Isolated Capital Cities, Accountability and Corruption

Evidence from US States*

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Abstract

We show that isolated capital cities are robustly associated with greater levels of corruption across US states. In particular, this is the case when we use the variation induced by the exogenous location of a state's centroid to instrument for the concentration of population around the capital city. We then show that different mechanisms for holding state politicians accountable are also affected by the spatial distribution of population: newspapers provide greater coverage of state politics when their audiences are more concentrated around the capital, and voter turnout in state elections is greater in places that are closer to the capital. Consistent with lower accountability, there is also evidence that there is more money in state-level political campaigns in those states with isolated capitals. We find that the role of media accountability helps explain the connection between isolated capitals and corruption. In addition, we provide some evidence that this pattern is also associated with lower levels of public good spending and outcomes.

Keywords: Corruption; Accountability; Population Concentration; Capital Cities; US State Politics; Media; Turnout; Campaign Contributions; Public Good Provision.

JEL Classification: D72, D73, L82, R12, R50

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1 Introduction

Corruption is widely seen as a major problem, in developing and developed countries alike, and the prescribed solution often goes back to the notion of accountability. After all, it stands to reason that when citizens are better able to monitor the performance of public officials and punish those who do misbehave, there will be less scope for the latter to misuse their office for private gain. One would thus expect to observe a connection between the role of accountability mechanisms – such as the media, or the electoral process – and the prevalence of corruption. There is indeed substantial evidence that this is the case (e.g. Brunetti and Weder 2003, Lederman, Loayza and Soares 2005, Reinikka and Svensson 2005, Ferraz and Finan 2008).

This in turn begs the question of what determines the degree of accountability, and in that regard a somewhat underappreciated aspect is the spatial distribution of the population of a given polity of interest. To the extent that people are typically more interested in what is more immediately salient, and that what is closer to them geographically, *ceteris paribus*, gains salience, where people are located will potentially matter for accountability. After all, the level of media coverage of the behavior of politicians will be affected by their audience's level of interest in it, and so will the degree of citizen involvement in politics. As a result, one might well expect that the prevalence of corruption would be affected by how close citizens are to where the politicians are and where the political decisions are taken.

This potential connection between the spatial distribution of the population, accountability, and the prevalence of corruption has actually long been noted by observers in a particular context: US state politics. In particular, some have raised the idea that having a capital city that is geographically isolated from the main centers of population is conducive to higher corruption, as the distance would lead to less accountability. Notably, Wilson's (1966) seminal contribution argued that state-level politics was particularly prone to corruption because state capitals are often located outside the major metropolitan centers of the state, which leaves them with a lower level of scrutiny by citizens.[1] In the words of Redlich (2006, p. x-xi), referring to the state of New York (with its relatively isolated capital, Albany), state politicians under these circumstances are faced with voters who "have been lulled into a state of mind whereby attention is focused more on national and local government than on state actions." As a result, "it is no accident that state officials in Annapolis, Jefferson City, Trenton, and Springfield [which are state capitals located at some distance from the states' larger metropolitan areas] have national reputations for political corruption." (Maxwell and Winters 2005, p. 3) This has largely not been tested systematically, however, which we believe is due to the lack of appropriate measurement tools for the relevant idea of the spatial distribution of population around the capital city.

[1] In Wilson's words: "the degree of public scrutiny of government is not the same at the state as the city level. Big cities have big newspapers, big civic associations, and big blocs of newspaper-reading, civic-minded voters. State capitals, by contrast, are usually located outside the major metropolitan centers of the state in smaller cities with small-city newspapers, few (and weak) civic associations, and relatively few attentive citizens with high and vocal standards of public morality." (p. 596)

Motivated by these observations, this paper pursues a systematic investigation of this connection between isolated capitals, accountability, and corruption, using the specific context of US state politics. We start off by establishing a stylized fact: isolated capital cities are indeed associated with higher levels of corruption. A simple depiction of that can be seen in Figure 1, where corruption is measured, following a long tradition in the literature on corruption in the US, by the average number (between 1976 and 2002) of federal convictions of public officials for corruption-related crime, relative to population size. This is plotted against two measures of the concentration of a state's population around its capital city, averaged up to 1970 – that is, before the start of the period for which corruption is measured:[2] one that does not control for the geographical size of the state (Panel A) and another that does (Panel B). These are two members of the family of axiomatically grounded measures of concentration around a point of interest, the Centered Index of Spatial Concentration, recently proposed in Campante and Do (2010).

[FIGURE 1 HERE]

Both panels show a clear pattern in which more isolated capital cities are associated with more corruption. As an illustration, if we compare two Northeastern states with similar levels of GDP per capita, we see that Massachusetts, with its population quite concentrated around Boston, is measured as considerably less corrupt than New York and its isolated Albany. To put this in perspective, Panel C depicts the raw correlation between corruption and a factor that has been consistently found to be (negatively) correlated with it: education (Alt and Lassen 2003, Glaeser and Saks 2006).[3] If anything, the correlation with education looks *less* pronounced than that with the concentration of population around the capital. (In fact, the concentration plots make less puzzling the observation of states that are relatively rich and educated but are also seen as corrupt, such as Illinois or New York.)

We establish that this is indeed a very robust connection. First, it holds with different measures of corruption, and different measures of the degree of isolation of the capital city. Second, it is indeed related to something specific about capital cities: there is no additional effect of the concentration of population around the state's largest city, nor of other "placebo" measures of concentration that are unrelated to the isolation of the actual capital. Third, it seems to be about corruption: there is no connection between the isolation of the capital and other types of federal criminal cases, as exemplified by drug offenses. The link is also important from a quantitative perspective: our preferred specification associates a one-standard-deviation increase in the concentration of population around the capital city with a reduction of about three-quarters of a standard deviation in corruption – very much consistent across different measures.

Quite importantly, we are able to address the issue of causality. Since the location of the capital city is an institutional choice, one might worry that the correlation we observe is being driven by omitted

[2]The same patterns emerge if we look at population concentration measured at other points in time. We will discuss the evolution of concentration over time below.

[3]Following Glaeser and Saks (2006), we use the share of the state population with a college degree, also as of 1970.

variables – namely, some unobserved determinant of corruption that might also affect that choice or how it impacts the distribution of population. Fortunately, the historical record documenting the designation of state capitals provides us with a source of plausibly exogenous variation: the concentration of population around the centroid, also known as the geometric center or barycenter, of each state.

There is ample evidence that a major concern as of the time when the location of capitals was being chosen was that it be located near "that spot which will be least removed from every part of the empire," as put by James Madison with regard to the federal capital (Zagarri 1987). Consistent with that, we do see that this potential instrument is a good predictor of the isolation of the capital city. It also can be plausibly regarded as exogenous, as the location of the centroid (conditional on the state's borders), relative to the distribution of economic and institutional features affecting the distribution of population, is essentially random. Indeed, we find evidence that the isolation of the centroid is not correlated with a number of predetermined variables, suggesting that states whose population happens to be highly concentrated around the centroid were not systematically different from those where the centroid is relatively isolated. As it turns out, the effect of an isolated capital city on corruption is again statistically significant when estimated using this instrumental variable – and quantitatively larger than the baseline estimates.

What lies behind this connection? We hypothesize that isolated capital cities are indeed related to lower levels of accountability, as suggested by observers of US state politics. This suspicion is reinforced as we find evidence that states with isolated capital cities pay higher salaries to their governors, controlling for demographics. To go deeper into the possible specific mechanisms, we then investigate two different realms of accountability, certainly among the most important: the roles of the media and of the electoral process. Our main question of interest is whether they are indeed affected by the spatial distribution of population, along the lines that we have speculated about.

We do find evidence of that sort. When it comes to the media, we create a measure of coverage of state-level politics, by searching the online editions of a number of newspapers (as made available by the website NewsLibrary.com) for terms such as the name of the governor, or "state elections". We match that with data on the spatial distribution of those newspapers' circulation, and show that an outlet's coverage of state politics is increasing in the concentration of its circulation around the state capital city. Whether this is because coverage responds to the demands of a given audience, or because circulation responds to the level of coverage, or most likely both, there is in any case a connection between having an isolated capital and lower levels of press coverage of state politics. We also show some evidence that this newspaper-level connection aggregates up to the state level: the (circulation-weighted) amount of coverage is greater in states whose population is more concentrated around the capital.

When it comes to electoral accountability, we find evidence that people who live in counties that are closer to the state capital are more likely to turn out in state elections, controlling for county demographics and state fixed effects. We show that this again seems to be about the special role of the capital, as we control for "placebos" such as the distance to the state largest city, or the state centroid. Most crucially, we also find that the effect of distance to the state capital is not present for state elections that coincide with federal polls (especially for president) – years in which one would presume that forces related to state politics would have a lesser impact on turnout.

We also address a third topic related to accountability and the role of the capital city: the role of money in politics. We are again motivated by the history of discussions over where to locate the state capitals, from the 18th century until the last state capital move, in 1910 (Oklahoma). In these discussions an oft-stated concern was to keep the capital away from major economic centers, as this was perceived as a way to stave off an undue influence of economic power over state politics. To check whether this influence is in fact related to the isolation of the capital city, we look at how the amount of campaign contributions to state politics correlates to the concentration of population around the capital. As it turns out, we find a negative correlation between concentration and contributions: a state like Nevada, with its isolated Carson City, witnesses a larger amount of contributions (controlling for the size of its economy) than does broadly comparable Utah and its population largely concentrated around Salt Lake City. This goes against the presumption, and would be consistent with a scenario in which low levels of accountability due to lower media scrutiny and citizen participation open the door to a more prominent role for money in politics.

Having established a connection between the spatial distribution of a state's population relative to its capital city and the degree of accountability to which its politicians are likely to be exposed, we can ask to which extent we can directly attribute the observed effect of the spatial distribution on the prevalence of corruption to each of these accountability mechanisms. While short of a rigorous quantitative assessment, it turns out that when we add the three accountability measures into the baseline regressions, we see that turnout and contributions have essentially no impact on the original coefficient linking corruption to the concentration of population around the capital. Media coverage, on the other hand, besides typically being a significant negative predictor of corruption, does affect the baseline effect. The coefficient on the measure of concentration is now lower, and statistically significantly so, when compared to the baseline. That said, the size of the reduction, of about 20-25%, underscores that there is more to the connection than what is grasped by our obviously imperfect measure of coverage, or by the rough nature of our exercise.

As a final note, we also provide some evidence on whether this pattern of low accountability affects the ultimate provision of public goods. We find that states with isolated capital cities also seem to spend relatively less on things like education, public welfare, and health care, and more on administrative expenditures. This seems in turn associated with lower public good provision as measured by a combination of inputs and outcomes in education and health care. This seems to suggest that low accountability and corruption induced by isolation do have an impact in terms of government performance and priorities.

In sum, the evidence displays a strong connection between the spatial distribution of population and corruption: isolated capital cities are associated with greater levels of corruption across US states. There is also evidence that this distribution affects different levers of accountability, such as the media scrutiny of politicians and the engagement with state politics. The role of the media, in particular, seems to be able to explain part of that impact on corruption. In addition, there is some evidence that those isolated capitals are associated with worse public good provision. This sheds new light on the mechanisms of corruption and accountability, and adds a novel dimension towards understanding how institutional choices over the structure of the political system affect the incentives of the actors that operate in them.

Not surprisingly, social scientists have devoted substantial effort to understanding the underpinnings of corruption. Many potential factors have been proposed and empirically investigated, both at the cross-country level (Rose-Ackerman 1999, Treisman 2007, *inter alia*) and within countries. Particularly related to this paper, there is a substantial literature looking at corruption across US states (e.g. Meier and Holbrook 1992, Fisman and Gatti 2002, Alt and Lassen 2003, Glaeser and Saks 2006), which points at factors ranging from education to historical and cultural factors to the degree of openness of a state's political system. Population and its spatial distribution, while noted by some observers, have not seen much systematic evidence. Some studies have found that population size is positively correlated with corruption (e.g. Meier and Holbrook 1992, Maxwell and Winters 2005), although this relationship is not particularly robust – as indicated for instance by Meier and Schlesinger (2002) and Glaeser and Saks (2006). When it comes to the spatial distribution of population, most effort has been devoted to looking at the correlation with the degree of urbanization, under the assumption that corruption tends to thrive in cities as opposed to rural areas (Alt and Lassen 2003). While there is some evidence for that assertion, it is not overwhelming or particularly robust either (Glaeser and Saks 2006). Needless to say, these are not at all tests of the idea that the isolation of the capital city is related to corruption.

We also relate to the literature on media and accountability, particularly in the US, recent examples of which include Snyder and Stromberg (2010), and Lim, Snyder, and Stromberg (2010). Most directly, our paper is related to work that has exploited the intersection between urban economics and economic geography, on one side, and political economy – such as Ades and Glaeser (1995), Davis and Henderson (2003), Campante and Do (2010), Galliani and Kim (2011). A recent literature in political science has also dealt with the political implications of spatial distributions, as surveyed for instance by Rodden (2010) – although without much focus on the idea that some places (e.g. capital cities) are distinctive. We believe this is a very fruitful connection, which should be explored further.

The paper is organized as follows: Section 2 establishes the stylized fact linking isolated capitals and corruption; Section 3 presents the evidence on the spatial distribution of population and accountability; Section 4 assesses to what extent the specific accountability mechanisms can help explain the link with corruption; Section 5 goes over the link between isolated capitals and public good provision; and Section 6 concludes.

2 A Stylized Fact: Isolated Capital Cities Are Associated with Higher Levels of Corruption

2.1 Data: Corruption and Concentration of Population around the Capital

In order to proceed with our investigation, we obviously need measures of corruption across US states, and of the degree of isolation of their capital cities. We will now discuss our preferred measures for these two concepts, in order. Other variables we use, as well as additional measures of corruption and isolation of the capital that we use to check for robustness, will be described later, as they are introduced.

2.1.1 Corruption

Our benchmark measure of state-level corruption will be the oft-used number of federal convictions of public officials for corruption-related crime (relative to the size of the population). These refer to cases prosecuted by the US Department of Justice (DOJ), ranging from fraud and campaign-finance violations to obstruction of justice. (A detailed description of this measure can be found in Glaeser and Saks (2006).) We focus on the prosecutions by the DOJ in order to alleviate concerns over the differences in resources and political bias that might affect the variation across states (Alt and Lassen 2011, Gordon 2009), as this should be more problematic for local US district attorneys. Also, the convictions encompass public officials at the state, local, and federal levels, as well private citizens involved in public corruption. All of these possibilities bring information about the level of corruption that is prevalent within a state, but we should keep them in mind when it comes to the interpretation of state-level corruption.

Because this variable is very noisy in terms of its year-on-year fluctuations, we focus attention on the average number of convictions for the period 1976-2002. We use this sample to keep comparability with the existing literature (e.g. Glaeser and Saks 2006, Alt and Lassen 2008). In any case, we have also looked at more recent updates (up to 2007), and the results are not affected – not surprising, since the correlation between the 1998-2007 average and the standard sample is in excess of 0.80. Averaging over a number of years also helps deal with an additional source of political bias, at the federal level, as the partisan match between states and federal government would vary considerably over time.

2.1.2 Concentration of Population around the Capital

When it comes to measuring how isolated a capital city is, what we need is a measure of the concentration of state population around the capital. For this, standard measures such as the share of population living in the capital are rather unsatisfactory and coarse, as they rely on arbitrary definitions of what counts as the capital city and discard all the information on the spatial distribution outside of that arbitrarily delimited city. Other measures, such as urbanization or population density, actually capture different concepts, related but clearly distinct from the role of the capital city. We choose instead to make use of the axiomatically grounded family of measures that was recently proposed in Campante and Do (2010) – the Centered Index of Spatial Concentration (CISC) – which enables a much better look at the concept of interest. Since this is a relatively novel concept, it is worth spending some time describing the measure we will use, as well as its properties.

