, I vary several aspects of the synthetic control design and compare the resulting estimates to my baseline results. First, following the recommendation of Ferman et al. (2020), I include a specification with only pre-treatment outcomes as predictors, a benchmark that avoids specification searching. Next, in order to reduce the potential for over-fitting and interpolation biases, I restrict the donor pool to states with predictor values that are close to those of California (Abadie and Vives-i Bastida, 2022). To accomplish this, given California's size, I exclude states with populations that place them in the bottom ten percent of the distribution in the last post-intervention year (1997). Next, to address the possibility that some states may already make it simple to dissolve special districts that are not serving the public purpose, even if they have not passed a specific law to that effect, I exclude states from the donor pool with clear dissolution procedures. Specifically, I exclude the states that Bauroth (2010) identifies as having clear dissolution procedures for all types of special districts. Finally, I employ an alternative estimator, the synthetic difference-in-differences estimator of Arkhangelsky et al. (2021), which uses data-driven weights similarly to the SCM but also includes adjustments for time-trends.[5]

Table 2 presents the results. The baseline estimates are presented alongside the alternative specifications for comparison. The first set of estimates pertaining to the number of governments shows that almost all of the alternative specifications are consistent with the baseline results. The one exception is that the specifications using only the pre-treatment outcomes as predictors are smaller than the baseline estimates and not statistically significant. Given the importance of population and land area as structural determinants of the number of local governments in a state, this result may reflect the fact that solely optimizing the pretreatment fit of the outcome variable can result in estimates that are more biased and

[5] The synthetic d-i-d estimator requires a balanced panel and thus omits covariates without a full set of observations over the pre-treatment period.

less precise compared to models that place more weight on covariates (Kaul et al., 2022). Nevertheless, four of the five estimates for the effect of CKH on the total number of governments have p-values less than 0.05. The second and third sets of estimates, pertaining to per-capita spending and own source revenues, also affirm the baseline results. There is no evidence that CKH decreased per capita spending or own-source revenues. In fact, all of the specifications in columns 1-5 for the fiscal outcomes are positive, indicating that, if anything, the local government sector in California expanded during this period rather than shrank.

7 Additional Analyses

7.1 Difference-in-difference analysis of local governments

How could the reform reduce the number of jurisdictions in the state but fail to achieve cost savings? If the state reduced the number of special districts but failed to reduce spending, this would imply that the surviving governments in California must have increased their spending accordingly. In order to evaluate the change in spending among California local governments that remained post-CKH, I assemble a balanced panel of local governments with a full set of observations in the period of time spanning CKH. Specifically, I assemble a sample of governments that appear every year in the Census' Annual Survey of State and Local Finances between 1995-2009. I use this sample to construct a matched panel of treated (California) and untreated local governments, and I estimate the change in fiscal outcomes using a simple difference-in-difference (d-i-d) design of the following form:

$$Y_{it} = \beta_1 CA_i * Post_t + \delta_i + \gamma_t + \varepsilon_{it} \tag{1}$$

where CA denotes an indicator variable for local governments in California subject to CKH, $Post$ indicates the time period after 2000, and δ_i and γ_t represent government and year fixed effects respectively. The Census does not report population statistics for special districts and school districts and thus the outcome variables cannot be scaled by population as in the earlier fiscal analysis, however in principle this should not be necessary since, unlike with the SCM, there is no concern about assigning negative weights.

To assemble the matched comparison group, I perform nearest neighbor matching by computing the Mahalanobis distance between each treated unit and all governments in the comparison pool on the basis of the outcome of interest in five pre-intervention years (1995-1999). Because California contained many of the highest spending local governments in the country in 1999, each of which cannot be easily paired with a match, I use a caliper of 0.6 to exclude matches of poor quality, lowering the number of treated districts in the sample from 434 to 401 for the expenditure analysis. As with the synthetic control estimation above, I exclude from the comparison pool governments from New York, Florida, Colorado, Georgia, and Oregon.

Figure 6 presents the graphical results of the matching process. Figure 6A shows average log total expenditures among local governments in California (of all types) relative to the matched sample, while Figure 6B shows the results for own source revenues. It is clear from Figure 6A that average total expenditures among local governments in California begins to outstrip the matched sample shortly after the passage of CKH in 2000, with the difference continuing to grow over time. Figure 6B shows similar results for own-source revenues. Table 3 shows the corresponding d-i-d coefficients, with expenditures and own source revenues both increasing by an average of 11-12 percent, effects that are significant at the 0.01 level. The results are consistent with a model in which the functions of the districts that disappeared were absorbed into the surviving governments.

7.2 County-level analysis

One concern with the synthetic control analysis is that if other shocks impacted the state of California in 2000, then the estimated treatment effects would not only reflect the impact of CKH but would also incorporate the effects of these other shocks, potentially clouding the true treatment effect. To mitigate this concern, and to shed further light on the findings above, I exploit one further source of variation: differences across regions in the extent of consolidation. If consolidation did lead to cost savings, then this would suggest that regions that experienced greater amounts of consolidation would have experienced higher levels of savings (lower levels of spending growth). To investigate, I aggregate government spending data to the county-level, i.e. I aggregate all of the spending of the local governments – municipalities, special district, school districts – located within each county. I then compare the percent change in the number of governments within each county over time (between 1997 and 2012) with the percentage change in aggregate spending and, separately, own-source revenues in the county.

The results are presented in Figure 7. Figure 7A looks at the change in total expenditures, while Figure 7B looks at the change in own-source revenues. Each observation represents a California county. Trend lines fitted to the data in both figures are flat, indicating that there is little to no relationship between the change in the number of governments and the change in either spending or revenues. Thus, this result too supports the main conclusion; despite decreasing the number of special districts in the state, CKH had no effect on fiscal outcomes. Spending that had previously been incurred by special districts was simply transferred to surviving governments.

