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Chapter 3: Initial Conditions and State Politics

State legislatures have played and continue to play a central role in state legal systems. State legislatures make state laws, set policies regarding the operation of state courts, and determine the budgets for courts. In later chapters, we argue that members of state legislatures have preferences regarding the optimal level of independence of state judges that are related to the initial legal system of the settling country. Members' ability to act on these preferences may, however, be limited by the level of political competition within the state legislature. Higher levels of political competition are associated with more centrist outcomes. Further, higher levels of political may cause political parties to prefer an independent state judiciary for reasons unrelated to whether the state is a civil-law or common-law state. An independent judiciary can better protect the majority party's policies in the event that the majority party becomes the minority party in a later election.

In this chapter, we investigate the relationship between state initial conditions and a number of measures of political competition within a state. Our goals here are twofold. First, we want to document state initial conditions. Second, we want to demonstrate that over the nineteenth and twentieth centuries, state initial conditions were systematically related to:

- the levels of political competition in state legislatures
- the size, professionalism and voter oversight of state legislatures, and
- the frequency of modification of state constitutions

Our measures are conceptually distinct. However, they can be thought of as different measures of a mythical creature – the state political system. So we expect the measures to exhibit broadly similar patterns with respect to initial conditions. In the next chapter, we describe and document the mechanism through which initial conditions appear to have acted on state legislatures.

Because this chapter is in some sense a broad overview of 150 years of American state political history, it is useful to address some possible critiques by political historians of what we do. The first critique is: Don't we know this already? There are two parts to the answer. The first part is that not all readers will be intimately familiar with American state political history. So it is useful to present the evidence for the sake of this audience. The second part to the answer is that only one piece of the story is well known to political historians. Most scholars will be aware of the North-South split in politics that occurred around the time of the American Civil War. Many studies examine this split.[1] There is less awareness of the effect of other initial conditions on the evolution of state legislatures and state political competition. Therefore, some of our results are likely to be new to many political historians.

A second critique is that the quantitative measures we use are too simplistic. They are particularly simple in comparison to many more qualitative case studies of people, parties, laws, and policy and their variations across states over time.[2] These studies are important for understanding American state political history in all its richness. We have

[1] There are many, many studies and they range in their approach. We will mention just a few. The seminal example of Southern state political history is V.O. Key's (1949) Southern Politics in State and Nation. An important example of the study of sectional state politics is Michael Holt's (1983) The Political Crisis of the 1850s. At the national level, an important example would be Keith Poole and Howard Rosenthal's Congress: A Political-Economic History of Roll Call Voting (1997).

[2] For some examples, see Baum (1984), Benson (1961), Bourke and Debats (1995), Formisano (1983), Kleppner (1970), Kruman (1983), Levine (1977), and Maizlish (1983). For overviews of the literature and additional references, see McCormick (1986) and Formisano (1999).

a simple contention, however. Differences in the level of competition within state legislatures will lead to differences in outcomes. We are interested in the fact that initial conditions have considerable power to predict state political competition. This observation suggests that patterns of competition formed early and persisted. Nonetheless, this does not mean that political competition is deterministic. People, parties, laws, and policy all have played roles at different times. However, their roles are constrained by the system within which they operate.

A third, and related, critique is that our measures are not true measures of state political competition.[3] Political competition is difficult to evaluate. The measures of political competition we use are at best noisy and indirect. By using a variety of measures and showing that broad patterns are similar across measures, we hope to convince readers that we capture important aspects of state political competition.

A fourth critique is that state political competition at any time is determined by culture, religion, class, race or other aspects of the composition of the populace and not by initial conditions at the time of settlement. [4] This may well be true. In fact, as we will discuss in Chapters 4 and 7, we believe that initial conditions are acting through some of these channels. We are, however, struck by the ability of state initial conditions to explain the evolution of state political competition. Further, patterns across the American states bear strong relationships to patterns that we observe in the international context. This suggests – yet by no means proves – that our findings are not idiosyncratic to the United States or to individual states. They seem to be the product of general forces.

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[3] See Holbrook and Van Dunk (1993) and the discussion of the Ranney index.

[4] See the discussion in see McCormick (1988) and Formisano (1999) on the ethno-cultural view of politics and the earlier literature on the elite and class-based politics. See also Patterson and Caldeira (1984) and King (1989), who relate the Ranney index to state level characteristics such education, income, population and other variables.