More specifically, our preferred measure within that family is the "Gravity-based" CISC (G-CISC). This can be defined as the sum (over the spatial distribution of individuals) of the negative of a logarithmic function of the distance between each individual and the capital city. More formally, let X be a convex set that can contain (the representation of) all states, p_x denote the distribution of individuals in a given state, defined over X, and z_x be the distance between a point $x \in X$ and the state capital, which we fix at a point $c \in X$. We then have:[4]

$$GCISC = \int_X (1 - \alpha \log z_x) dp_x, \tag{1}$$

where $\alpha > 0$ is a normalization parameter to be adjusted so that the measure is contained between 0 and 1. A measure of one represents a situation of maximum concentration, in which all individuals live arbitrarily close to the point designated as the center of the capital, while zero represents a situation where the capital is maximally isolated, with all individuals living as far from it as possible in the context of interest.

Campante and Do (2010) establish that this measure, as a member of the CISC family, satisfies three key desirable properties for a measure of spatial concentration around a point of interest – properties that this family only will simultaneously satisfy.[5] First, it is such that, if a subset of a population becomes more concentrated around the capital, so does the overall distribution (subgroup consistency). Second, it means that moving people closer to the capital implies a more concentrated distribution (monotonicity). Third, the measure is independent of the units in which distance is measured (rank invariance). In addition, the GCISC also satisfies a property of convexity that seems reasonable in our context, namely that a given movement of a person towards the capital has a greater impact on concentration if it happens close to the capital.

Another desirable property of the G-CISC is that it is the only measure within the CISC family that also displays a property of invariance under mean-preserving spreads of the distribution around points other than the capital. This technical point means, in practice, that the measure is unbiased to approximations that have to be performed in computing the measure with actual data. Specifically, we compute the levels of concentration of state population around the capital city by using county-level information on population, from the US Census. (All variables and sources are detailed in the Data Appendix.) We thus have to attribute the location of each county's population to the geographical position of the centroid of the county.[6] The G-CISC is unbiased to that type of measurement error, in

[4]A description of the G-CISC as we actually compute it in practice, given the data we have, can be found in the Data Appendix, along with the definition, sources, and descriptive statistics of the variables we use.

[5]The CISC family consists of sums of a monotonically decreasing, isoelastic ("constant relative risk aversion") function of the distance between each individual and the capital.

[6]While finer geographical subdivisions such as Census tract and block are available - and we do compute concentration using these subdivisions as the unit of observation – the focus on counties enables us to compute the measures for the years before the population data became consistently available at those more detailed levels for the entire US (in 1980).

that "random" deviations do not change the rankings of distributions as measured by it.

We will compute two different versions of the G-CISC, making use of alternative choices for the normalization parameter α. As previously mentioned, this parameter is chosen so that a G-CISC equal to zero corresponds to a situation where all individuals in a state live as far from the capital as possible. However, the definition of "possible" can be picked so as to adjust concentration for the geographical size of the state, or so as to leave it unadjusted. We will refer as "$GCISC_1$" to the version that does not adjust for size, as the measure is benchmarked by the lowest possible level across all states: a measure of zero would correspond to a situation where the entire population of the state is as far from its capital as it is possible to be far from the Texan capital Austin while remaining in Texas.[7] In this case, it is clear that only Texas could conceivably display $GCISC_1$ equal to zero. "$GCISC_2$", in contrast, controls for the size of the state: it is a measure of how concentrated the population of a given state is relative to how far from the capital that particular state's population could possibly be. In other words, $GCISC_2$ weighs distances differently depending on the size of the state, whereas $GCISC_1$ keeps the same weight across states.

We are able to compute it for all Census years between 1920 (when detailed county data first becomes available) and 2000, for 48 states – Alaska and Hawaii are left out as the data for them do not go as far back in time. What does the ranking of states look like in terms of concentration around the capital? Table 1 provides the answer, as of 2000, for the two different versions of G-CISC.

[TABLE 1 HERE]

Table 1 shows that both measures are sensible in that the rankings are clearly related to whether the capital is the largest city or not. The two measures differ in that the most concentrated states according to $GCISC_1$ are typically those where the capital is the largest city *and* that are geographically small, whereas the least concentrated are the large states and, within that subset, those where the capital is not the largest city. In contrast, the ranking by $GCISC_2$ does not display the same distinction between geographically large and small states.

As it turns out, Table 2 shows that the autocorrelation in both $GCISC_1$ and $GCISC_2$ is very high. Nevertheless, there is nontrivial variation over time. First of all, while most states unsurprisingly became more concentrated, some became substantially less so – such as Nevada, California or Florida. These were states in which the capital is far from the largest cities, and where the largest cities grew substantially over the 20th century. Second, the variation can be quantitatively important: between 1920 and 2000, Nevada became less concentrated around Carson City (in terms of $GCISC_1$) by roughly one full standard deviation of the 2000 distribution across states. This is roughly the difference between the concentration of the population of Massachusetts around Boston versus that of New Jersey around Trenton.

[7]The maximum distance from the capital among the 50 states would be in Alaska, which was left out of the sample for the aforementioned reasons. Alaska aside, California loses first place to Texas by about one mile.

[TABLE 2 HERE]

Because of this nontrivial variation, and because it seems likely that the effects of changes in the distribution of population are likely to be felt over a relatively long period of time, our main specifications will use as independent variables average measures of concentration over time. We will use different averages depending on the relevant period of analysis, and will also depart from that to exploit some of the time variation in a few specifications. Importantly, our results are essentially unaltered if we use time-specific measures instead.

Note also, from Table 2, that the correlation between the two versions of G-CISC is high but not overwhelmingly so, hovering around 0.6 for the contemporaneous measures. It is not surprising that they are relatively different, since $GCISC_1$ will tend to rank territorially small states as having their population more concentrated around the capital, whereas no such tendency is displayed by $GCISC_2$. In any case, it is not clear *ex ante* whether in our case we would want to weigh distances differently in smaller states, so we will focus on both alternatives in our analysis

2.2 Baseline Results

As striking as Figure 1 is, the raw correlations obviously do not provide a full picture of the link between corruption and the isolation of capital cities. After all, they do not control for the many other factors that also affect observed levels of corruption. More systematic documentation can be seen in Table 3. Column (1) displays the correlation with $GCISC_1$ without any additional controls, thus reproducing the message from Figure 1. (Just as in that figure, concentration here is an average of the measures calculated up to 1970, i.e. before the time period for which corruption is measured.) Column (2) introduces a basic set of controls, namely (log) income per capita and education, plus (log) population size (to make sure that we are capturing the effect of concentration) and (log) area (to control for geographical size, which is not built into $GCISC_1$). The coefficient of interest is highly significant, and its size is actually much increased. Column (3) adds controls other correlates of corruption that are established in the literature: the size of government (share of total employment) and urbanization (share of urban population), plus regional dummies.[8] This specification – which essentially reproduces the basic specification in Glaeser and Saks (2006) – does not detract from the size or significance of the negative coefficient on population concentration. This is our preferred specification, as it controls for a number of correlates while keeping a relative parsimony that is necessary in light if the limited sample size.[9]

[8] Our results are also unaltered if we control for a measure of party competition – often found to be an important correlate of state-level corruption (Meier and Holbrook 1993). We use the so-called "folded" Ranney index, computed for different sub-periods from 1970 through 1999 by King (1989), Holbrook and Van Dunk (1993) and Shufeldt and Flavin (2011), and control for them separately and averaged. The same is true if we control for the share of taxes relative to state expenditures, as the breakdown of state revenues has been suggested to affect corruption (Fisman and Gatti 2002). Both of these sets of results are available upon request.

[9] As evidenced by Figure 1, the results are not sensitive to outliers: they are still present when we run the regressions excluding one region at a time.

[TABLE 3 HERE]

It is interesting to note that in Column (3) income is the only variable other than concentration, reported or not, that has a significant coefficient, and only at the 10% level. The strength of the concentration variable is further highlighted in Column (4), which adds yet another set of controls often related to corruption– measures of ethnic fractionalization (index of racial dissimilarity), quality of government regulation (Regulation index), and reliance on natural resources (share of value added in mining in the gross state product). The size of the coefficient is slightly reduced, but it is still statistically significant at the 1% level. The same pattern is also present for our other measure of concentration, $GCISC_2$, as shown by Columns (5)-(8) reproducing the specifications in Columns (1)-(4).[10]

We thus see a strong, systematic correlation: states with more isolated capitals are indeed found to display higher levels of corruption. Besides its statistical significance, the effect is also meaningful quantitatively. The average for $GCISC_1$ in our sample, for the mean up until 1970, is at around 0.31 (roughly the value for Nebraska or South Carolina), with a standard deviation around 0.09. With the coefficient of our preferred specification (-1.06), this means that if the population of a state becomes more concentrated around its capital by one standard deviation, the corresponding reduction in corruption (0.10) is around three-quarters of a standard deviation of the corruption sample. A similar calculation for $GCISC_2$, which has a lower variance, would yield a shift of about 0.45 standard deviation. For the sake of comparison, Glaeser and Saks (2006) find an effect of about half of a standard deviation of a corresponding one-standard-deviation increase in education in their sample.

2.3 Robustness: Different Measures of Corruption and Concentration, Placebo Regressions

Let us now consider the robustness of our results, beyond the number of controls considered in Table 3. First, we can probe further into our stylized fact by considering alternative measures of corruption and concentration. This will not only help us check for robustness, but also shed light on the nature of the link between those variables. We start by considering an alternative measure of corruption as our LHS variable. Following Saiz and Simonsohn (2008), we build a measure from an online search for the term "corruption" close to the name of each state, using the *Exalead* search tool.[11] The results are in Columns (1) and (2) of Table 4, for $GCISC_1$ and $GCISC_2$ respectively, and they very much confirm the message from Table 3. Even quantitatively, an exercise along the lines of what we have done for the baseline results would yield an effect of just over 0.7 standard deviation.[12] Note that here, since the measure of

[10] We do not include controls for geographical size, since this is built into the measure of concentration.

[11] The details of the construction of the measure are in the Data Appendix. Saiz and Simonsohn (2008) argue that this measure performs well in that it is able to reproduce the standard stylized facts found by the literature on corruption, both at the state and country levels. In our sample, the two measures have a correlation of 0.25, which is significant at the 10% level.

[12] We also experimented with the measure of corruption perceptions introduced by Boylan and Long (2002) and used by Alt and Lassen (2003), based on a question posed to reporters covering the State House and available for 47 states. The

corruption is computed over a more recent period, we use the average of the measures of concentration up to 2000, and use the demographic control variables as of 2000 as well.

[TABLE 4 HERE]

Another dimension of robustness is to check for alternative measures of concentration relative to the capital city. We do so by considering another member of the family of CISC measures proposed by Campante and Do (2010), the "Linear CISC" (L-CISC). This measure substitutes an identity function for the logarithm in (1. This means that it attaches the same weight to population moves that occur far from the capital as to those that occur near it, whereas G-CISC (as described above) places more weight on the latter. Also, L-CISC does not display the same unbiasedness property that G-CISC has. In any case, it is reassuring that the results are still present with both versions, $LCISC_1$ and $LCISC_2$, as shown in Columns (3) and (4) – not surprisingly when we consider that the raw correlation between $GCISC$ and $LCISC$ measures is around 0.8.

For the sake of completeness, we can also consider the coarser measures of concentration. We look at the share of population living in the state capital (as of 2010), and a dummy variable for whether the capital is the largest city in the state. Both of these variables are positively correlated with $GCISC_1$ and $GCISC_2$, as one would expect. The raw pairwise correlation hovers around 0.3 in all cases, significant at the 5% level. We use these measures in regression specifications otherwise identical to those in Columns (1) and (2), using the "Exalead" measure in light of the time period for which we have the population data at the city level. As it turns out, we see a statistically significant negative coefficient in Columns (5) and (6), consistent with the baseline results. The quantitative implications, however, suggest in both cases a decrease in corruption of about one third of a standard deviation – for a one-standard-deviation increase in the share of the population in the capital and for a change from the capital not being to its being the largest city, respectively. This smaller effect is consistent with a substantial measurement error being introduced by the use of these coarse measures.

A second check is to probe the results with a few "placebo" regressions. In that regard, we can start by asking whether there is indeed something special about the capital city, as opposed to other features of the spatial distribution of population. A first piece of evidence to support that comes from Table 3, of course. After all, we were already controlling for an uncentered measure of population a concentration, namely (the log of) density – since both the logs of population and area were included, and the log of density is the difference between the two.

In any case, we can go further by considering "placebo" measures of concentration that do not place the capital city per se in any special role. For instance, we look at a measure of concentration of population around the largest city in each state. After all, since the latter is often – though certainly

regression results have high standard errors, but quantitatively the estimates are again very similar to our baseline: the estimated coefficient implies that an increase in $GCISC_1$ by one standard deviation is associated with a reduction in the measure of corruption perception of about 0.8 standard deviation. (These results are also available upon request.)

not always – also the capital city, one might wonder whether concentration around the capital could be in fact proxying for that. Columns (1)-(4) in Table 5 dispel that notion: the concentration around the largest city has no independent effect and, most crucially, its inclusion does not affect the significance or size of the coefficient on the concentration around the capital.[13]

[TABLE 5 HERE]

A second "placebo" test is to check for different outcome variables. If the stylized fact is indeed saying something specific about corruption and accountability at the state level, one would expect that there would be no particular connection between the isolation of the capital city and the prevalence of (or federal prosecutorial efforts in pursuing) other types of crime that are presumably unrelated to state politics. We check that, in Columns (5)-(8), using a measure of criminal cases related to drug offenses that are brought by prosecutors to federal courts in each state (as of 2011). We choose drug offenses because they are the most numerous, by some distance, among the cases brought before federal courts. Columns (5)-(6) show that there seems to be no connection whatsoever between the number of drug cases and the concentration of population around the capital. To check that this is not driven by outliers, we then exclude from the sample the states on the Mexico border – which tend to have a disproportionate number of drug-related cases (especially Arizona and New Mexico). In Columns (7)-(8) we see that the same result still applies in that case.

In sum, the relationship between the concentration of population around the capital city and corruption in US states seems robust to different measures of both concepts. The evidence also suggests that there is something particular about the capital city and about corruption, in fact corroborating the impression of observers of US state politics.

2.4 Is There Evidence of Causality?

We have established the stylized fact in terms of correlations, but the crucial question remains of whether we can identify a causal relationship going from the isolation of the capital city to the prevalence of corruption – which seems implicit in the anecdotal accounts.

To understand the issues more clearly, let us think of the spatial distribution of population over a state as being determined by underlying features of the state's environment – which we can think of, for simplicity, as the spatial distribution of "economic resources". For instance, a state's inhabitants will be more likely to live in a given part of it if that's where there is a navigable river, or canal, or a gold mine, or better road infrastructure, and so on. Where the state capital will be located, relative to those resources are, will determine the degree of isolation of the capital city. To fix ideas, we can consider a

[13] Similar results apply when we repeat the same exercise for a different "placebo" – the concentration around the capital that each state would have if its population were uniformly distributed over its territory. This "uniform" CISC teases out the effect of the specific location of the capital city, leaving aside the effects of its special status as the capital. These are not included for the sake of brevity, but are available upon request.

fictitious binary situation where the resources (and hence population) are all in a single location, and such that the capital city (*capital*) may be situated either close to (C) or far from (F) that location. In this case, we can think of the isolation of the capital as being measured by (the negative of) a dummy variable, X:

$$X = \begin{cases} 1 & \text{if } capital = C \\ 0 & \text{if } capital = F \end{cases} \tag{2}$$

If we denote as Y our outcome variable of interest, corruption, what we want is to estimate the parameter β in a model such as:

$$Y = \beta X + W\Gamma + u, \tag{3}$$

where W stands for the observable determinants of corruption, in addition to the isolation of the capital city, and the error term u. The endogeneity problem, of course, is that it could well be the case that X and u are correlated. To put it in terms of our simple binary model, whether the capital city will be located close to where the economic resources are will obviously be endogenous – both because the location of the capital city is an institutional decision and because the very fact that a given city is designated as such will affect its economic potential.[14] It is natural to think that both of these factors are related to variables, say institutional or cultural traits, that are unobserved or otherwise left out of our empirical specifications.