8 Discussion and Conclusion

This paper revisits a long-standing debate about government fragmentation and efficiency. By leveraging a state reform in California, it seeks to determine whether or not reductions in the number of governments can lead to cost savings at the local level. Unlike most prior studies, which have concentrated on consolidations among general-purpose governments, such as cities or counties, California's Cortese-Knox-Hertzberg (CKH) Government Reorganization Act of 2000 overwhelmingly affected special districts, the entities most responsible for the growth in the number of local governments in the United States over the last half century. Using synthetic control methods, I show that the reform reduced the number of special districts in the state by more than 30 percent by 2022. However, this reduction had no impact on overall spending or own-sources revenues collected by local governments in the state. A separate difference-in-difference analysis using a panel of local governments supports this result by showing that spending increased among the surviving governments during this period. A within-state comparison of counties also confirms that the results are not driven by alternative shocks that might have impacted the state in the early 2000s.

These results stand in contrast to the common presumption – derived largely from studies of amalgamation reforms that targeted general purpose municipalities – that consolidation necessarily delivers cost efficiencies. In the case of California, the evidence suggests that attempts to merge special districts have failed to yield economies of scale. These findings also challenge the view that special districts are prone to inefficiency due to low visibility or limited accountability; a shift toward larger and more visible service providers did not lead to efficiency gains.

Why might it be difficult to realize economies of scale with single function districts? The findings in this paper indicate that consolidation disproportionately affected districts providing safety and community services to small local areas, such as fire districts, parks, and libraries. Local officials may have targeted these districts under the mistaken assumption that small, locally focused entities are well-positioned to capture efficiency gains from scale. While schools and general purpose municipalities can pool administrative and financial functions across multiple areas (HR, IT, finance, legal), single function districts such as fire districts and libraries are place-based and capital intensive; each community requires a proximate fire station (or library or park), which blunts the rationale for consolidation. As Duncombe and Yinger (1993) note, economies of scale in the production of services such as fire protection flatten out quickly as their core operating costs are tied to geography and response-time standards rather than administrative costs that can be easily trimmed. Thus, the findings in this paper suggest that consolidations among single-function districts delivering localized, place-based services are unlikely to generate the kinds of cost savings observed in mergers of general purpose governments, where a larger share of expenditures can be reduced through administrative efficiencies. Efforts to reduce fragmentation may have limited fiscal impact unless they target districts where overlapping functions or scale inefficiencies are most pronounced.

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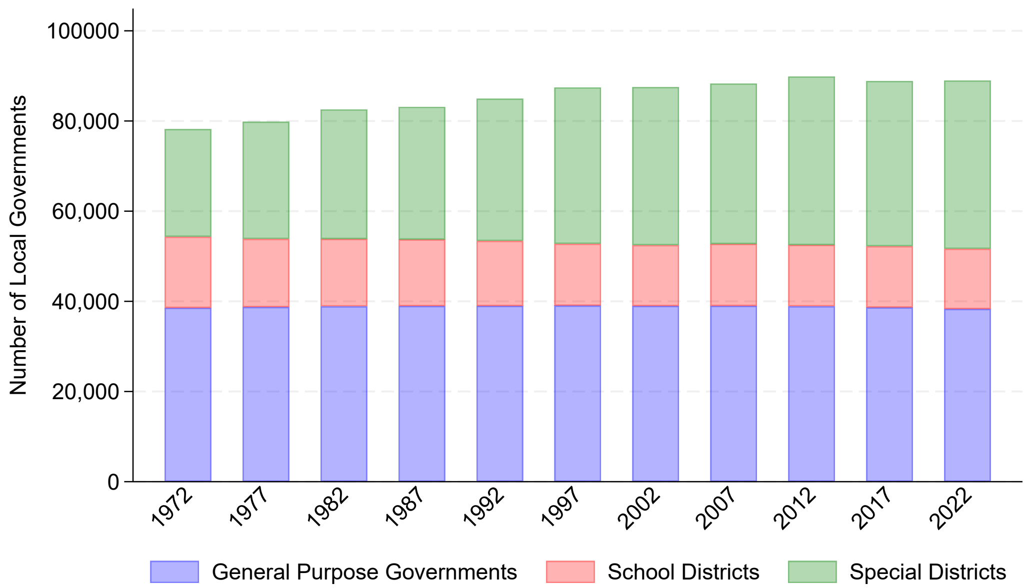
Figure 1: Number of Local Governments in the United States



Source: Census of Governments and author's calculations.

Figure 2: Validation Exercise

Log Total Number of Governments

Figure 2A: CA vs Synthetic Control

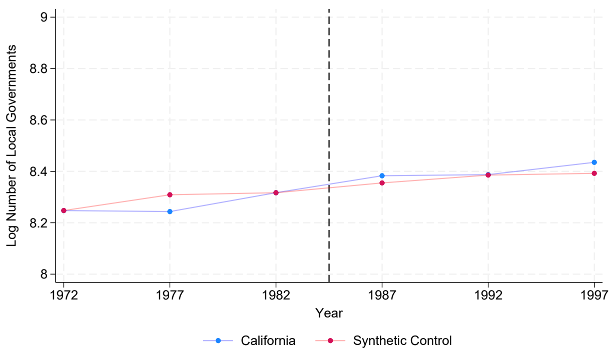
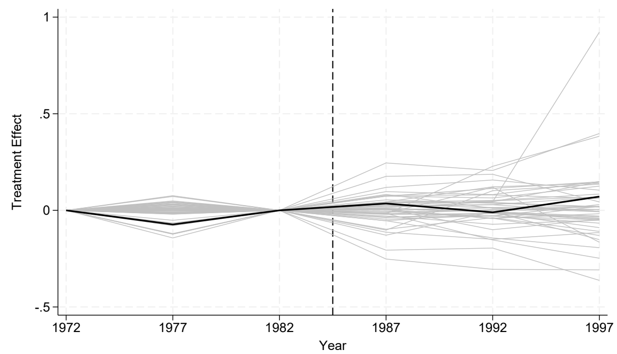