To deal with that, in the absence of something like a natural experiment on the location of capital cities, we need to look for sources of exogenous variation in the concentration of population around the capital. One possible instrument along these lines is the concentration of population around each state's centroid – also known as the geometric center or barycenter, and computed as the average coordinate of the state. Specifically, if we take the map of a state as a set $Z \subset \mathbb{R}^2$, the centroid is a point $c \in \mathbb{R}^2$ such that $c = \frac{\int_Z x dx}{\int_Z dx}$. Note in particular that the location of the centroid does not depend on the spatial distribution of a state's population, but only on the state's geographical shape. In terms of our simple model, we can think of the centroid as another location (*centroid*), whose isolation is given by the negative of:

$$Z = \begin{cases} 1 & \text{if } centroid = C \\ 0 & \text{if } centroid = F \end{cases} \tag{4}$$

To check if Z is a valid instrument, of course, the first question is whether Z and X are indeed correlated. The history of the designation of state (and federal) capitals in the US strongly suggests a link between the location chosen for the capital and the centroid, as concerns with equal representation led to strong pressures in that regard (Zagarri 1987). For instance, back in 1789, James Madison argued that, as a matter of equality and political stability, the capital cities of the states, and of the Union, ought to be placed "in that spot which will be least removed from every part of the empire," as opposed

[14]While the presence of government could be expected to generate a positive impact in terms of economic activity, in practice it often turns out not to be that large. Many American state capitals failed to develop into major economic centers (Zagarri 1987, p. 32-33).

to other "eccentric" locations. This was in line with an ancient tradition advocating a centrally located capital city, dating all the way back to Aristotle's description, in his *Politics*, of the ideal location for the seat of government as a "common centre, linked to the sea as well as land, and equally linked to the whole of the territory." (Zagarri, 1987, p. 27) In fact, as state capital cities were typically chosen at a time when transportation and communication costs were substantial, this consideration was particularly important. "Americans believed it was a matter of right, not simply personal comfort, to have a centrally located capital" (Zagarri 1987, p.17), and many state capitals where moved to more centrally located spots as the settlement of those states proceeded (Shelley 1996).[15]

In practice, as a result, there does seem to be a positive correlation between the two measures of concentration, as illustrated by Figure 2. Panel A shows a map of the US showing all state capitals, and it is apparent from inspection that many of them are actually in relatively central locations. Panels B and C in turn display the scatterplots for $GCISC_1$ and $GCISC_2$, respectively. The raw correlation for the former is 0.90 (in 1970) between concentration around the capital and concentration around the centroid, significant at the 1% level. The correlation is smaller (0.38) for $GCISC_2$, yet still significant at the 1% level.

[FIGURE 2 HERE]

On the other hand, the location of the centroid relative to that of economic resources, and ultimately the distribution of population, is essentially exogenous. Put differently, the arbitrariness of the location of the centroid would naturally imply that the concentration of population around that point should not affect any relevant outcomes in and of itself. As a result, it is reasonable to think that Z and u are in fact uncorrelated. This should be true at least once the territorial limits of each state are set. Because of that, we will control for the geographical size of the state in all specifications, to guard against the possibility that a correlation between omitted variables and the expansion or rearrangement of state borders might affect the results. (Alternatively, we control for the total miles of state borders – national and international – and coastline. The results are essentially unaltered.)[16] In fact, the importance of controlling for the role of geographical size is in line with Zagarri's (1987) observation that, faced with the pressure to relocate their capitals in a way so as to satisfy a notion of equal representation, small states chose to move them close to the geographical center, whereas larger states tended to situate them close to the demographic center. It is also consistent with the weaker raw correlation with $GCISC_2$, relative to $GCISC_1$, since the former already controls for the geographical size and shape of each state.

To further assuage endogeneity concerns, it is also instructive to check the correlation between our instrument, the centroid $GCISC$, and a number of "predetermined" variables – namely variables that

[15]This could be construed to imply that, with the reduction in transportation and communication costs over time, it should become less important to have that congruence – in fact, however, we will see that there is no significant correlation between the date at which a state joined the Union and the distance between its capital and centroid (once we control for the state's geographical size).

[16]State borders have been generally stable after establishment. For a history of those borders, see Stein (2008).

cannot be affected by contemporaneous levels of corruption or by its current covariates. We select variables that are either geographical in nature (e.g. latitude and longitude, total borders and coastline, elevation span, mileage of navigable inland waterways) or are measured far back in the past, as contained in the 1878 US Statistical Abstract (e.g. railroad miles, coal production). (By 1870, the state borders for the continental US were essentially in line with what prevails today – even for states that had yet to be admitted into the Union as such.[17]) One would expect that, if the isolation of the centroid were to vary systematically across state characteristics that might correlate with current levels of corruption, this would be picked up by a few of those predetermined variables.

Columns (1)-(2) in Table 6 display the raw pairwise correlations. We can see that $GCISC_2$ is indeed uncorrelated with those variables. $GCISC_1$, on the other hand, seems correlated with a few geographical variables. As it turns out, these correlations are misleading, because of that which exists, by construction, between a state's $GCISC_1$ and its geographical size. Columns (3)-(4) control for that by conditioning the pairwise correlations: we run a regression of each measure of the concentration of population around the centroid on (log) area and regional dummies, and compute the pairwise correlations of the residuals from these regressions with the other predetermined variables. It then becomes clear that none of these is significantly correlated with the concentration of population around the centroid.

[TABLE 6 HERE]

In other words, the states with a population highly concentrated around the centroid look rather similar, from an *ex ante* perspective, to those with low concentration. In particular, this is true along a few important dimensions. First, from an historical standpoint, there seems to be no systematic differences between older and newer states. Second, more and less concentrated states (around the centroid) also look similar with respect to key geographical characteristics, such as the presence of mountains or rivers or the size of borders and coastline. Finally, there seems to be little difference with respect to economic factors such as natural resources or transportation networks.

Having argued for the validity of our instrument, we can now check the two-stage least-squares (2SLS) results in Table 7. We start in Columns (1)-(2) by displaying the first-stage results for our preferred specification, which reproduces Columns (3) and (7) in Table 3. We can see that the centroid $GCISC$ is indeed a significant predictor of the capital $GCISC$. That said, the F-statistic is relatively low for $GCISC_2$. In light of this, in the rest of the table we reproduce the p-values as given by the minimum distance version of the Anderson-Rubin (AR) test, which is robust to weak instruments.[18] Columns (3)-(8) then reproduce in order, for comparison's sake, the specifications with controls from Table 3.

[17]A historical map from 1870 can be seen in Figure A1, which can be compared with the map in Figure 2. The one exception is that the eastern part of current Oklahoma was still designated as Indian Territory, as was the case until 1907.

[18]The Cragg-Donald F-statistic, for $GCISC_2$, is equal to 7.03, which lies between the 15% and 20% thresholds of the Stock-Yogo weak instrument maximal IV size critical values (Stock and Yogo 2005). This means that the instrument would be considered weak if we were to limit the size of the conventional IV Wald test to at most 0.15 above its nominal value. We take this to mean that the instrument is not obviously weak, but warrants robust inference.

[TABLE 7 HERE]

We do see confirmed the significant effect of having an isolated capital on corruption. As it turns out, the point estimates are generally considerably greater, in absolute value, than the corresponding OLS results in Table 3. For instance, in the case of $GCISC_1$, our preferred specification corresponds to an effect that is just over 40% larger than previously. This means that the same quantitative exercise we had before – a one standard deviation increase in concentration – would yield an impressive decrease in corruption of about 1.1 standard deviation. In terms of interpretation, when it comes to the direction of the bias in the OLS estimates, this suggests that population tends to gravitate more toward the capital in states with a more corrupt environment – or else, perhaps, that states that would otherwise display more fertile ground for corruption may on average choose, for whatever reason, to locate their capitals in less isolated places.[19]

In sum, while we are short of a true natural experiment where state capitals would have been randomly assigned, a plausible source of exogenous variation suggests that behind our stylized fact there is indeed an effect of having an isolated capital city on the prevalence of corruption in a given state.

3 Accountability and the Spatial Distribution of Population

What could possibly explain such a strong and robust connection between a population that is less concentrated around the state's capital city and higher levels of corruption? As we have anticipated, it has been posited by observers that politicians in isolated state capitals face lower levels of accountability.

We can take a first look at the possibility that the accountability of state-level officials is affected by the spatial distribution of population by inquiring about their compensation patterns. After all, if politicians are less accountable in states with isolated capitals, one might expect that they would also obtain higher rents through higher official compensation. We check that hypothesis using data on the annual compensation of state governors, from 2008, as compiled by the Alaska Department of Administration. We focus on the compensation of governors because of ease of comparability. State legislatures, for instance, vary enormously in terms of basic characteristics such as the frequency with which they convene, so that it becomes very hard to compare compensation across different states.

Table 8 displays the results of this simple exercise. The first four columns essentially reproduce, again for comparability, the basic specifications studied for corruption (as in Columns (2)-(3) and (6)-(7) of

[19] On a separate note, we can also consider the time variation in our data in order to control for unobserved factors that may affect state-level corruption while being correlated with the isolation of the capital city. We have kept that variation aside because of the noisiness of the corruption measure, but that evidently entails some loss of potentially relevant information. We create a panel by averaging our sample across three roughly defined decades covering the period for which we have corruption data: from 1976 to 1984, from 1985 to 1994, and from 1995 to 2002. We then match each of these decades to the corresponding $GCISC$ from 1980, 1990, and 2000. The results are very much in line with our baseline, whether we simply pool the data or run specifications with random or fixed effects (at the state level). (The results with the latter are not significant, which is not surprising when we are leaving aside most of the interesting variation.) These results are available upon request.

Table 3), only now with (the log of) governor salaries substituted as the dependent variable. We see a negative, statistically significant coefficient of interest: the governors of states with less isolated capital cities receive less compensation (as a share of per capita income). In fact, using the coefficient from our preferred specification (Column (2)), it follows that a one standard deviation increase in the concentration of population around the capital decreases compensation by just under 85% of a standard deviation. The last two columns in turn display the 2SLS specifications, again with the exogenous variation induced by the location of the centroid. They suggest evidence of a causal impact of the isolation of the capital on compensation, consistent with lower accountability.

[TABLE 8 HERE]

In other words, we have *prima facie* reason to suspect that accountability is indeed weaker in states with isolated capital cities. But what are the specific accountability mechanisms that may be affected by the spatial distribution of the population around the capital city? We will now pursue a systematic look at three possible versions of this hypothesis – having to do with the roles of the media, of the electoral process, and of special interests.

3.1 The Role of the Media

To the extent that media outlets are at least partly trying to provide content that interests their audience (e.g. Mullainathan and Shleifer 2005, Gentzkow and Shapiro 2010), and to the extent that media consumers are at least somewhat more interested (*ceteris paribus*) in what happens close to where they live, it would be reasonable to expect that an outlet's coverage would focus on things that take place where its audience is concentrated. If so, outlets whose audience is more concentrated around the capital city would tend to give more extensive coverage of state politics. As a result, one would conclude that in states where the population is more concentrated around the capital there would be more intense media coverage of state politics, and therefore greater accountability. This is an evidently plausible story, which seems to underlie the view that connects isolated state capitals to the prevalence of corruption through lower levels of media accountability.

3.1.1 A Motivating Example

To motivate this nexus, let us consider a couple of corruption episodes bringing together our aforementioned comparison between New York and Massachusetts. Both states have witnessed recent corruption scandals that led to the indictment and eventual conviction of two very prominent state legislators: former Senate Majority leader Joseph Bruno, in New York, and former House Speaker Salvatore DiMasi, in Massachusetts. We can learn about the scope of media accountability in both states by looking at these scandals and how they were covered by the New York City and Boston press.

In 2007, Bruno had been serving as the Majority leader for thirteen years. As such, he was one of the "three men in a room," along with the governor and the Assembly speaker, who are reputed to run New York state politics (Lachman and Polner 2006) – a popular description that in and of itself indicates a system without much accountability. In that year, political scandal forced him to resign from a consulting job with a firm involved in managing funds for politically powerful unions – a job that led to his being investigated by the FBI. (New York legislators are legally allowed to have other jobs besides their legislative office.) In 2008, as a result of the fallout from that investigation, he chose not to run for reelection and eventually resigned from his seat. In early 2009 he was formally indicted on eight counts of corruption, for allegedly using "his powerful position to help entities with business before the state that in return paid him $3.2 million in private consulting fees." (*The Saratogian*, 01/24/2009) He was later convicted in late 2009, by the Federal District Court, on two counts of fraud. He was sentenced to two years in prison, although he has remained free during appeal. His case was certainly not unique: one of the Majority leaders that succeeded Bruno was later indicted on six counts of embezzlement and theft, in 2010, and lost his reelection bid in the process.

Around the same time, DiMasi also resigned from his position as Massachusetts House Speaker, in 2009, amidst a massive scandal involving extorsion and receiving kickbacks in return for government contracts. He was eventually indicted in nine corruption charges, and later found guilty of seven of these counts in a federal court, in 2011. He got sentenced to eight years in prison, which he started serving in November 2011. This episode represented the third straight instance of a Massachusetts House Speaker being federally indicted.

In other words, we have two comparable scandals involving prominent politicians in these two neighboring Northeastern states. Both led to high-profile convictions, in scandal-plagued environments. It is interesting, however, to contrast the coverage devoted to these cases by the main newspapers from the respective states' main cities: New York City, located just over 100 miles away from the state capital Albany, and Boston, which happens to be the capital itself. A search for "Joseph Bruno" (or "Joseph L. Bruno") and "corruption" in November 2011 yielded 154 articles in the online archives of the *New York Times*, 77 in the *New York Post*, and 91 in the *New York Daily News*. The same search with "Salvatore DiMasi" (or "Salvatore F. DiMasi"), on the other hand, yielded 238 matches in the *Boston Globe* and 130 matches in the *Boston Herald*. The difference is more remarkable if we control for the size of the different newspapers: a "neutral" search (for the word "Monday," following Gentzkow et al. (2005)) reveals, for instance, that the *New York Times* is about twice the size of the *Boston Globe*. In sum, Boston newspapers seem to have devoted substantially more coverage to the DiMasi scandal than New York City newspapers did to the Bruno affair – consistent with the idea that their readership might be more interested in what goes on in Beacon Hill (the central Boston neighborhood that is the site of the state government) than the New York papers' is in what takes place in Albany.

Illustrative as an anecdote can be, it obviously cannot establish a pattern on its own. For instance, one might wonder if the journalistic interest of the DiMasi case could be inherently greater, or whether more coverage of corruption scandals is actually the outcome of their occurring more often – although New York is measured as more corrupt than Massachusetts in all of our available measures. In any case, we need a more systematic look at the evidence.

3.1.2 The Evidence

In order to test this story, we take a closer look at newspaper coverage of state politics. It is widely understood that newspapers provide far greater coverage of state politics in the US than competing media such as TV (e.g. Vinson 2003, Druckmann 2005), and it is also the case that their audiences tend to be more geographically concentrated than those of TV. They also happen to have more easily searchable content, which comes in handy for our investigation.

Specifically, we use the newspapers whose content is available and searchable at the website "NewsLibrary.com" – covering nearly four thousand outlets all over the US. In order to proxy for their coverage of state politics, we search in each newspaper for the names of each state's then-current governors – as well as, alternatively, for terms such as "state government," "state budget," or "state elections", where "state" refers to the name of each state – between January 1st 2008 and December 31st 2009. (Details of the search are in the Data Appendix.)[20] Because we want to guard against reverse causality when it comes to corruption – ie, the possibility that there is a lot of media coverage because of the existence of corruption scandals – the idea here is to look for terms that are not necessarily related to this type of episode – though it can certainly be the case (and actually is, for some states) that governors are involved in a few of those. Note also that we only take into account mentions to the state in which each newspaper is based. Finally, we control for newspaper size by running a search for a "neutral" term ("Monday"), as mentioned above.

We then want to check how that coverage of state politics is conditioned by how close each newspaper's audience is to the capital city. For that we look at the circulation data provided by the Audit Bureau of Circulations (ABC), which breaks it down by county, and allocate every reader in a given county as if she lived in that county's centroid. This lets us compute the G-CISC of each newspaper's total circulation in a given state, measuring the concentration if its readership around the state capital. The number of newspapers with ABC data available is considerably smaller than what NewsLibrary.com covers, so we end up with a total of 436 newspapers in our sample. Also, we leave aside the circulation of a newspaper outside of its home state, since we are focusing on coverage of home-state politics. For newspapers that have substantial circulation outside their home state, this would tend to overestimate the degree of concentration of their circulation around the home-state capital – a source of measurement error that should be kept in mind when interpreting the results below.

[20] Similar procedures using NewsLibrary.com have been used, for instance, by Snyder and Stromberg (2010) and Lim, Snyder, and Stromberg (2010).

The basic hypothesis to check would be that a newspaper's coverage of state politics is increasing in how concentrated its readership is around the state capital, as captured by the G-CISC. For this we first run regressions of different measures of state-level political coverage on the concentration of newspaper circulation around the state capital city – controlling for newspaper size (proxied by the "Monday" search), circulation and state fixed effects. We find coefficients that are generally positive and significant, as we can see in Table 9.[21] In addition, we would expect the kind of measurement error introduced by out-of-state circulation to lead these estimates to be biased downwards: newspapers with significant out-of-state circulation would likely have an incentive to provide less coverage of home-state politics, and the concentration of their circulation is being overestimated in our calculation.

[TABLE 9 HERE]

We can also look at this question at an aggregate level, as opposed to that of individual newspapers. To get at this angle, we compute an aggregate state-level measure of political coverage as a weighted sum of the newspaper-level measures. We use two alternative sets of weights: the circulation of each newspaper in the state, and that circulation weighted by its geographical concentration as captured by the GCISC. The latter would put more weight on circulations closer to the capital, and thus allows for the possibility that the content of newspapers whose audience is more concentrated around the capital city might have a disproportionate effect on the behavior of state politicians. However, because of the measurement error that we have highlighted above, we will think of the first set of weights as our preferred measure. As far as measurement error is concerned, we should also note that the aggregate measure introduces an additional source, due to the fact that the ABC and NewsLibrary.com data do not cover the totality of a state's newspaper industry. There is no particular reason to believe that this measurement error is correlated with the underlying value of the variable we want to measure, so we would in principle expect a possible downward bias emerging from that. For brevity, we will summarize media coverage with the first principal component of the four aforementioned alternative measures, which are all adjusted by newspaper size.

We can start off by looking at the data in graphic form. Figure 3 does so, using the circulation-weighted measure of media coverage – in fact, the residuals of a regression of this measure on a dummy for whether the state had an election for governor in one of the years to which our newspaper search refers (2008 and 2009), in order to account for the possibility that coverage of state politics would react to the proximity of elections.[22] It depicts a positive link between media coverage and the concentration

[21] Note that in this case the presence of state fixed effects makes the normalization of the G-CISC immaterial.

[22] For ease of visualization, we leave out the state of Rhode Island, which turns out to be a huge positive outlier when it comes to the media coverage variable – about five standard deviations greater than the state with the next largest measure. This is because there is one newspaper, the *Providence Journal*, that far outstrips the circulation of all other RI-based newspapers in the sample – there is a strong presence of out-of-state newspapers circulating in the state, unsurprisingly for a small state close to big media markets in Boston and New York. This one newspaper happened to have a very large measure of coverage of state politics, and is idiosyncratically driving the state-level measure. Our results hold both with the state's presence or absence from the sample, as we discuss below.

of population around the capital (as of 2000), where we control for the geographical size of the state by using $GCISC_2$. In other words, states with isolated capitals tend to display lower levels of media coverage of state politics – to resort to our previous example, Massachusetts newspapers do seem to cover state politics more extensively than the New York press. This is an aggregate effect that is clearly consistent with the newspaper-level evidence from Table 8.

[FIGURE 3 HERE]

The regression evidence, in Table 10, confirms that positive correlation at the aggregate level. The effect is considerably stronger for the $GCISC_2$ measure than for $GCISC_1$, indicating that what matters most for the connection is how isolated the capital city is, not so much in terms of absolute distances, but rather relative to the geographical size of the state. The results are largely the same with the full sample (Columns (1)-(4)) or excluding Rhode Island (Columns (5)-(6)). By the same token, similar results obtain when we use our measure of concentration around the state centroid as an instrument for concentration around the capital: we see a significant effect in the case of $GCISC_2$, and no effect for the case of $GCISC_1$ (Columns (7)-(8)). That said, the significance of the results is sensitive to the exclusion of the states of South Dakota and Delaware, as might have been suggested by Figure 3. These are not outliers in a strict sense – they are not even two standard deviations below the mean or median – but this does add some grains of salt to the interpretation of the aggregate evidence.

[TABLE 10 HERE]

We conclude that there does seem to be a link between the degree of isolation of the state capital city and the amount of media scrutiny over state-level politics. First, at the more micro level, newspapers tend to give state politics greater coverage when their audience is more concentrated around the capital. Second, there is some evidence that the aggregate level of coverage seems to respond to the overall level of concentration. In short, the spatial distribution of population matters for media accountability.

3.2 The Role of Voters

It is quite possible that other forms of holding state politicians accountable could be linked to the spatial distribution of that state's population. For instance, it could be that citizens are more likely to be moved to take part in the political process if they are closer to the center of power, as they feel more closely connected to what happens near them. As a result, things like voter turnout could be affected by that spatial distribution. While we are not aware of this hypothesis being tested directly in the context of the US, similar effects have been detected elsewhere (Hearl, Budge, and Pearson 1996, Dandoy 2010), with regions far from capital cities displaying lower turnout.

The basic empirical question then is whether it is the case that people who live closer to the state capital city would be more likely to turn out in state-level elections. To check for that we use county-level data on turnout, once again attributing for simplicity the county's population to its centroid, and on the distance between each county (ie, its centroid) and the state capital. We use data from the election cycle between 1997 and 2000, so that we can cover all states and use more comfortably the demographic variables from the 2000 Census.

Table 11 shows a very strong and robust negative effect of distance to the capital on turnout: people who are closer to the capital city are indeed more likely to turn out in state elections.[23] The basic result in Column (1) controls for basic demographics (education, income, and density of voting-age population) and state fixed effects, so that we focus on within-state variation in obtaining our estimates. Column (2) then shows it clearly survives additional demographic controls that may matter for turnout, such as poverty and inequality, ethnic and religious composition, and the age profile of the population.

[TABLE 11 HERE]

We again check that what we find is indeed related to the special role of the capital city, by including a "placebo" variable such as distance to the state's centroid. If we run the regression without distance to the capital (Column (3)), the "placebo" variable comes out significant, but Column (4) shows very clearly that distance to the capital is what really matters in predicting turnout. Similar results emerge if we use distance to the state largest city instead.

If we follow the logic of the hypothesis linking distance to state capital to turnout, we are led to conjecture that the link would not hold – or at least should be weaker – for presidential elections. After all, there should be less of an asymmetry between how national politics is felt in state capitals relative to other locations in a given state. We can test for that by looking at the different timing of elections in our sample. More specifically, state elections coincided with presidential elections, in our sample, only in the year 2000, and we can check whether the link between distance and turnout would be weaker in those years – where presumably turnout would be more heavily affected by forces unrelated to state politics. Sure enough, if we run the regression for the year 2000 only, Column (5) shows that we obtain a coefficient that is about one-half the size of the effect for the whole sample, and statistically significant only at the 10% level. In contrast, if we run the same regression restricting the sample to the "off"-years of 1997 and 1999 – where no federal election took place – we get a coefficient (Column (6)) that is about four times as large, and much more significant, even though we have a sample size that is considerably smaller.

There thus seems to be evidence in favor of the idea that electoral accountability might be related to the spatial distribution of a state's population relative to its capital city. However, assuming from this that the relationship that emerges from the county-level data would necessarily aggregate up to a link between state-level turnout and the isolation of the state capital would be incurring in the well-known ecological fallacy. Let us thus look more directly at the state-level relationship. Figure 4 depicts it for

[23] The results are very much the same, qualitatively, if we use distance itself instead of logs.

states that held their elections in non-presidential years, and we can see a weakly positive link between turnout and the concentration of population around the capital. However, this relationship turns out not to be statistically significant and, most crucially, rather dependent on the influence of New Jersey and Minnesota.[24] As a result, we cannot be confident that the link carries over to the aggregate state level.

[FIGURE 4 HERE]

In sum, we have uncovered an empirical regularity that is to the best of our knowledge a novel one: turnout in state elections is affected by the distance to the state capital. However, it is not clear that this is matched by a link between isolated capital cities and lower overall turnout.

3.3 The Role of Special Interests

Still on the nexus between isolated capital cities and accountability, we may also examine whether the influence of special interests over state politics is affected by the spatial distribution of population. In fact, the concern with that presumably corrupting influence figures prominently in historical records regarding the choice of state capitals. Those most concerned would typically argue, however, that this would be a reason to keep the capital city geographically apart from major centers. As put by Shelley (1996, p. 38) when talking about the late 18th century debate over the location of the federal capital, "many Americans were uneasy about the prospect that their capital would be a major commercial center. The republican philosophy expressed in the Declaration of Independence and in the Constitution regarded the centralization of political and economic power as dangerous." In the opposite direction, however, one might argue that an isolated capital would constitute more fertile ground for the influence of special interests, particularly in light of the patterns of media and electoral accountability uncovered in the previous subsections.

In order to tackle this question, we look at data on contributions to state-level political campaigns, as a proxy for the role of those economic interests, to see if the patterns across different states display differences related to such centralization, or lack thereof. (The data on contributions come from www.followthemoney.org.) As it turns out, there is a surprisingly strong negative correlation between contributions and the concentration of population around the state capital. In other words, states with relatively isolated capital cities display higher levels of campaign contributions in state politics. This can be seen in the raw data in Figure 5, which plots the log of total contributions at the state level (as a share of GDP), from 2001 to 2010, against the $GCISC_2$ as of 2000.[25] For instance, if we compare Utah and Nevada – two neighboring states, which were once joined in the Territory of Utah, and are now actually very similar in terms of both GDP and population size – we see that the latter, with its isolated capital Carson City, has witnessed a lot more money flowing into state politics than the former, whose population is very concentrated around Salt Lake City.

[24] The IV results here are very similar to the OLS, both qualitatively and quantitatively.

[25] We start in 2001 because the state coverage in previous electoral cycles is somewhat inconsistent.

[FIGURE 5 HERE]

This raw correlation survives controlling for confounding factors – as shown in Table 12. Columns (1)-(2) show that the results hold for the basic OLS specifications, which reproduce our preferred specifications for corruption, but substituting campaign contributions as our dependent variable: we see a significant negative coefficient on both measures of concentration. It is also quite substantial from a quantitative perspective: a one-standard-deviation increase in the concentration of population around the capital (as measured by $GCISC_1$) would be associated with a 30% decrease in contributions. Columns (3)-(4) then show that the results survive unscathed when we control for presidential campaign contributions (in the 2008 election cycle), which are very highly correlated with state-level contributions (the raw correlation is 0.87), and may thus help capture other factors leading to a high general propensity to engage in this form of political activity.[26] Finally, Columns (5)-(6) show similar results when we again instrument for G-CISC using the centroid measure.

[TABLE 12 HERE]

In sum, the argument that isolated capitals would prevent an undue influence of economically powerful groups seems not to be borne out by this admittedly rough exercise. Much to the contrary, it seems that they are actually associated with greater levels of campaign contributions. Based on the evidence from the previous subsections, one could thus speculate that, in the presence of lower media scrutiny and reduced involvement by voters, an isolated capital may open the way for a stronger role of money in shaping political outcomes.

4 Assessing the Role of Different Accountability Mechanisms

We have established an empirical connection between isolated capital cities and greater levels of corruption across US states. We have also shown that different accountability mechanisms are related to the spatial distribution of population. In particular, distance from the capital reduces the coverage devoted by the media to state politics, and reduces turnout in state elections. In addition, states with isolated capitals display greater levels of contributions flowing to campaigns for state-level office. With that picture in mind, we can now try to disentangle in the data, if only roughly, the extent to which each of these mechanisms may explain the link with corruption.[27] This is evidently complicated by the fact that the different mechanisms are likely to be correlated with each other – for instance, voter turnout will likely

[26]Interestingly, the concentration of population does not come out with a significant coefficient in a similar regression with presidential contributions as the dependent variable (available upon request). This seems consistent with the idea that the distribution of population around the capital city should not affect the level of engagement with politics at the federal level.

[27]Note that our measures of corruption are not limited to state-level officials. (See for instance Glaeser and Saks (2006, p. 1057)). In that sense, when investigating the connections with state-level accountability mechanisms, one should keep in mind that the measures of corruption are proxies for the corruption of those officials – or alternatively, the measures of each of the mechanisms are proxies for the accountability faced by different officials, state-level or otherwise, in a given state.

be affected by media coverage – but we can nevertheless try to shed some crude light on their relative importance.

We start off by taking a look at the raw data, plotting our main measure of corruption against our proxies for media coverage, voter turnout, and campaign contributions. Panel A in Figure 6 shows a negative correlation between corruption and our measure of media coverage (more specifically, as before, the residuals from a regression on a dummy for the presence of state elections during the period of our media content search). Panel B in turn shows a negative correlation when it comes to turnout – again excluding states having elections in presidential years, although the picture looks rather similar if we include all states. Finally, Panel C shows a positive link between corruption and the prevalence of campaign contributions. The interpretation is made harder by the temporal disassociation between our proxies for accountability and the measure of corruption, but the pictures are remarkably similar if we use the updated measure of corruption (up to 2007). This suggests that the measure of corruption is proxying for a deep-lying feature of the institutional environment –which seems stable over time. In any case, while these are simply raw correlations, they are broadly consistent with the hypothesis that media accountability helps keep graft in check.

[FIGURE 6 HERE]

With this in mind, we can run specifications adding these measures of accountability to our basic regression linking corruption and the concentration of population around the capital. We can then check the extent to which that link is weakened once we account – imperfectly as the case may be – for the different accountability mechanisms. This is what we do in Table 13. Each odd-numbered column essentially reproduces the basic specification, except for adjusting the sample for the idiosyncrasies that each of our measures require. Then each even-numbered column includes our preferred measure of accountability, with each pair being run for $GCISC_1$ and $GCISC_2$.

[TABLE 13 HERE]

Let us start with the media specifications, which include the dummy for state elections. We start with a coefficient that is very much similar to what we had before, in Table 3. When we introduce our measure of circulation-weighted media coverage, we note a robust negative coefficient on media coverage. Of greatest note, including the measure of media coverage does reduce the coefficient on the measures of concentration, by around one fifth of the initial coefficient. This difference between the coefficients is in fact statistically significant (at the 5% level). Nevertheless, the effect remains statistically significant, also at the 5% level. Columns (3)-(4) reproduce the same results for the $GCISC_2$ measure, which are very much consistent.[28]

[28]The results are similar whether we include Rhode Island or not, and whether we use the GCISC-weighted measure of coverage. Last but not least, they are largely the same when we use our alternative measure of corruption.