Figure 2B: Treatment Effects



Total Per Capita Local Spending

Figure 2C: CA vs Synthetic Control

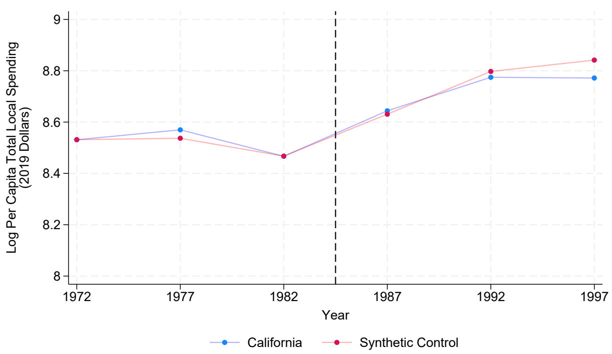
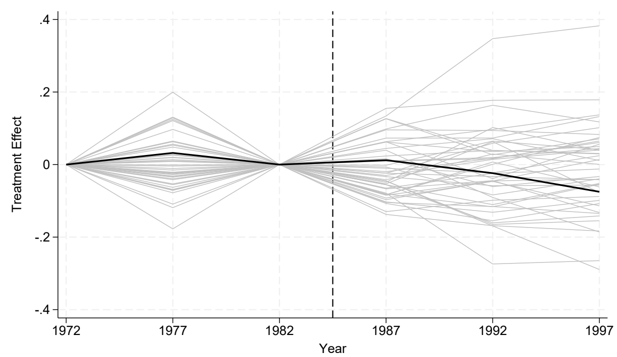


Figure 2D: Treatment Effects



Total Per Capita Own-Source Revenues

Figure 2E: CA vs Synthetic Control

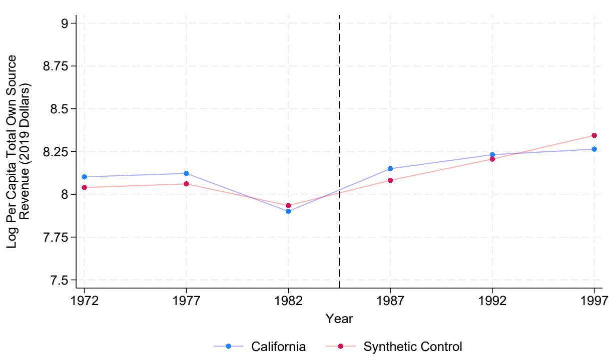
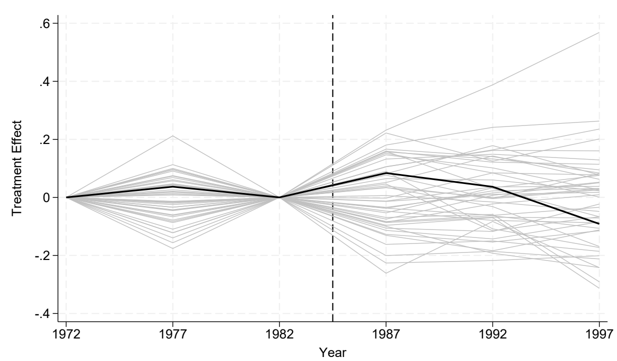


Figure 2F: Treatment Effects



Note: Figure 2A plots the natural log of the number of governments in California before and after a placebo intervention. Figure 2B plots the bias-corrected treatment effect estimates for the effect of the placebo on the logged number of governments. Figure 2C plots the natural log of total per capita local spending in the state before and after the placebo intervention. Figure 2D plots the bias-corrected treatment effect estimates for the effect of the placebo on log total per capita spending. Figure 2E plots the natural log of total per capita local own-source revenues in the state before and after the placebo intervention. Figure 2 F plots the bias-corrected treatment effect estimates for the effect of the placebo on log total per capita own source revenues. In Figures B, D, and F, the light grey lines represent the treatment effect estimates for other units in the donor pool.