The picture is quite different for our two other measures. When it comes to voter turnout, Columns (5)-(8) in Table 13 show that it does not quite seem capable of explaining our stylized fact regarding corruption. (Here we again focus on the states with elections in non-presidential years.) In both cases, the initial coefficient on the G-CISC is barely affected, and there is no evidence of a direct effect of turnout itself. The same is true when we consider campaign contributions, which we omit for the sake of brevity.

Finally, Columns (9)-(12) add the three variables jointly, with the full sample. It essentially confirms the previous results, with the coefficients being very close to the case when the media coverage variable is included on its own. The coefficient on the GCISC falls by between one fifth and one fourth.

In sum, media coverage of state politics does seem to explain at least some of the effect of having an isolated capital on state-level corruption. We nevertheless stress the need for caution against overinterpreting this result, especially in quantitative terms, in light of the obviously imperfect nature of our measure of media coverage and of its relationship to the media accountability faced by different types of officials in a state, and also in light of the correlation between the different accountability mechanisms. Needless to say, any causal interpretation of the estimates in Table 13 is warranted, as we do not have enough sources of exogenous variation to disentangle the effects of different channels.

5 Isolated Capital Cities and the Provision of Public Goods

Finally, since the evidence suggests that an isolated capital city is associated with lower levels of accountability and more widespread corruption, it is worth asking whether this pattern would also be reflected in a diminished provision of public goods. It is certainly plausible, and would be of particular concern, if that were indeed the case.

In order to investigate this possibility, we collect data from the US Statistical Abstract (2012 edition) on the pattern of expenditures by US states (in 2009), and also on outcomes that might be related to the provision of public goods. Most of state government expenditures that might be directly ascribed to public good provision fall under four categories: “Education,” “Public Welfare,” “Health,” and “Hospitals.” We thus compute the share of total spending devoted to these categories as a proxy for the resources that the state devotes to public good provision. This accounts for, on average, just under two thirds of total expenditures, although it varies from as low as 51% (Louisiana) to as high as 77% (Tennessee). We also compute the share devoted to “Government Administration,” “Interest on General Debt,” and “Other” as a proxy for what is not directly related to public good provision, although they could certainly be indirectly related. These comprise about one sixth of total expenditures, on average, varying from about 11% (Tennessee) to about 28% (North Dakota).

These measures do not say much about how effectively these resources are spent, of course. We thus also check proxies for the ultimate provision of public goods. These are affected directly by many factors other than state-level policy, but should nevertheless provide a useful piece of information for our purposes. Specifically, we use three measures that capture aspects of what should be affected by the type of public good expenditure we have defined. The first is an index that aggregates twenty-one different measures of educational inputs and outcomes by state, the so-called “Smartest State” index (Morgan Quitno Corporation 2005), from 2005-2006.[29] The second is the percentage of the population that has health insurance, again from the US Statistical Abstract (2012 edition). Finally, we use the log of the number of hospital beds per capita, also from the US Statistical Abstract (2012 edition).

For a rough look at the data, let us consider the correlation between public good provision and the concentration of population around the capital city. In Figure 7, the former is captured by the first principal component of the three aforementioned measures, and the latter is represented by $GCISC_2$, again to control for geographical size. We see a distinct positive relationship. Table 14 then displays the more systematic results. We use the control variables from our preferred specification for the baseline results in Table 3, except that we add ethnic fractionalization in order to take into account the standard result that it seems to affect the provision of public goods (eg Alesina, Baqir and Easterly 1999). Columns (1) and (2), with OLS specifications using $GCISC_1$, shows evidence that isolated capital cities are significantly correlated with lower spending on public good provision, and more spending on items not directly related to it. Column (3) shows a corresponding correlation, falling just short of significance at the 10% level, with higher levels of public good provision, which for concision we summarize using the first principal component of the three aforementioned measures.[30] Columns (4)-(6) reproduce the same sequence, but using the 2SLS specification, again with the centroid GCISC as an instrument. The results are generally consistent, although the coefficient for public good provision is now essentially zero. Columns (7)-(12) display a very similar pattern for $GCISC_2$, with the signs of the coefficients now being consistent throughout. Note that the 2SLS results are rather imprecisely estimated, but the point estimates, though smaller than their OLS counterparts, are not too far from them.

[FIGURE 7 HERE]

[TABLE 14 HERE]

These estimates are also quantitatively meaningful. Using the OLS coefficients for $GCISC_1$, it turns out that a one standard deviation increase in G-CISC is associated with a change of around 0.25-0.3 of a standard deviation in the distribution of spending, and one fourth of a standard deviation for public good provision. Interestingly, the results are substantially weakened, and lose statistical significance, when we control for our preferred measure of corruption. While this is obviously endogenous, and hence the interpretation of the specific coefficients would be perilous, this evidence is suggestive that the impact of G-CISC on public good provision may well relate to its effect on the prevalence of corruption.

[29]The methodology for the index is described in http://www.morganquitno.com/edrank05.htm#METHODOLOGY. The index aggregates, among other things proficiency measures from test scores, graduation rates, and average class sizes.

[30]The results regarding education are similar, though less precise, for the individual measures(available upon request).

The evidence thus indicates a significant negative impact of a state's having an isolated capital city on how much it spends on public goods. Our measures of actual provision are obviously rather imperfect, but they also suggest that provision is worse in those states with isolated capital cities.[31] Along with our previous evidence, this paints a picture of isolated capital cities associated with low accountability and corruption, with important detrimental effects on the state's performance as a provider of public goods.

6 Concluding Remarks

We have explored the connections between the spatial distribution of population, accountability and corruption, in the context of US states. We first established the stylized fact that isolated capital cities are associated with greater levels of corruption. This holds true for different measures of the isolation of the capital, and of corruption. It also holds when we instrument for the concentration of population around the capital using the concentration around the state centroid, the location of which is essentially exogenous.

We hypothesized that this connection might be due to an impact of the spatial distribution of population on the degree of accountability faced by state-level politicians, as illustrated by the evidence that isolated capitals are also linked to higher levels of compensation for those politicians. We then looked at how that spatial distribution affects specific accountability mechanisms. We showed evidence that newspapers tend to provide greater coverage of state politics when their audience is more concentrated around the state capital, and that voter turnout in state elections (but not in presidential ones) tends to be lower in areas that are relatively far from the capital. We also saw evidence that state politicians tend to get more money from campaign contributions in states with isolated capitals, belying the fear that having the capital in a major economic center would lead to a greater risk of capture of state politics by economic interests – and consistent with the idea that lower levels of accountability in isolated capitals would actually increase that risk. We then produced a rough attempt to assess to what extent each of these factors would explain the link between isolated capitals and corruption. The role of media accountability certainly came out ahead, although our imperfect measures leave quite a bit unexplained. Last but not least, we provided some suggestive evidence that the pattern of low accountability induced by isolated capital cities also translates into worse provision of public goods.

This evidence sheds light on the long-run implications of institutional choices, and particularly their spatial content. Specifically, the importance of the choice of where to locate the capital city is highlighted both by the historical record in the US, where the issue was prominently discussed and fought over both at the state and federal levels, and by the many historical instances of capital relocations across different countries. We have shown one reason that makes it important, as it affects institutional performance

[31] From the mechanism we propose, one might also expect that states might provide more public goods of the location-specific sort in places that are closer to the capital city. It is much harder, in this case, to find disaggregated data that could test this proposition.

along important dimensions such as the prevalence of corruption, even in a fully democratic context. From a policy perspective, in particular, one is led to conclude that extra vigilance might be needed, when it comes to polities with isolated capital cities, in order to counteract their tendency towards reduced accountability.

In terms of future research, this provides further evidence that spatial distributions – of people, preferences, economic activity, etc. – matter for politico-economic outcomes, as argued by Rodden (2010). We also add the perspective that some places in space are different from others in that they occupy particularly important positions, institutionally or otherwise. We hope more effort will be devoted to understanding the implications of that.

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8 Data Appendix

Here we describe the variables and corresponding data sources.

CISC We compute the different versions of the Centered Index of Spatial Concentration, as described in the text. Following Campante and Do (2010), we have the formula $GCISC_1 = \sum_i s_{1i} (\alpha_1 \log(d_i) + \beta_1)$, where s_{1i} is the share of the state's population living in county i and d_i is the distance between county i's centroid and the point of interest (capital or centroid or largest city). The parameters (α_1, β_1) are $\left(-\frac{1}{\log(\bar{d}_1)}, 1\right)$, where $\bar{d}_1$ is the maximum distance, across all states, between a state's capital (or other point of interest) and another point in that state. By the same token, $GCISC_2 = \sum_i s_{2i} (\alpha_2 \log(d_i) + \beta_2)$, where s_{2i} is the share of the state's population living in county i, normalized by $\log(\bar{d}_2)$, where $\bar{d}_2$ is the maximum distance, for each state, between the state's capital (or other point of interest) and another point in that state. The parameters (α_2, β_2) are $(-1, 1)$. In this way, $GCISC_2$ controls for the state's size, while $GCISC_1$ does not. ($LCISC$ replaces $\log(d)$ with d.) The population data are from the US Census, from 1920 to 2000. (As we go all the way back to 1920, we exclude Alaska and Hawaii, which were not states at the beginning of the period.)
$GCISC_1$ 1920-1970: n= 48 , Mean: 0.311, S.D.: 0.095, Min:0.158, Max: 0.577.
$GCISC_2$ 1920-1970: n= 48 , Mean: 0.203, S.D.: 0.073, Min:0.080, Max: 0.411.

Corruption Number of convictions of public officials for public corruption 1976-2002 relative to average population in the state 1976-2002, from the 1989, 1999 and 2002 issues of the Report to Congress on the activities and operations of the Public Integrity Section, issued by the Department of Justice. The data were generously shared by Ed Glaeser and Raven Saks (GS), and is further described in Glaeser and Saks (2006).
n= 50 , Mean: 0.275, S.D.: 0.132, Min: 0.073, Max: 0.625.

Corruption (Exalead) Following Saiz and Simonsohn (2008), we use the'*Exalead* (www.exalead.com) search tool to search for the word "corruption" near the name of the state (*corruption NEAR name of state*), and divide the number of hits by the number of hits for the name of the state alone. (In the case of Washington, we search for "Washington State".) The search was performed in September 2009.
n= 50, Mean: 0.00023, S.D.: 0.00034, Min: 0.00004, Max: 0.00177.

Income Median household income, from US Census. (GS)

% College Share of the population aged 25 and up with four or more years of college, from US Census. (GS)

Population From Bureau of Economic Analysis (BEA). (GS)

Area From US Census.

Share of government employment Number of government employees relative to total employment, from BEA. (GS)

% Urban Urban population relative to total population in the state, from US Census. (GS)

Regional dummies US Census regions: South, Midwest, West, Northeast.

Racial dissimilarity Racial heterogeneity: Dissimilarity index $= 1 - \sum s_i^2$, where s_i is the population share of group i. (GS)

Regulation index Component of economic freedom index published in 1999 by Clemson University, http://freedom.clemson.edu. (GS)

Share of value added in mining In 2007, from BEA.

Capital Share Population of capital city relative to total population in the state (1980), from US Census.
n= 50, Mean: 0.063, S.D.: 0.064, Min: 0.004, Max: 0.280.

Capital Largest Dummy equal to 1 is capital is largest city in the state.
n= 50, Mean: 0.34, S.D.: 0.478, Min: 0, Max: 1.

Drug Cases Criminal defendants charged with "drug offenses" and commenced at US District Courts during the 12-month period ending in September 30, 2011, per 100,000 inhabitants (as of 2000). The number of cases is taken from Table D-3 in the *2011 Annual Report of the Director: Judicial Business of the United States Courts*, available at http://www.uscourts.gov/Statistics/JudicialBusiness.aspx#appTables
n= 50, Mean: 6.351, S.D.: 6.379, Min: 1.040, Max: 37.845.

Governor Salary Governor's annual compensation in 2008, from Alaska Department of Administration (available at http://doa.alaska.gov/dop/fileadmin/socc/pdf/bkgrnd_socc23.pdf).
n= 50, Mean: 128735, S.D.: 29316, Min: 70000, Max: 212179.

Total Border Number of total miles of borders with another state (from Holmes 1998), with another country (from US Census, as reported in the *US Statistical Abstract*, 2012, Table 363), and of general coastline, including Great Lakes (from US Census, as reported in the *US Statistical Abstract*, 2012, Tables 361 and 364).
n= 49, Mean: 1039, S.D.: 480, Min: 103, Max: 2780.

Latitude and Longitude Latitude of northernmost internal point, longitude of westernmost internal point. (GS)
n= 50 and 50, Mean: 39.5 and 93.6, S.D.: 6.1 and 19.1, Min: 20.8 and 69.4 , Max: 61.6 and 157.0.

Elevation Span Difference between state's highest and lowest point, in feet, from US Geological Survey.
n= 50, Mean: 5494, S.D.: 4736, Min: 345, Max: 20320.

Percentage of Water Area Percentage of state area that is inland water (i.e. surrounded by US land), from US Census.
n= 50, Mean: 2.97, S.D.: 3.06, Min: 0.20, Max: 17.

Navigable Waterways Mileage of inland waterways, determined by including the length of channels 1) with a controlling draft of nine feet or greater, 2) with commercial cargo traffic reported for 1998 and 1999, but 3) were not offshore (i.e., channels in coastal areas included only the miles from the entrance channel inward). Channels within major bays are included (e.g., Chesapeake Bay, San Francisco Bay, Puget Sound, Long Island Sound, and major sounds and straits in southeastern Alaska). Channels in the Great Lakes are not included, but waterways connecting lakes and the St. Lawrence Seaway inside the United States are included. From US Army Corps of Engineers, available at http://www.statemaster.com/graph/trn_inl_wat_mil-transportation-inland-waterway-mileage.
n= 50, Mean: 592.4, S.D.: 919.3, Min: 0, Max: 5497.

Share of Arable Land, 1950 Agricultural land as a share of total area, in 1950, from US Department of Agriculture.
n= 48, Mean: 0.616, S.D.: 0.218, Min: 0.107, Max: 0.984.

Railroad Miles, 1870 Number of miles of railroad in operation during the year 1870, from *US Statistical Abstract*, 1878, Table 144.
n= 45, Mean: 1165, S.D.: 1202, Min: 0, Max: 4823.

Population, 1870 From US Census, as reported in *US Statistical Abstract*, 1878, Table 142.
n= 45, Mean: 1361600, S.D.: 3773519, Min: 9118, Max: 25.4 million.

Coal Production, 1869 Tons of bituminous coal produced during 1869, from *US Statistical Abstract*, 1878, Table 150.
n= 50, Mean: 344236, S.D.: 1216998, Min: 0, Max: 7798517.

Newspaper Coverage We start by searching for each of the terms under consideration – "state elections," "state budget," "state government," and the name of the governor – in the online archives of all of a state's newspapers that are available on NewsLibrary.com, for articles published between 01/01/2008 and 12/31/2009. (In the case of the governor's name, we search for the name of each governor during the sub-period, within that period, in which he or she was in office. We look for different combinations, including first name (or popular nickname) and last name, with or without middle initial. The full list is available upon request.) We also search for the neutral term "Monday". In order to compute the CISC of circulation, we use county-level circulation data from the *U.S. County Penetration Report* (Spring 2010), from the Audit Bureau of Circulations. Our final sample includes 436 newspapers, from 49 states (all except Montana).
"State Elections": n= 431, Mean: 997.8, S.D.: 900.2, Min: 0; Max: 7019.
Governor's name: n= 436, Mean: 719.8, S.D.: 736.5, Min: 0, Max: 5096.