Figure 3: Number of Governments

Log Total Number of Governments

Figure 3A: CA vs Synthetic Control

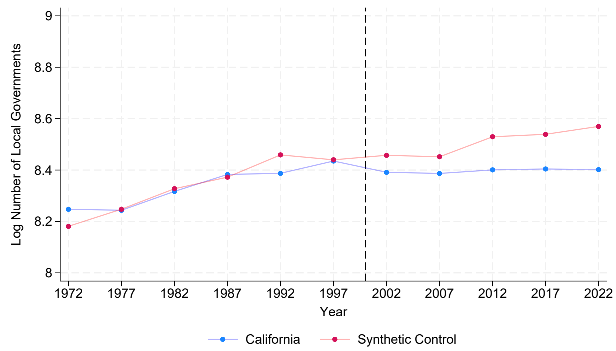


Figure 3B: Treatment Effects

Log Number of General Purpose Governments

Figure 3C: CA vs Synthetic Control

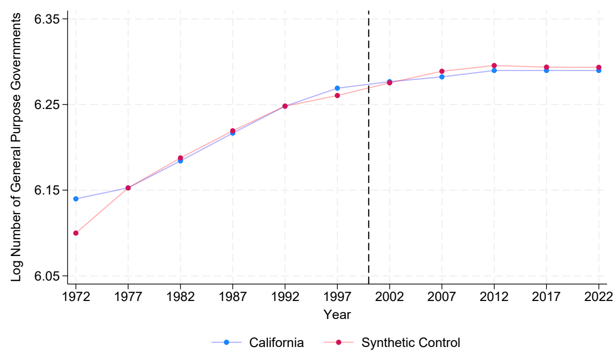


Figure 3D: Treatment Effects

Log Number of Special Districts

Figure 3E: CA vs Synthetic Control

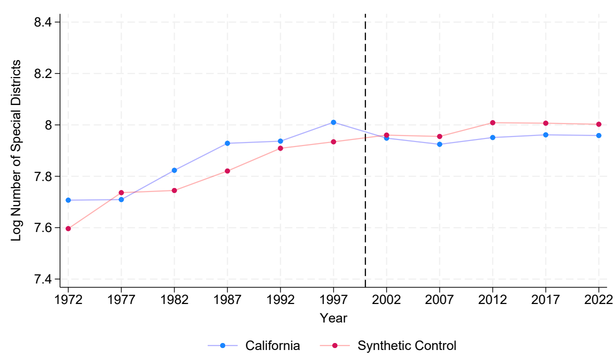
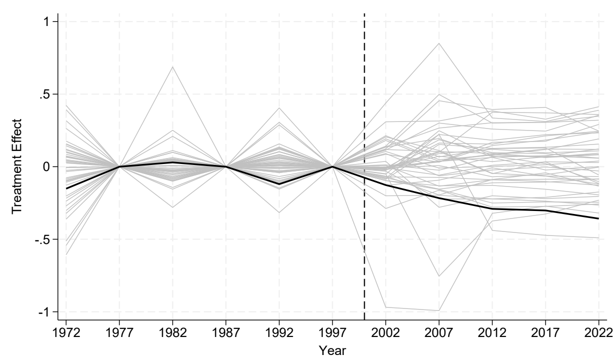


Figure 3F: Treatment Effects



Note: Figure 3A plots the natural log of the total number of governments in California before and after the passage of the Cortese-Knox-Hertzberg (CKH) Local Government Reorganization Act of 2000. Figure 3B plots the bias-corrected treatment effect estimates for the effect of CKH on the logged number of governments. Figures 3C and 3E plot the logged number of general purpose governments and special districts respectively before and after CKH. Figures 3D and 3F plot the corresponding bias-corrected treatment effect estimates. In Figures B, D and F, the light grey lines represent placebos. Figure 3F omits one placebo with a gap greater than 1 in the earliest pre-intervention year (1972).

Figure 4: Log Per Capita Local Government Spending

All Governments

Figure 4A: CA vs Synthetic Control

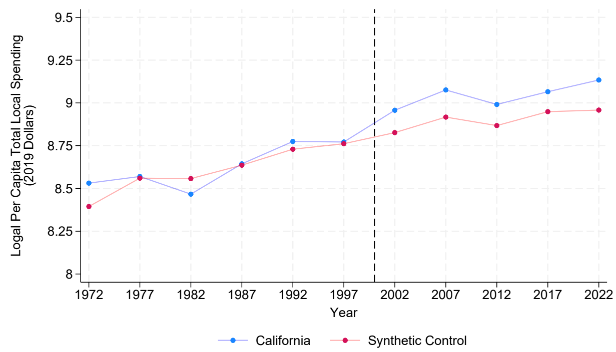
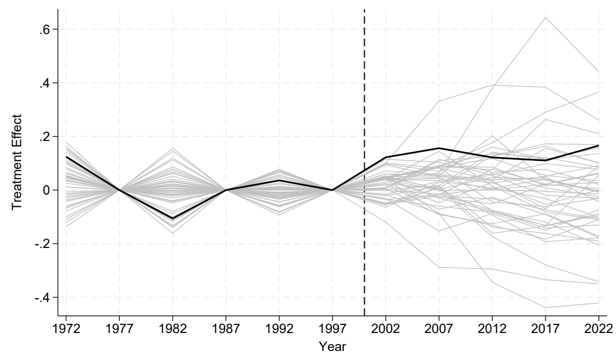


Figure 4B: Treatment Effects



General Purpose Governments

Figure 4C: CA vs Synthetic Control

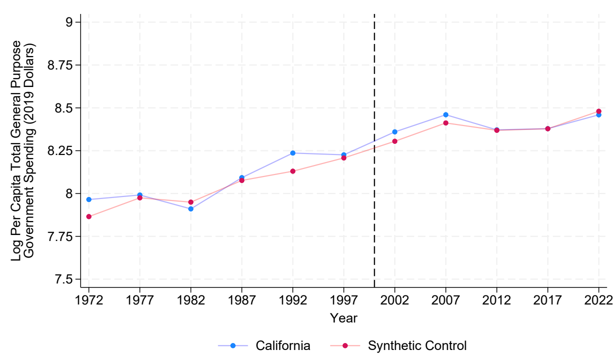
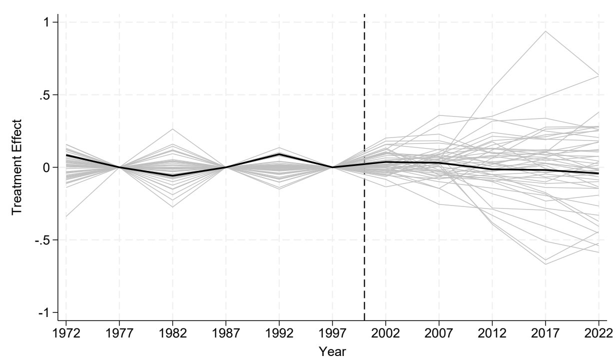


Figure 4D: Treatment Effects



Special Districts

Figure 4E: CA vs Synthetic Control

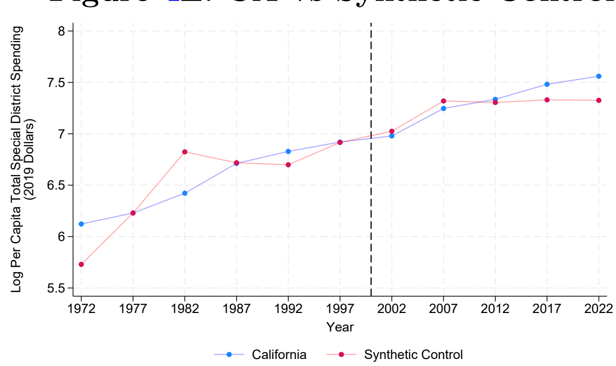
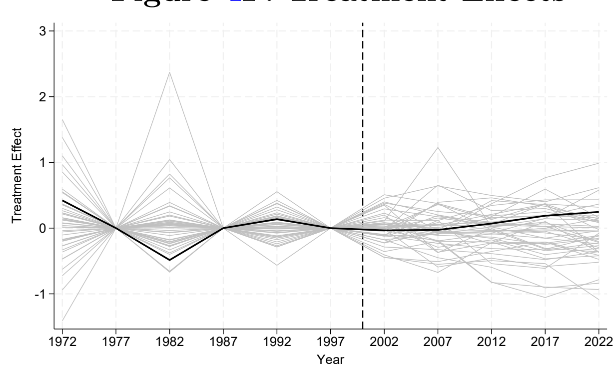


Figure 4F: Treatment Effects



Note: Figure 4A plots the natural log of the total amount of per capita spending by local governments in California before and after the passage of the Cortese-Knox-Hertzberg (CKH) Local Government Reorganization Act of 2000. Figure 4B plots the bias-corrected treatment effect estimates. Figures 4C and 4E plots the natural log of the total amount of per capita spending by general purpose governments and special districts respectively in California before and after CKH. Figures 4D and 4F plots the corresponding bias-corrected treatment effect estimates. In Figures B, D, and F the light grey lines represent placebos.