Turnout in State Elections Total popular vote cast for candidates for governor at the county level in 1997-2000 (from David Leip's Atlas of US Presidential Elections, http://uselectionatlas.org), divided by total voting-age population in the county (from US Census in 2000).
n= 4986, Mean: 0.543, S.D.: 0.084, Min: 0.273, Max: 0.849.

State Campaign Contributions Sum of campaign contributions to state office between 2001 and 2010, from followthemoney.org.
n= 50, Mean: 102.4 million, S.D.: 135.81 million, Min: 9.9 million, Max: 824.9 million.

Presidential Campaign Contributions Total donations to presidential campaigns in 2008 cycle, from Federal Elections Commission (FEC) data compiled by the Center for Responsive Politics, available at http://www.opensecrets.org/pres08/pres_stateAll.php?list=all
n= 50, Mean: 17.5 million, S.D.: 27.96 million, Min: 0.41 million, Max: 153.2 million.

Public Good Expenditures Share of state general expenditures assigned to the categories "Education," "Public Welfare," "Health," and "Hospitals," from *US Statistical Abstract* 2012, Table 454.
n= 50, Mean: 0.654, S.D.: 0.074, Min: 0.366, Max: 0.766.

Other Expenditures Share of state general expenditures assigned to the categories "Governmental Administration," "Interest on General Debt," and "Other," from *US Statistical Abstract* 2012, Table 454.
n= 50, Mean: 0.179, S.D.: 0.056, Min: 0.109, Max: 0.400.

Public Good Provision First principal component of: "Smartest State" index, from Morgan Quitno Corporation (2005); % Insured: 100 - Persons Without Health Insurance Coverage in 2008-2009 (Percent Total) from *US Statistical Abstract* 2012, Table 156; and log of Hospital Beds in 2009, from *US Statistical Abstract* 2012, Table 194 (divided by population).
n= 50, Mean: 0.237, S.D.: 1.232, Min: -1.944, Max: 3.494.

Table 1. Ranking of States, GCISC

state	$GCISC_1$	state	$GCISC_2$
	10 least concentrated		
FLORIDA	0.1240	ILLINOIS	0.0719
NEVADA	0.1411	SOUTH DAKOTA	0.0790
CALIFORNIA	0.1480	NEVADA	0.0805
TEXAS	0.1951	FLORIDA	0.0916
SOUTH DAKOTA	0.1997	DELAWARE	0.1016
ILLINOIS	0.2052	NORTH DAKOTA	0.1235
NEW YORK	0.2147	ALABAMA	0.1342
WYOMING	0.2149	MISSOURI	0.1392
MONTANA	0.2237	NEW YORK	0.1401
NORTH DAKOTA	0.2453	SOUTH CAROLINA	0.1474
	10 most concentrated		
NEW JERSEY	0.3935	NEW HAMPSHIRE	0.2732
MINNESOTA	0.3979	MICHIGAN	0.2764
VERMONT	0.4202	OKLAHOMA	0.2798
MARYLAND	0.4231	MARYLAND	0.2966
NEW HAMPSHIRE	0.4478	GEORGIA	0.3043
DELAWARE	0.4596	COLORADO	0.3169
UTAH	0.4644	MASSACHUSETTS	0.3204
MASSACHUSETTS	0.4778	NEBRASKA	0.3475
CONNECTICUT	0.4863	MINNESOTA	0.3511
RHODE ISLAND	0.5633	UTAH	0.4024

Table 2. Correlation over Time, GCISC

$GCISC_1$	1920	1930	1940	1950	1960	1970	1980	1990	2000
1920	1								
1930	0.9960	1							
1940	0.9937	0.9994	1						
1950	0.9829	0.9935	0.996	1					
1960	0.9673	0.9832	0.9872	0.9967	1				
1970	0.9578	0.9766	0.9810	0.9917	0.9980	1			
1980	0.9569	0.9755	0.9794	0.9859	0.9917	0.9964	1		
1990	0.9424	0.9629	0.9662	0.9702	0.9768	0.9857	0.9957	1	
2000	0.9322	0.9539	0.9577	0.9628	0.9705	0.9811	0.9920	0.9987	1

$GCISC_2$	1920	1930	1940	1950	1960	1970	1980	1990	2000
1920	1								
1930	0.9917	1							
1940	0.9873	0.9987	1						
1950	0.9697	0.9890	0.9937	1					
1960	0.9412	0.9702	0.9777	0.9935	1				
1970	0.9242	0.9582	0.9662	0.9839	0.9960	1			
1980	0.9125	0.9485	0.9562	0.9698	0.9833	0.9940	1		
1990	0.8809	0.9211	0.9280	0.9383	0.9542	0.9733	0.9913	1	
2000	0.8639	0.9056	0.9131	0.9251	0.9422	0.9642	0.9844	0.9976	1

$GCISC_2$ / $GCISC_1$	1920	1930	1940	1950	1960	1970	1980	1990	2000
1920	0.5703	0.578	0.5813	0.6064	0.6068	0.6018	0.5726	0.5492	0.5467
1930	0.5782	0.5969	0.6024	0.6332	0.6405	0.6397	0.6114	0.5912	0.5902
1940	0.5717	0.5926	0.5999	0.6332	0.6427	0.6423	0.6136	0.5927	0.5922
1950	0.5423	0.5689	0.5784	0.6206	0.637	0.6383	0.6055	0.5820	0.583
1960	0.5233	0.5563	0.5676	0.6158	0.6409	0.6463	0.614	0.5921	0.5942
1970	0.5073	0.5436	0.5551	0.6042	0.6332	0.6441	0.6162	0.6002	0.6045
1980	0.4962	0.5338	0.5452	0.5912	0.6210	0.6365	0.6171	0.6096	0.6157
1990	0.4674	0.5079	0.5185	0.5613	0.5927	0.6142	0.6036	0.6082	0.6177
2000	0.4450	0.4865	0.4976	0.5414	0.5738	0.5972	0.5880	0.5958	0.6088

Table 3. Corruption and Concentration of Population around the Capital City: G-CISC

Dep. Var.: Corruption	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$GCISC_1$	-0.4439***	-1.1162***	-1.0573***	-0.7823***				
	[0.1404]	[0.2541]	[0.3440]	[0.2810]				
$GCISC_2$					-0.8245***	-0.8383***	-0.8023***	-0.5734**
					[0.1680]	[0.1897]	[0.2001]	[0.2225]
Log Income		-0.4939***	-0.4853*	-0.2485		-0.3709**	-0.2585	-0.0884
		[0.1497]	[0.2570]	[0.2122]		[0.1388]	[0.2234]	[0.2029]
% College		1.1532	0.1797	-0.8124		0.5242	-0.7037	-1.4917
		[0.8233]	[1.3883]	[1.0775]		[0.8502]	[1.1086]	[0.9180]
Log Population		0.0319**	0.0101	0.0090		0.0329**	0.0231	0.0224
		[0.0154]	[0.0242]	[0.0210]		[0.0136]	[0.0160]	[0.0168]
Log Area		-0.0917***	-0.0698*	-0.0495*				
		[0.0208]	[0.0371]	[0.0257]				
Observations	48	48	48	48	48	48	48	48
R-squared	0.232	0.406	0.525	0.598	0.114	0.451	0.514	0.606

Robust standard errors in brackets. OLS regressions. Dependent variable: Corruption = Federal convictions of public officials for corruption-related crime, avg. 1976-2002. Independent variables as of 1970 (GCISC average 1920-1970). Column (3) control variables: Share of government employment, % Urban, Regional dummies. Column (4) control variables: same as Column (3), plus Racial dissimilarity, Regulation index, Share of value added in mining.

*** p<0.01, ** p<0.05, * p<0.1

Table 4. Corruption and Concentration of Population: Other Measures

	(1) Corruption (Exalead)	(2) Corruption (Exalead)	(3) Corruption	(4) Corruption	(5) Corruption (Exalead)	(6) Corruption (Exalead)
$GCISC_1$	-0.0018**					
	[0.0008]					
$GCISC_2$		-0.0018**				
		[0.0007]				
$LCISC_1$			-0.4710***			
			[0.0906]			
$LCISC_2$				-0.7098**		
				[0.3081]		
Capital Share					-0.0011**	
					[0.0005]	
Capital Largest						-0.0001*
						[0.0001]
Observations	48	48	48	48	50	50
R-squared	0.368	0.398	0.553	0.444	0.340	0.328

Robust standard errors in brackets. OLS regressions. Dependent variable: Corruption = Federal convictions of public officials for corruption-related crime, avg. 1976-2002. Corruption (Exalead) = Number of search hits for "corruption" close to state name, using *Exalead* search tool. Independent variables as of 2000 (GCISC avg. 1920-2000) in Columns (1)-(2), as of 1970 (GCISC avg. 1920-1970) in Columns (3)-(4),as of 2010 in Columns(5)-(6).Control variables: Log Income, Log Population, % College, Log Area (for $GCISC_1$ specifications), Share of government employment, % Urban, Regional dummies.

*** p<0.01, ** p<0.05, * p<0.1

Table 5. "Placebo" Tests

Dep. Var.:	(1) Corruption	(2) Corruption	(3) Corruption	(4) Corruption	(5) Drug Cases	(6) Drug Cases	(7) Drug Cases	(8) Drug Cases
$GCISC_1$(largest city)	-0.4946*	0.0131						
	[0.2923]	[0.3367]						
$GCISC_2$ (largest city)			-0.2564	0.2019				
			[0.2218]	[0.2419]				
$GCISC_1$		-1.0645**			6.8820		1.2946	
		[0.4033]			[14.846]		[10.776]	
$GCISC_2$				-0.8921***		-1.0907		9.5891
				[0.2363]		[9.2008]		[8.2884]
Observations	48	48	48	48	48	48	44	44
R-squared	0.397	0.514	0.370	0.532	0.325	0.322	0.394	0.417

Robust standard errors in brackets. OLS regressions. Dependent variables: Corruption = Federal convictions of public officials for corruption-related crime, avg. 1976-2002; Drug Cases = Criminal defendants commenced in federal courts, 2011. Independent variables as of 1970 (GCISC avg. 1920-1970). Control variables: Log Income, Log Population, % College, Log Area (for $GCISC_1$ specifications), Share of government employment, % Urban, Regional dummies. Columns (7)-(8) exclude Mexico border states (CA, AZ, NM, TX).
*** p<0.01, ** p<0.05, * p<0.1

Table 6. Pairwise Correlations between Centroid CISC and Predetermined Variables

Variable	(1) Raw $GCISC_1$	(2) Raw $GCISC_2$	(3) Cond. $GCISC_1$	(4) Cond. $GCISC_2$
Log Area	-0.9571***	0.2223	-	-
	[0.0000]	[0.1247]		
Log Total Border	-0.8828***	-0.0186	0.1638	-0.1852
	[0.0000]	[0.9001]	[0.2660]	[0.2075]
Latitude	0.0644	-0.1810	-0.1092	0.0233
	[0.6602]	[0.2132]	[0.4552]	[0.8740]
Longitude	-0.5163***	-0.1239	0.0151	-0.1163
	[0.0002]	[0.3965]	[0.9179]	[0.4262]
Log Distance to DC	-0.5709***	-0.2391	0.1919	-0.2178
	[0.0000]	[0.1018]	[0.1912]	[0.1369]
Date of Statehood	-0.5271***	-0.1418	0.1584	-0.0981
	[0.0001]	[0.3362]	[0.2822]	[0.5073]
Log Elevation Span	-0.3564**	0.0011	0.1750	-0.0018
	[0.0129]	[0.9939]	[0.2343]	[0.9904]
Percentage of Water Area	0.5538***	0.1110	-0.0600	0.1511
	[0.0000]	[0.4525]	[0.6854]	[0.3052]
Log Navigable Waterways	-0.0009	0.1455	-0.1135	-0.0288
	[0.9951]	[0.3239]	[0.4423]	[0.8458]
Share of Arable Land (1950)	-0.1254	0.0520	0.1626	-0.0465
	[0.3957]	[0.7256]	[0.2694]	[0.7538]
Log Railroad Miles (1870)	0.0877	0.0697	-0.0319	-0.0368
	[0.5667]	[0.6450]	[0.8353]	[0.8103]
Log Population (1870)	0.0895	0.1231	-0.0211	-0.0067
	[0.5586]	[0.4203]	[0.8907]	[0.9649]
Log Coal Production (1869)	0.0748	0.1447	0.0651	0.1767
	[0.6132]	[0.3264]	[0.6602]	[0.2296]

p-values in brackets. Columns (3)-(4): Residual of regression of GCISC on Log Area and regional dummies.

*** p<0.01, ** p<0.05, * p<0.1

Table 7. Corruption and Concentration of Population around the Capital City: Addressing Causality

Dep. Var.: Corruption	(1) 1st Stage	(2) 1st Stage	(3) 2SLS	(4) 2SLS	(5) 2SLS	(6) 2SLS	(7) 2SLS	(8) 2SLS
$GCISC_1$	0.755***		-1.4807***	-1.4898**	-1.4111***			
	[0.2413]		[0.5172]	[0.6293]	[0.5708]			
$GCISC_2$		0.708***				-1.1422*	-0.9091*	-0.7369
		[0.2546]				[0.5300]	[0.4433]	[0.4689]
Observations	48	48	48	48	48	48	48	48
R-squared	0.800	0.358	0.427	0.488	0.562	0.418	0.522	0.593
F-statistic	25.76	3.00	-	-	-	-	-	-
AR p-value	-	-	0.005	0.032	0.009	0.075	0.057	0.136

Robust standard errors in brackets.

Dependent variable: Corruption = Federal convictions of public officials for corruption-related crime, avg. 1976-2002.
Independent variables as of 1970 (GCISC: avg. 1920-1970). Control variables: Log Income, Log Population, % College, Log Area (all columns), Share of government employment, % Urban, Regional dummies (except for Columns (2) and (6)), Racial dissimilarity, Regulation index, Share of value added in mining (Columns (5) and (8) only). IV: GCISC (centroid). AR p-value: p-value from Anderson-Rubin (minimum distance) test.

*** p<0.01, ** p<0.05, * p<0.1

Table 8. Governors' Salaries and Concentration of Population around the Capital City

	(1)	(2)	(3)	(4)	(7)	(8)
Dep. Var.: Log Governor Salary	OLS	OLS	OLS	OLS	2SLS	2SLS
$GCISC_1$	-1.5028***	-1.4303**			-2.2823***	
	[0.5251]	[0.6293]			[0.5677]	
$GCISC_2$			-0.8200**	-0.7454*		-1.3890*
			[0.3684]	[0.4010]		[0.9987]
Observations	48	48	48	48	48	48
R-squared	0.607	0.618	0.526	0.555	0.534	0.585
AR p-value	-	-	-	-	0.001	0.098

Robust standard errors in brackets. Dependent variable: Log of Governor Salary (2008). Independent variables as of 2000 (GCISC: avg. 1920-2000). Control variables: Log Income, Log Population, % College, Log Area (all columns), Share of government employment, % Urban, Regional dummies (except for Columns (1) and (4)). IV: GCISC (centroid). AR p-value: p-value from Anderson-Rubin (minimum distance) test.

*** p<0.01, ** p<0.05, * p<0.1

Table 9. Newspaper Coverage of State Politics and the Concentration of Circulation around the Capital

	(1)	(2)	(3)	(4)
Dep. Var.: Number of Search Hits	State Elections	State Budget	State Government	Governor's Name
GCISC of Circulation	885.300***	964.226***	1,175.731**	1,353.011***
	[232.969]	[270.088]	[462.998]	[233.210]
Observations	431	436	436	436
R-squared	0.808	0.770	0.789	0.719

Robust standard errors in brackets. OLS regressions. Dependent variable: Number of search hits for each term in NewsLibrary.com (01/01/2008 to 12/31/2009).
Control variables: Log of daily circulation, Number of search hits for "Monday", state fixed effects.