Figure 5: Log Per Capita Own-Source Local Government Revenue

All Governments

Figure 5A: CA vs Synthetic Control

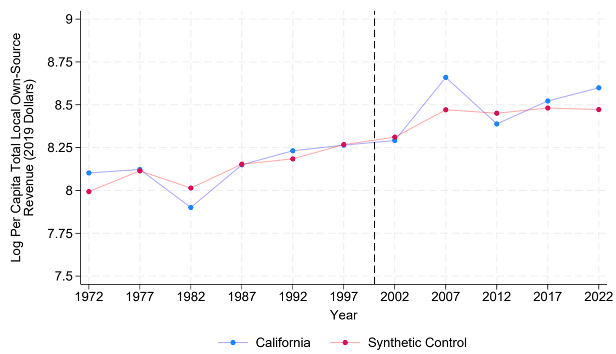
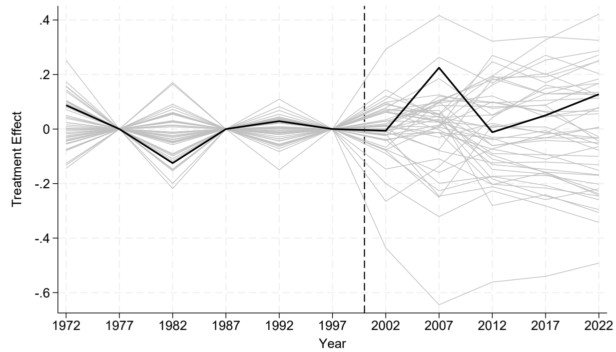


Figure 5B: Treatment Effects



General Purpose Governments

Figure 5A: CA vs Synthetic Control

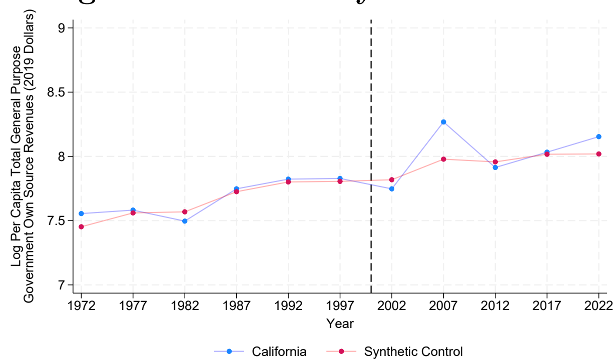
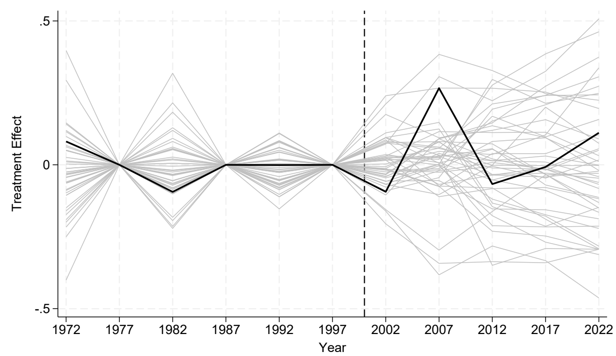


Figure 5B: Treatment Effects



Special Districts

Figure 5C: CA vs Synthetic Control

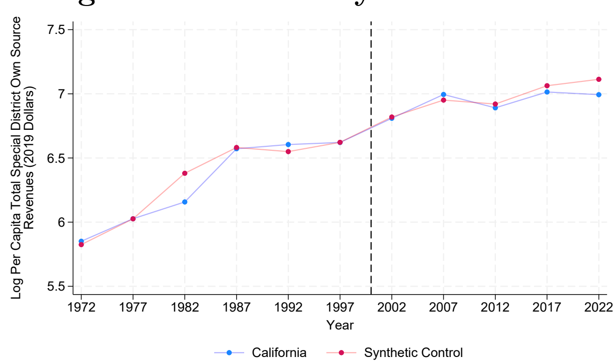
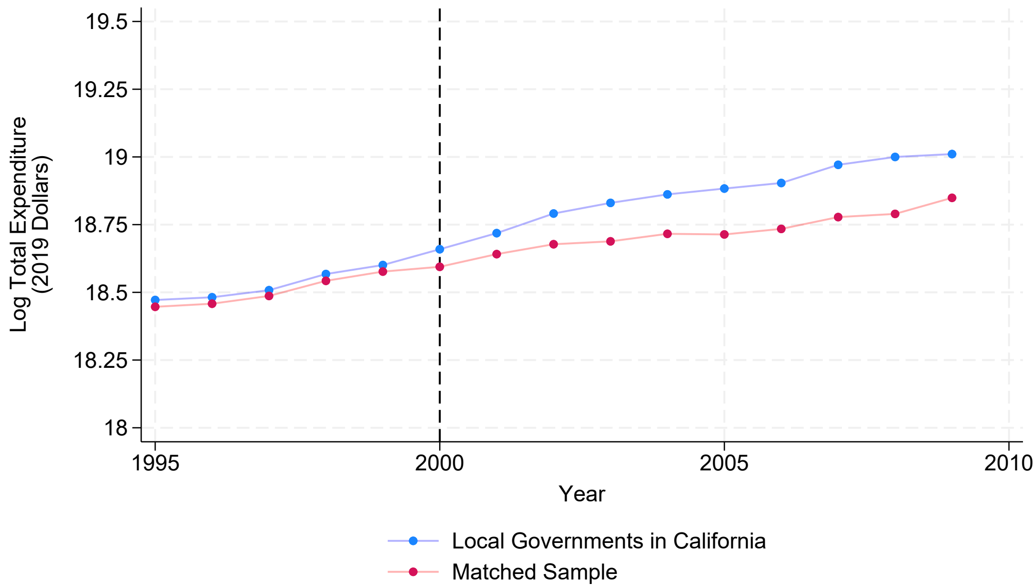


Figure 5D: Treatment Effects

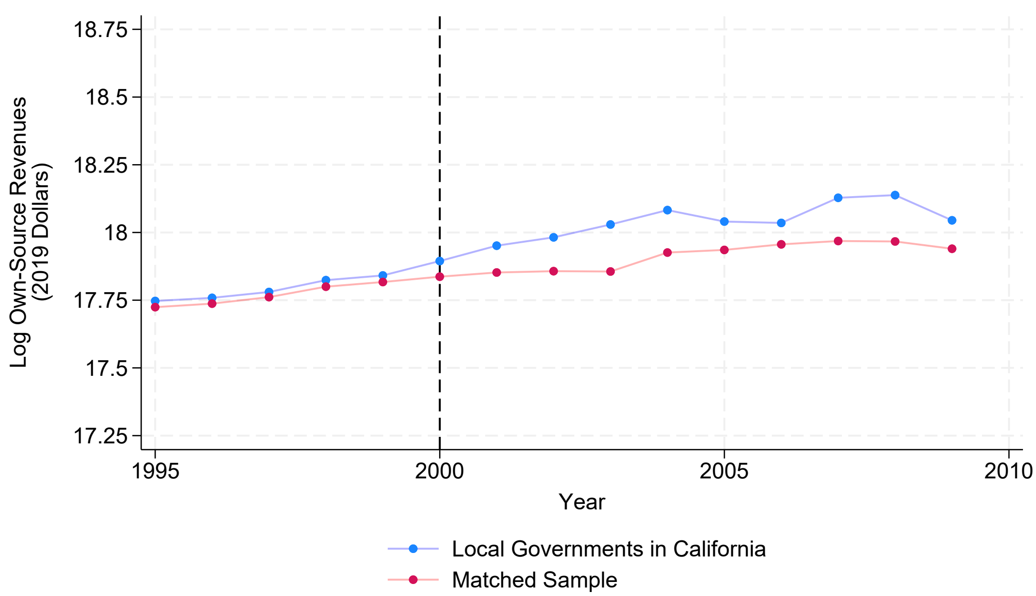
Note: Figure 5A plots the natural log of the total amount of per-capita own-source revenue collected by all local governments in California before and after the passage of the Cortese-Knox-Hertzberg (CKH) Local Government Reorganization Act of 2000. Figure 5B plots the bias-corrected treatment effect estimates. Figures 5C and 5E plot the natural log of the total amount of per capita own-source revenue collected by general purpose governments and special districts respectively in California before and after CKH. Figures 5D and 5F plot the corresponding bias-corrected treatment effect estimates. In Figures B, D, and F, the light grey lines represent placebos.

Figure 6: Fiscal Outcomes in a Matched Panel of Local Governments

All Governments
Figure 6A: Log Total Expenditures



All Governments
Figure 6B: Log Own-Source Revenues



Note: Figure 6 A plots the mean amount of spending by local governments in California relative to a sample of matched governments before and after the passage of the Cortese-Knox-Hertzberg (CKH) Local Government Reorganization Act of 2000. The sample is limited to governments that appear in the Annual Survey of State and Local Finances every year over the sample period. The matched comparison group is constructed using nearest neighbor matching on the Mahalanobis distance of the pre-intervention outcomes. The final matched sample excludes matches with a distance greater than 0.6. Figure 6B plots the corresponding means for own-source revenues.