*** p<0.01, ** p<0.05, * p<0.1

Table 10. Media Coverage and Concentration of Population around the Capital City: The Role of Media Accountability

Dep. Var.: Media Coverage	(1) Circ. Weighted	(2) GCISC Weighted	(3) Circ. Weighted	(4) GCISC Weighted	(5) Circ. Weighted	(6) Circ. Weighted	(7) Circ. Weighted 2SLS	(8) Circ. Weighted 2SLS
$GCISC_1$	1.2790	0.8285			0.6798		-0.8718	
	[3.7665]	[3.7823]			[2.5223]		[3.2547]	
$GCISC_2$			4.7810*	5.2566**		3.6317*		7.7153***
			[2.5286]	[2.5891]		[1.9301]		[3.0885]
Observations	47	47	47	47	46	46	46	46
AR p-value	-	-	-	-	-	-	0.785	0.008
R-squared	0.405	0.375	0.246	0.237	0.453	0.509	0.445	0.423

Robust standard errors in brackets. OLS regressions except where noted. Dependent variable: First principal component of weighted search hits for each of the terms in Table 7 (weighted by newspaper circulation or GCISC-weighted newspaper circulation, as indicated), divided by hits for "Monday". Independent variables as of 2000 (GCISC avg. 1920-2000). Control variables: Log Income, Log Population, % College, Log Area (for $GCISC_1$ specifications), Share of government employment, Regional dummies, Dummy for election in 2008-2009. Columns (5)-(8) exclude Rhode Island. The state of Montana is missing from the media coverage sample.Instrument: GCISC (centroid). AR p-value: p-value from Anderson-Rubin (minimum distance) test.
*** p<0.01, ** p<0.05, * p<0.1

Table 11. Distance to the Capital and Turnout in State Elections

Dep. Var.: Turnout in State Elections	(1) All Years	(2) All Years	(3) All Years	(4) All Years	(5) Presid. Year	(6) Off Years
LogDistance Capital	-0.0137***	-0.0175***		-0.0169***	-0.0070	-0.0365**
	[0.0032]	[0.0027]		[0.0027]	[0.0048]	[0.0069]
LogDistanceCentroid			-0.0093***	-0.0018		
			[0.0028]	[0.0027]		
Observations	3081	3027	3027	3027	553	364
R-squared	0.761	0.836	0.829	0.836	0.746	0.796

Robust standard errors in brackets. OLS regressions. Dependent variable: Turnout in state election, county-level (1997-2000). Independent variables: Log Distance to Capital, Log Distance to Centroid. Control variables: Log density, % High School and above, Log Median Household Income, state fixed effects (all columns), Poverty Rate, Gini coefficient, Racial fractionalization, Religious fractionalization, Shares of population under 5, 5-17, 18-24, 25-44, 45-64, 65-84, 85 and above (Columns (2)-(6)), all from 2000 Census.

*** p<0.01, ** p<0.05, * p<0.1

Table 12. Campaign Contributions and Concentration of Population around the Capital City

Dep. Var.: Log State Contributions	(1) OLS	(2) OLS	(3) OLS	(4) OLS	(5) 2SLS	(6) 2SLS
$GCISC_1$	-2.7695**		-2.2178*		-3.4327**	
	[1.0225]		[1.1252]		[1.4958]	
$GCISC_2$		-2.4241***		-1.9627**		-5.0285***
		[0.7883]		[0.8560]		[2.4475]
Log Presidential Contributions			0.3502*	0.3407*	0.2909	0.1402
			[0.1984]	[0.2000]	[0.1880]	[0.2565]
Observations	48	48	48	48	48	48
AR p-value	-	-	-	-	0.037	0.004
R-squared	0.898	0.899	0.906	0.907	0.903	0.878

Robust standard errors in brackets. Dependent variable: Log of Campaign Contributions to state-level campaigns, 2001-2010. Control variables (as of 2000): Log of Campaign Contributions to presidential campaigns (2008), Log Income, Log Population, % College, Log Area (for $GCISC_1$ specifications), Share of government employment, Regional dummies. Instrument: GCISC (centroid). AR p-value: p-value from Anderson-Rubin (minimum distance) test.
*** p<0.01, ** p<0.05, * p<0.1

Table 13. Corruption and Concentration of Population around the Capital City: The Role of Accountability

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dep. Var.: Corruption												
$GCISC_1$	-1.064***	-0.821**			-0.904**	-0.904**			-1.057***	-0.793**		
	[0.339]	[0.329]			[0.407]	[0.420]			[0.344]	[0.369]		
$GCISC_2$			-0.808***	-0.659***			-0.767***	-0.795**			-0.802***	-0.640**
			[0.194]	[0.215]			[0.271]	[0.291]			[0.200]	[0.237]
Media Coverage		-0.027***		-0.014**						-0.019**		-0.011
		[0.008]		[0.007]						[0.009]		[0.008]
Turnout State						-0.004		0.093		-0.103		-0.075
						[0.171]		[0.187]		[0.172]		[0.163]
Log Contributions										0.023		0.013
										[0.039]		[0.039]
Observations	48	47	48	47	38	38	38	38	48	47	48	47
R-squared	0.526	0.652	0.539	0.629	0.612	0.612	0.635	0.638	0.514	0.605	0.525	0.595

Robust standard errors in brackets. OLS regressions. Dependent variable: Corruption = Federal convictions of public officials for corruption-related crime, avg. 1976-2002. Independent Variables: GCISC avg 1920-1970, Media Coverage as in Table 8 (circulation weighted), Turnout State as in Table 9, Log Contributions as in Table 10.

Control variables: Log Income, Log Population, % College, Log Area (for $GCISC_1$ specifications), Share of government employment, % Urban, Regional dummies (all specifications), plus Dummy for election in 2008-2009 (Columns (1)-(4)), State election year dummies (Columns (5)-(8). Columns (5)-(8) restricted to states with elections in non-presidential years.

*** p<0.01, ** p<0.05, * p<0.1

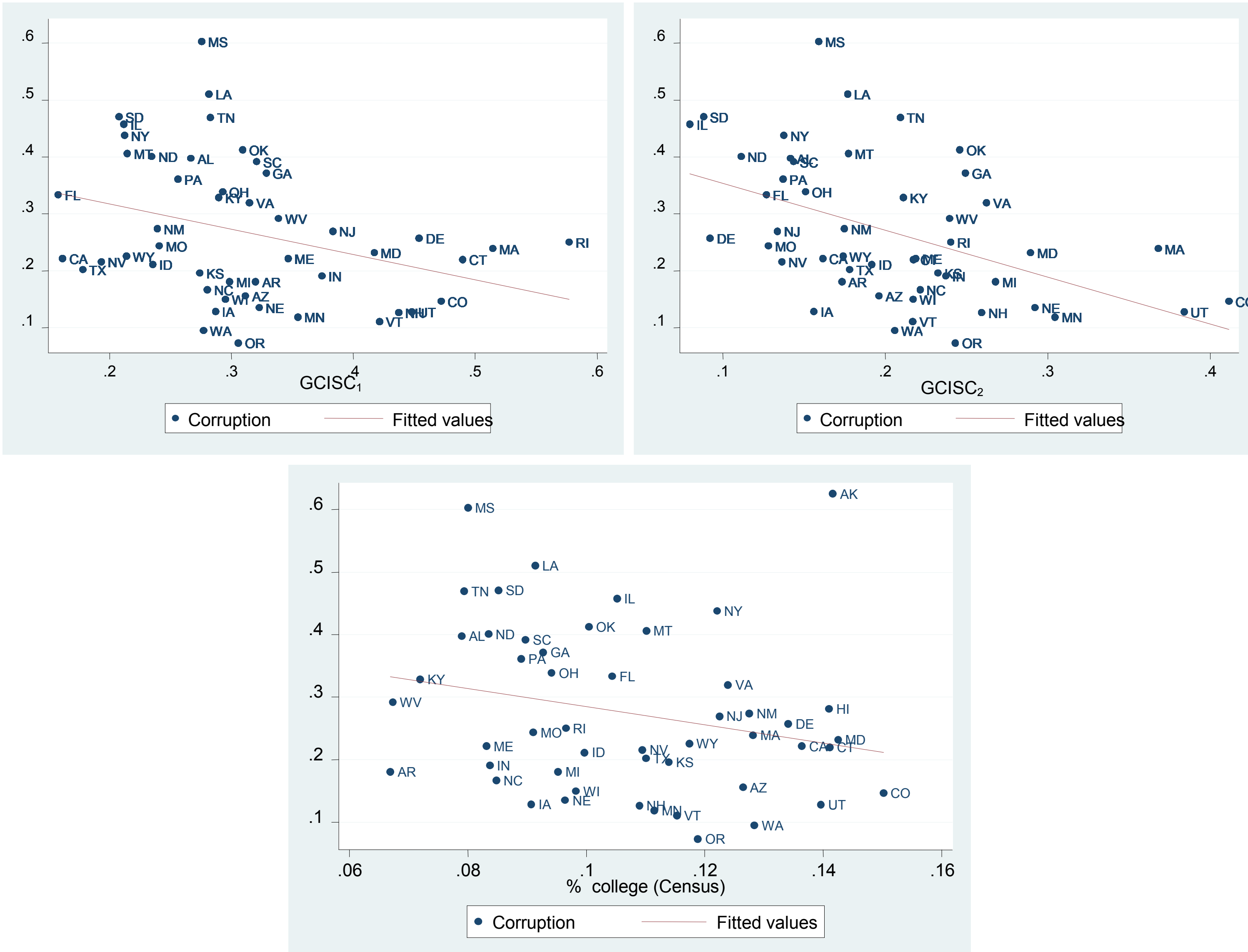
Table 14. Public Goods and the Concentration of Population around the Capital City

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	OLS	OLS	OLS	2SLS	2SLS	2SLS	OLS	OLS	OLS	2SLS	2SLS	2SLS
Dep. Var.:	PG Exp.	Other Exp.	PG Prov.	PG Exp.	Other Exp.	PG Prov.	PG Exp.	Other Exp.	PG Prov.	PG Exp.	Other Exp.	PG Prov.
$GCISC_1$	0.495***	-0.318***	2.455	0.620***	-0.324**	-0.258						
	[0.124]	[0.096]	[1.490]	[0.237]	[0.151]	[2.438]						
$GCISC_2$							0.308***	-0.197**	2.950*	0.271	-0.158	2.436
							[0.1167]	[0.085]	[1.566]	[0.257]	[0.185]	[3.398]
Observations	48	48	48	48	48	48	48	48	48	48	48	48
AR p-value	-	-	-	0.005	0.027	0.915	-	-	-	0.348	0.431	0.497
R-squared	0.447	0.593	0.876	0.438	0.593	0.866	0.381	0.510	0.837	0.381	0.550	0.877

Robust standard errors in brackets. Dependent variables: PG Exp. (Public Good Expenditures) = Share of state expenditures on education, public welfare, health, and hospitals in 2008; Other Exp. (Other Expenditures) = Share of state expenditures on government administration, interest on debt, and "other" in 2008; PG Prov. (Public Good Provision) = First principal component of "Smart State" Index (2005), % of population with health insurance (2008-9), and log of hospital beds per capita (2009). Independent variables: GCISC avg 1920-2000. Control variables: Log Income, Log Population, % College, Log Area (for $GCISC_1$ specifications), Share of government employment, Racial dissimilarity, % Urban, Regional dummies (all specifications).IV: GCISC (centroid). AR p-value: p-value from Anderson-Rubin (minimum distance) test.

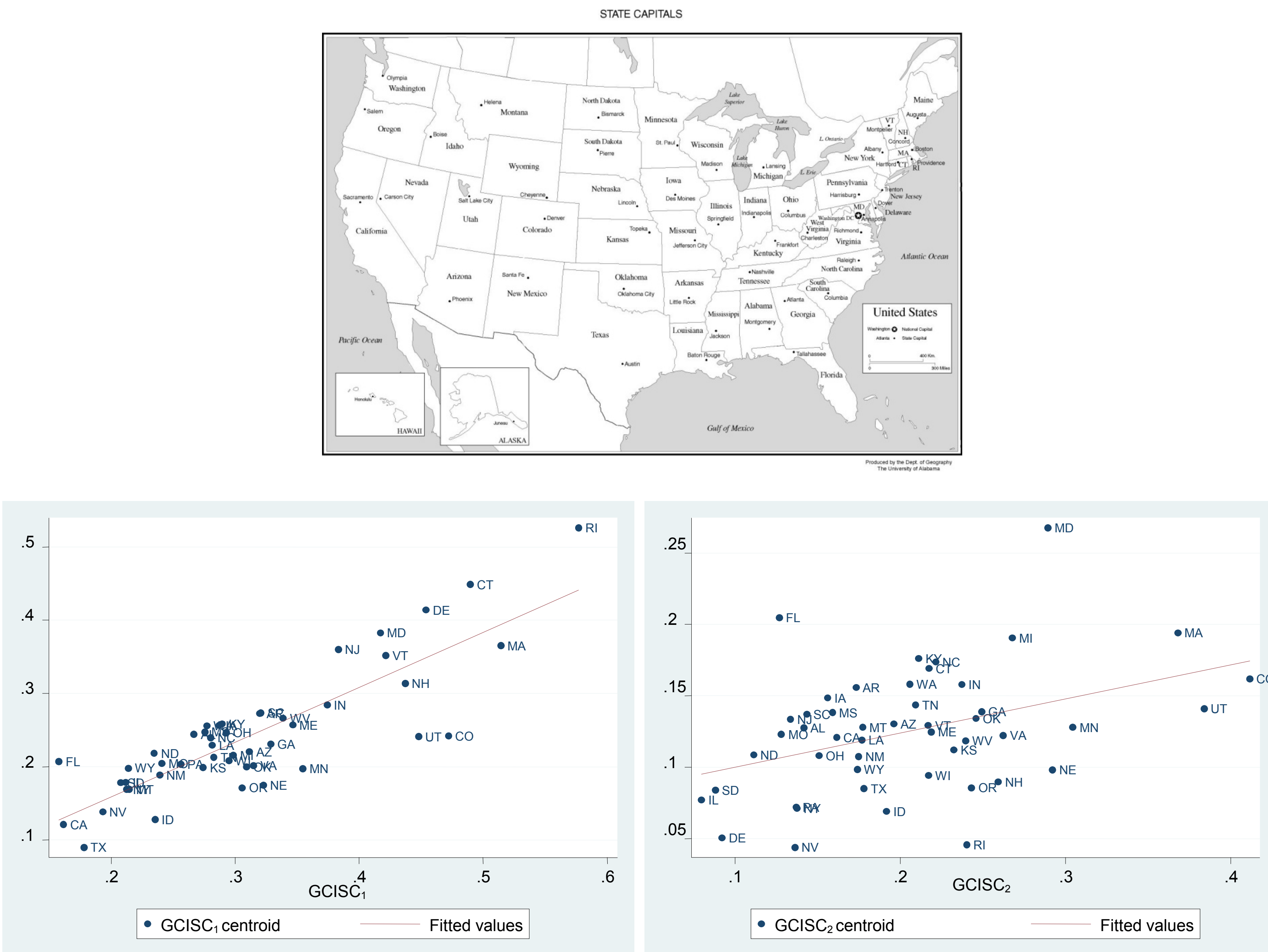
*** p<0.01, ** p<0.05, * p<0.1

FIGURE 1



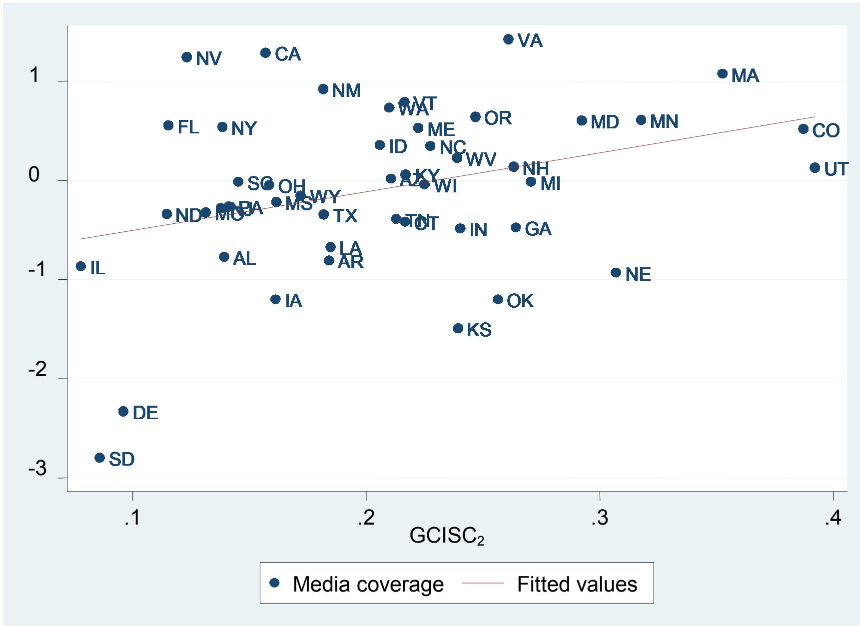
Notes: Corruption = Federal convictions of public officials for corruption-related crime, avg. 1976-2002; Independent variables: GCISC (avg. 1920-1970), % college (as of 1970)