Figure 7: County-Level Analysis

Figure 7A: Total Expenditures

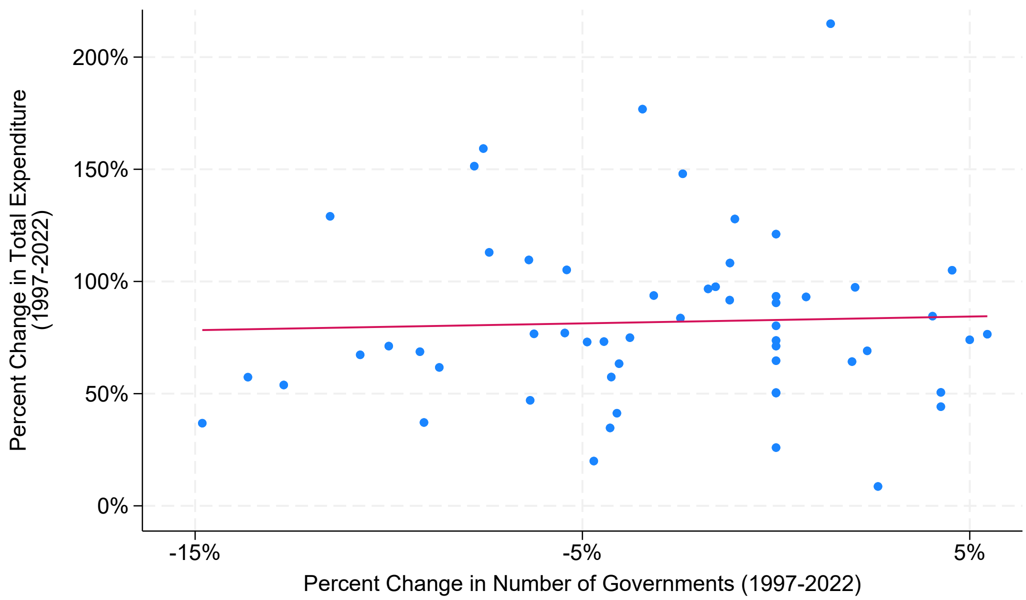
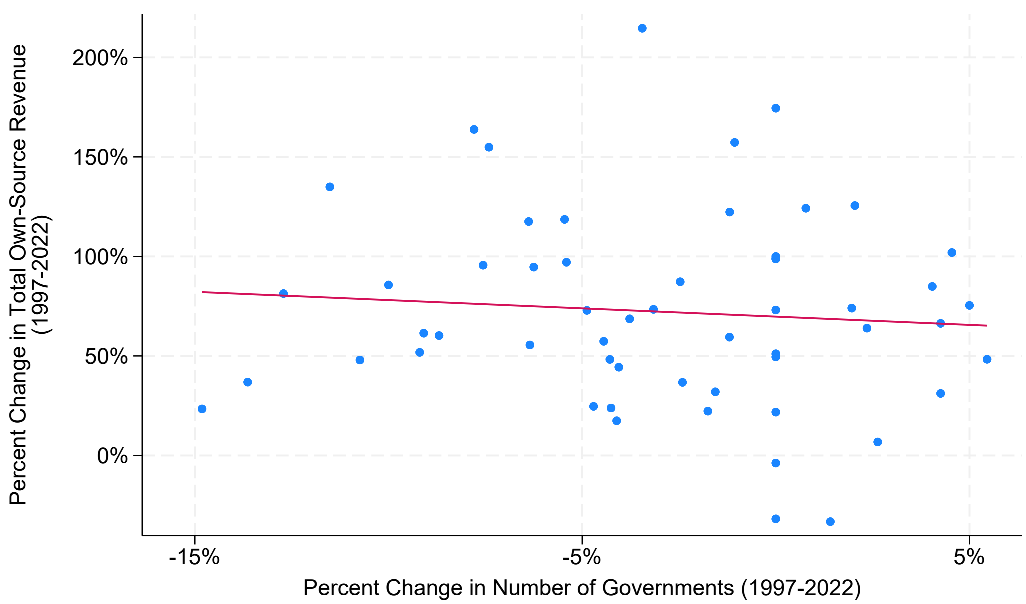


Figure 7B: Own-Source Revenues



Source: Figure 7A compares the percentage change in the number of governments within each county (x-axis) with the percentage change in aggregate total expenditures in each county (y-axis). Figure 7B compares the percentage change in the number of governments within each county (x-axis) with the percentage change in aggregate own-source revenues in each county (y-axis). Each blue dot represents a county in California. The changes are calculated between 1997 and 2022. Both figures excludes three outliers with percent changes in the number of governments of -44%, 14%, and 22%.

Table 1: Synthetic Control Estimates

		Effect in 2022		
		All Governments	General Purpose Governments	Special Districts
		(1)	(2)	(3)
Log Number of Governments	Estimate	-0.24	-0.067	-0.36
	P-value	0.043	0.065	0.043
Log Per Capita Total Local Government Spending	Estimate	0.17	-0.042	0.25
	P-value	0.89	0.39	0.87
Log Per Capita Total Local Own-Source Revenue	Estimate	0.13	0.11	-0.12
	P-value	0.76	0.76	0.50

Note: The table presents bias-corrected synthetic control estimates of the effect of CKH in 2022. The p-values are based on the permutation test described in Section 5.4.

Table 2: Alternative Specifications

		Effect in 2022														
		All Governments					General Purpose Governments					Special Districts				
		Baseline	Lags Only	Smaller DP	Clear Proc	Synthetic DiD	Baseline	Lags Only	Smaller DP	Clear Proc	Synthetic DiD	Baseline	Lags Only	Smaller DP	Clear Proc	Synthetic DiD
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Log Number of	Estimate	-0.24	-0.10	-0.24	-0.25	-0.15	-0.067	-0.018	-0.079	-0.070	-0.053	-0.36	-0.10	-0.46	-0.47	-0.11
Governments	P-value	0.043	0.20	0.024	0.024	0.029	0.065	0.20	0.071	0.073	0.045	0.043	0.37	0.071	0.049	0.30
Log Per Capita Total	Estimate	0.17	0.28	0.16	0.16	0.085	-0.042	-0.022	-0.074	-0.043	-0.064	0.25	0.055	0.59	0.37	0.44
Local Gov Spending	P-value	0.89	1.0	0.93	0.90	0.77	0.39	0.50	0.33	0.44	0.33	0.87	0.65	0.98	0.88	0.86
Log Per Capita Total	Estimate	0.13	0.17	0.09	0.13	0.18	0.11	0.17	0.016	0.11	0.037	-0.12	-0.15	-0.074	-0.051	0.29
Own Source Revenue	P-value	0.76	0.76	0.67	0.76	0.89	0.76	0.76	0.55	0.78	0.60	0.50	0.50	0.60	0.54	0.76

Note: The table presents the baseline synthetic control estimates for the effect of CKH in 2022 alongside the results of four different robustness checks. The first, "Lags Only" includes all pre-treatment outcomes as the only predictors. The second, "Smaller DP" (donor pool), removes states in the bottom 10 percent of the population distribution in the last pre-intervention observation (1997). The third, "Clear Proc," removes states from the donor pool that have clear dissolution procedures for special districts, based on Bauroth (2010). The fourth, "Synthetic DiD" uses the synthetic difference-in-differences estimator of Arkhangelsky et al. (2021), as implemented in Stata by Clarke et al. (2024).

Table 3: Difference-in-Differences

	All Governments	
	Log Total Expenditures	Log Own-Source Revenues
	(1)	(2)
CA*Post	0.123***	0.106***
	(0.017)	(0.020)
Year Fixed Effects	Yes	Yes
Gov Fixed Effects	Yes	Yes
Observations	11,445	11,314

Note: *** $p < 0.01$. This table shows the results of difference-in-difference estimation using the panel of governments depicted in Figure 6. Financial variables are in 2019 dollars. Standard errors clustered by government.

9 Appendices

Figure A1: Using Scaled Measures of the Number of Governments

Log Number of Governments Per Million Residents

Figure A1A: CA vs Synthetic Control

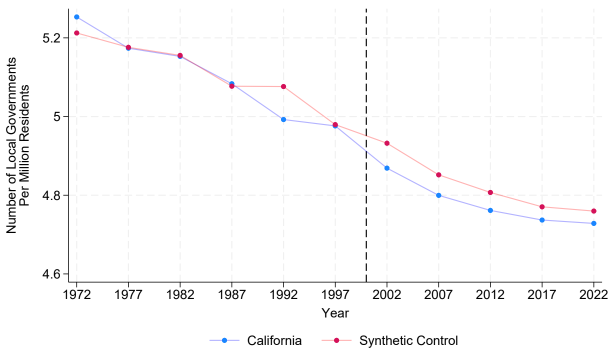
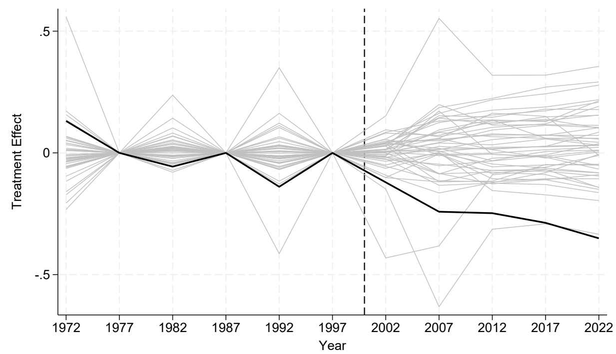


Figure A1B: Treatment Effects



Log Number of Governments Per Thousand Square Miles

Figure A1C: CA vs Synthetic Control

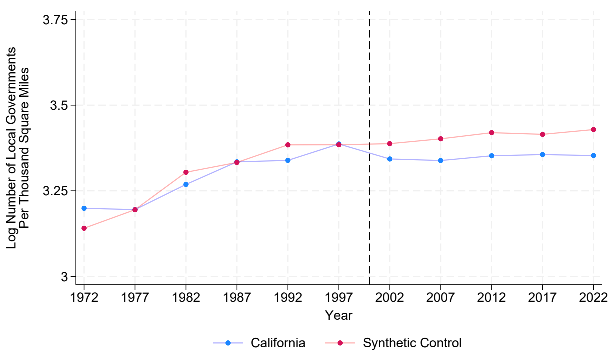
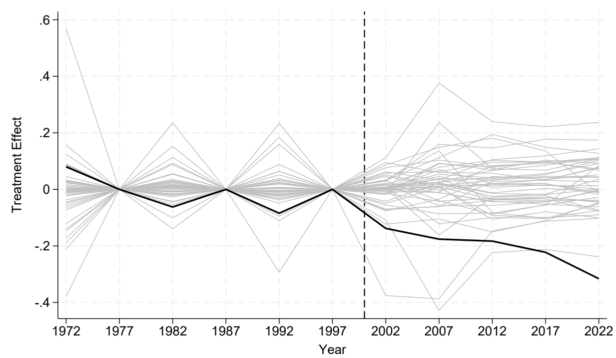


Figure A1D: Treatment Effects



Note: Figure A1 is similar to Figure 3 except that is uses scaled measures of the number of governments. Figure A1A and A1B shows the results for the number of governments per million residents. Figures A1C and A1D show the results for the number of governments per thousand square miles. Both analyses use the following variables as predictors: three years of pre-treatment outcomes (1977,1987,1997), personal income per capita, population density, the percentage of residents that are urban, the percentage of families with children, the percent of the population over 65, and total population. All covariates other than the pre-treatment lags are averaged over their pre-treatment observations.

Table A1: Weights in the Synthetic Control for Log Number of General Purpose Governments

State	Weight	State	Weight
Alabama	0	Nebraska	0
Alaska	0.033	Nevada	0
Arizona	0.191	New Hampshire	0
Arkansas	0	New Jersey	0
Connecticut	0	New Mexico	0
Delaware	0	North Carolina	0.52
D.C.	0	North Dakota	0
Hawaii	0	Ohio	0
Idaho	0	Oklahoma	0
Illinois	0	Pennsylvania	0
Indiana	0	Rhode Island	0
Iowa	0	South Carolina	0
Kansas	0	Douth Dakota	0
Kentucky	0	Tennessee	0
Louisiana	0	Texas	0.256
Maine	0	Utah	0
Maryland	0	Vermont	0
Massachusetts	0	Virginia	0
Michigan	0	Washington	0
Minnesota	0	West Virginia	0
Mississippi	0	Wisconsin	0
Missouri	0	Wyoming	0
Montana	0		

Note: This table lists the states in the donor pool along with the weights used in the synthetic control for the log number of general purpose governments. The donor pool excludes several states based on the discussion in section 5.2.

Table A2: Synthetic Control Estimates of the Number of Special Districts by Type

		Effect in 2022
Log Number of Local Safety &	Estimate	-0.80
Community Service Districts	P-value	0.022
Log Number of Health, Welfare, &	Estimate	-0.19
Community Wellbeing Districts	P-value	0.35
Log Number of Environment, Water,	Estimate	-0.05
& Resource Management Districts	P-value	0.35
Log Number of Infrastructure,	Estimate	0.08
Utility, & Development Authorities	P-value	0.37

Note: The table presents bias-corrected synthetic control estimates of the effect of CKH on the number of special districts in California by type in 2022. "Local Safety and Community Service" districts include fire protection, library, and park districts. "Health, Welfare, and Community Wellbeing" districts include hospital, emergency services, nursing home, and cemetery districts. "Environment, Water, and Resource Management Districts" include drainage, sewerage, water, and conservation districts. "Infrastructure, Utility, and Development Authorities" include transportation authorities, housing and community development authorities, port authorities, power authorities, and transit districts. The analysis excludes districts with missing functional codes and those that are classified as unallocable. The p-values are based on the permutation test described in Section 5.4.