FIGURE 2



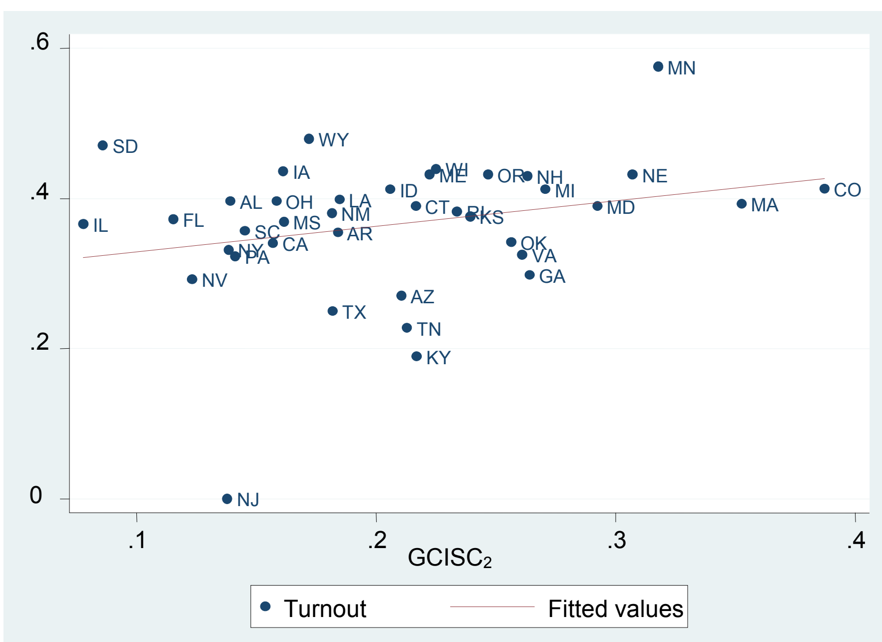
Notes: GCISC (avg. 1920-2000)

FIGURE 3



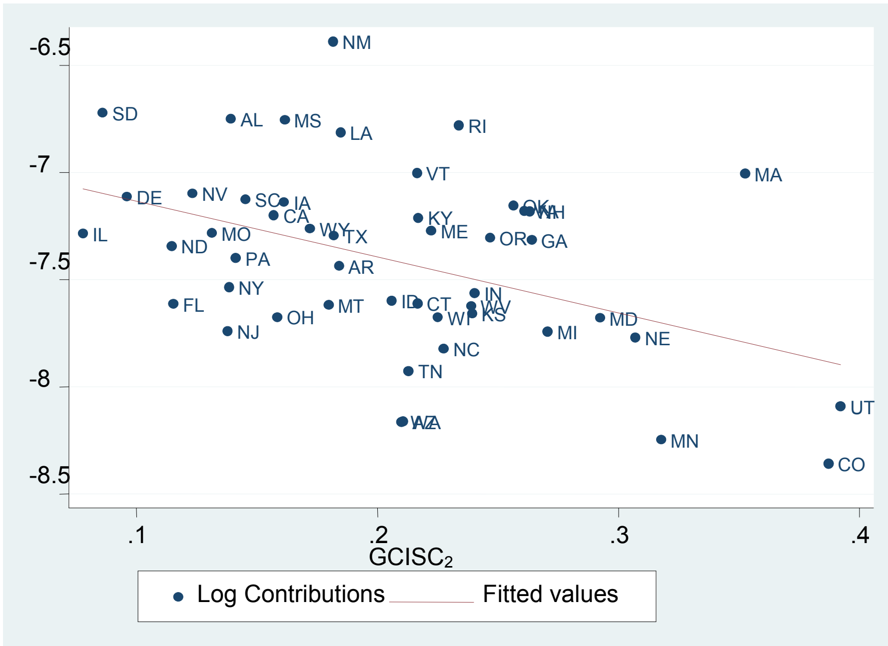
Notes: Media coverage = Residuals from regression of first principal component of circulation-weighted measure of media coverage on dummy for state election in 2008-2009; GCISC (avg. 1920-2000).

FIGURE 4



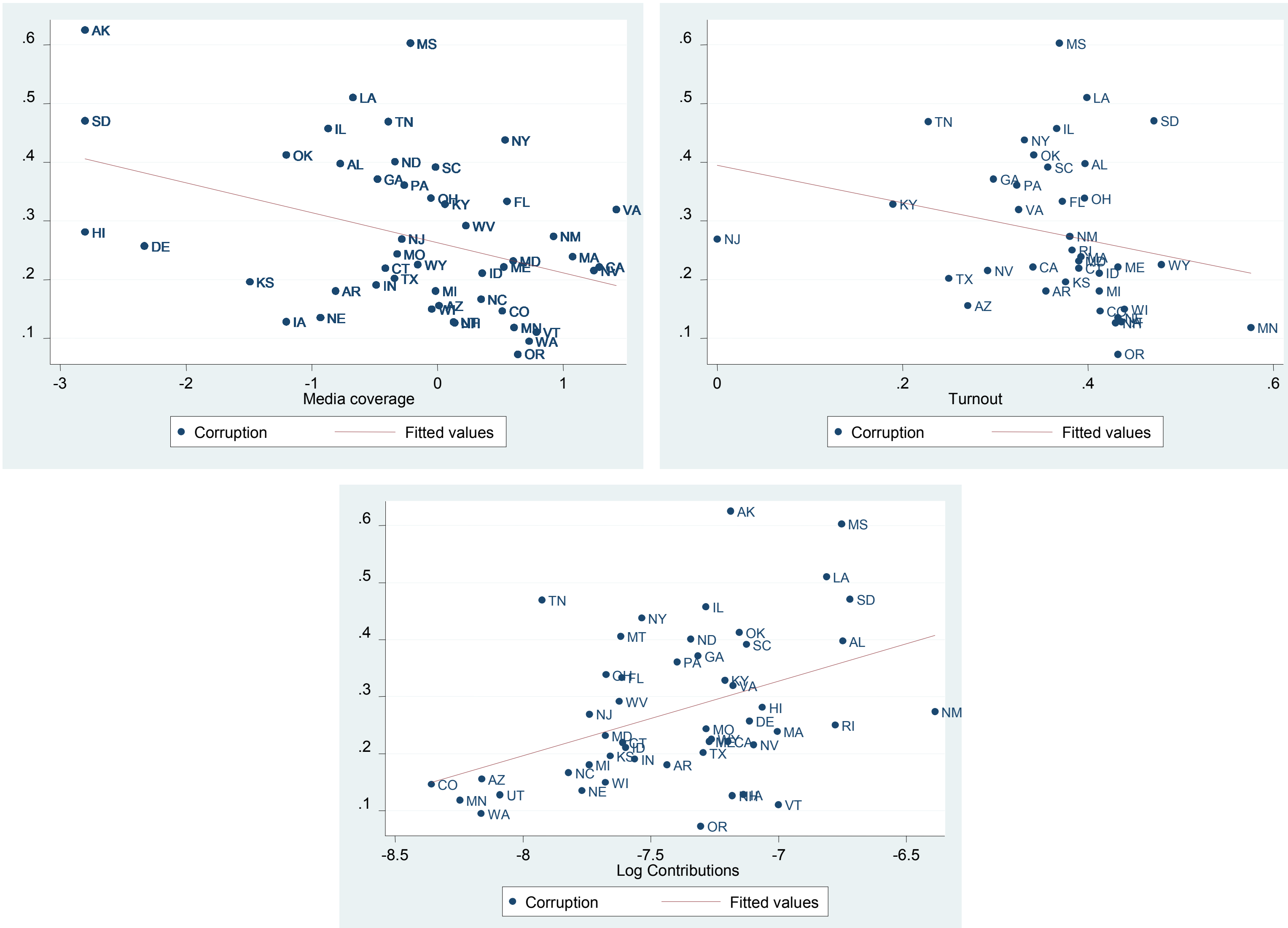
Notes: Turnout = Turnout in state elections, 1997-1999; GCISC (avg. 1920-2000).

FIGURE 5



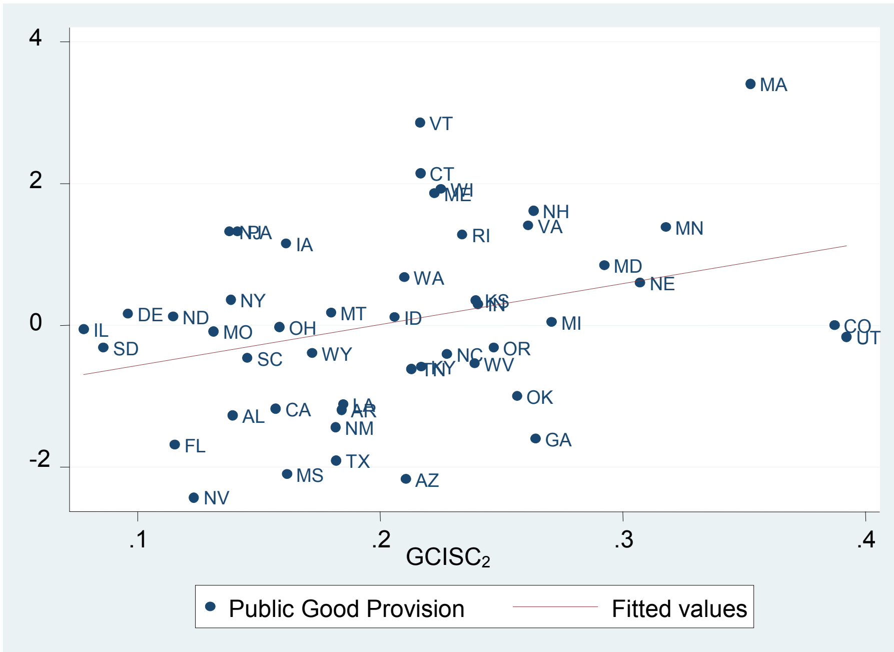
Notes: Log Contributions = Log of contributions to state-level campaigns (% GDP), 2001-2010; GCISC (avg.1920-2000)

FIGURE 6



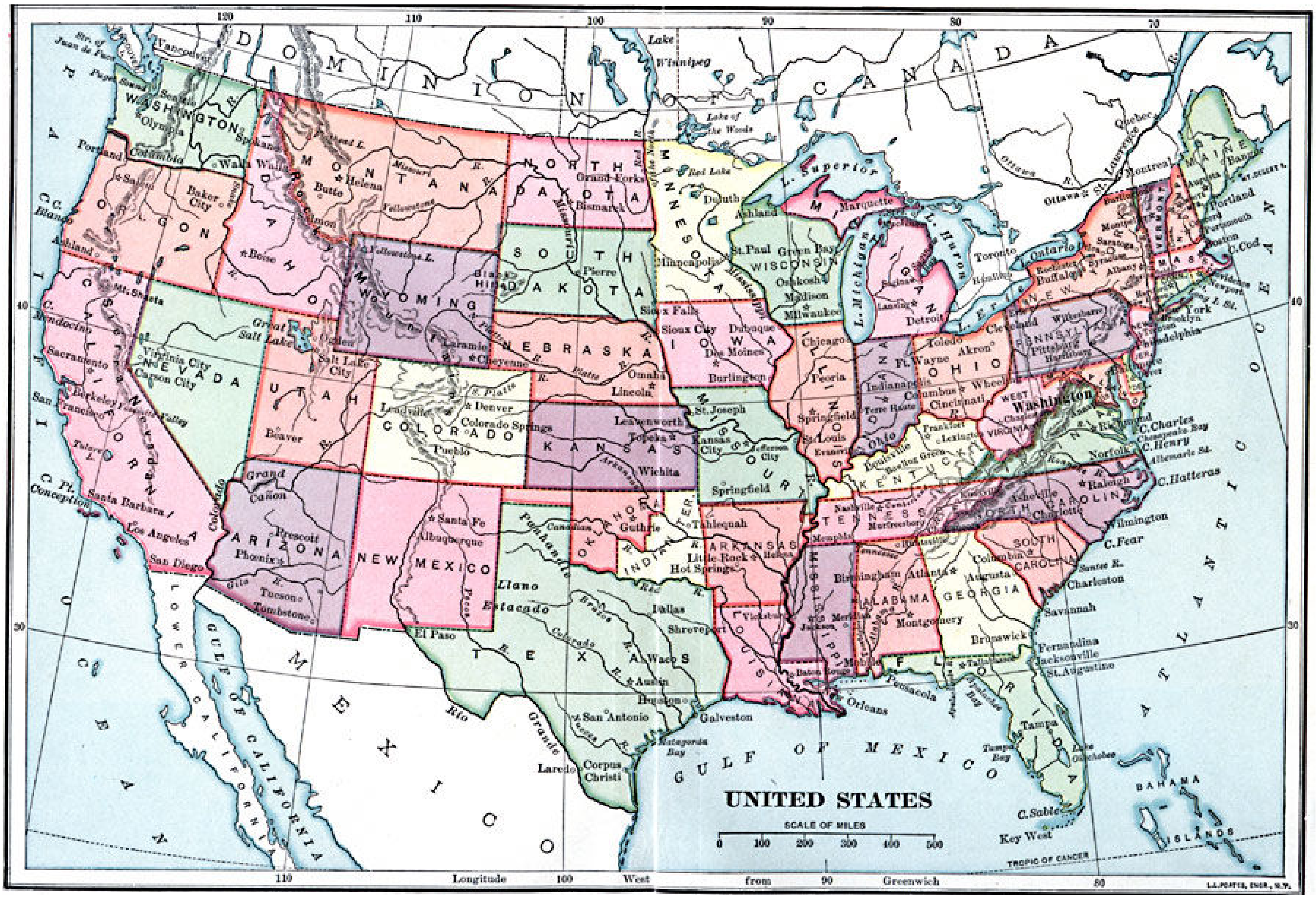
Notes: All variables as defined in previous figures.

FIGURE 7



Notes: Public Good Provision = First principal component of "Smartest State" index (2005-2006), % Insured (2008-2009), and Log of Hospital Beds per capita (2009); GCISC (avg. 1920-2000).

FIGURE A1



Source: Charles Kendall Adams, *A History of the United States* (Boston, MA: Allyn and Bacon, 1909) 550. Available at:http://etc.usf.edu/maps/pages/800/815/815.htm