Initial Conditions

The four initial conditions that we focus on are: legal origin, climate, access to water transportation, and culture. We focus on climate, access to water transportation and culture, because they have been shown by economists and political scientists, to be systematically related to outcomes.[5] For the United States, the most relevant papers are Mitchener and McLean (2003) and Rappaport and Sachs (2003). Mitchener and McLean (2003) show that between 1880 and 1980 price adjusted income per worker systematically was related to the average number of cooling-degree days, the percentage of population in slavery in 1860, and access to the ocean or the Great Lakes. Our measures of climate and access to water transportation are similar to theirs. We do not use the percentage of the population in slavery, because this variable is endogenous. The percentage of the population in slavery is, however, highly correlated with climate. Rappaport and Sachs (2003) show that, controlling for climate and topography, county population and employment density in 2000 are positively related to access to the ocean, Great Lakes, or navigable rivers. Because we use state-level data, we will use a more limited number of variables. This relationship holds for changes in population density from 1920 to 1960 and from 1960 to 2000. In international studies, scholars typically use climate and access to water transportation to explain growth and other economic outcomes.

To capture a number of different dimensions of the state climatic endowment, we use a single measure of climate that incorporates average annual temperature, average

[5] See, for example, Acemoglu, Johnson and Robinson (2001), Easterly and Levine (2003), Sachs (2003).

monthly precipitation, depth of soil, annual flood frequency, and average number of months of drought. To avoid focusing on any one of these five measures, we employed principal component analysis, which allows us to build a weighted average based on correlations among the five climatic conditions.[6] The climate variable is higher in states that are hotter, rainier, have deeper soil, have less flooding, or have fewer droughts. Table 3.1 lists the values of our initial conditions for each state. Louisiana has the highest value of climate (8.74), and Montana has the lowest value of climate (-4.81). The state closest to the average (0.00) is Rhode Island (-0.25). The average value for the North is -1.28. The average value for the South is 4.31.[7]

Table 3.1 here

We will defer to the next chapter the issue of the mechanism through which climate acts on political institutions. However, it is useful to identify two mechanisms through which other scholars propose that climate affects state politics. The first mechanism is climate as a proxy for agricultural endowment. Engerman and Sokoloff (2001, 2002) argue that having a tropical climate led, through slavery and the resulting inequality, to poor political institutions. Our measure of climate is positively correlated with agricultural output and specifically with cotton output and slavery. The second

[6] To make these five variables comparable, we converted all of them to standard normal variables, where stn(x) is the standardized normal version of a variable x. Because the average absolute correlation between these five variables is 0.52, the first component accounts for almost two-thirds of the variance between these five variables. Thus, we compute climate using the first component: climate = 0.8445*stn(temperature) + 0.8232*stn(precipitation) – 0.8173*stn(flood frequency) + 0.8262*stn(depth of soil) – 0.5880*stn(months of drought per decade).

[7] Here and in subsequent discussion, the term North refers to states that remained in the Union during the Civil War, while the term South refers to states that were members of the Confederacy during the Civil War.

mechanism is climate as a proxy for the disease environment. Acemoglu, Johnson and Robinson (2001) argue that a hostile disease environment caused European settlers to put in place extractive institutions.[8] Climate is also strongly positively correlated with antebellum mortality. We will discuss mortality further in the next chapter.

In addition to climate, states differed in their access to water transportation. Access to water transportation affected trade because, for much of the nineteenth and twentieth centuries, water was the most economical form of transportation. Table 3.1 shows by state the average share of counties with access to water transportation.[9] The variable equals 1 when all counties in the state have access to a navigable river, Great Lake or an ocean. The variable equals 0 when all counties are landlocked. Four states on the eastern seaboard – Connecticut, Delaware, New Jersey and Rhode Island – have scores of 1.00. Ten states – Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Utah, Vermont and Wyoming – have no access to water transportation and score 0. Moreover, both Kansas (0.06) and South Dakota (0.02) are essentially landlocked. The average value for the North is 0.38, and the average value for the South is 0.40.

We examine culture because the cultural composition of early settlers might be an initial condition in its own right. The set of all possible cultural classifications is large. For the sake of simplicity, we examine Elazar's 1966 classification of state political culture, which has been widely used in the political-science literature.[10] Other competing classifications exist. However, as Lieske (1993) noted, only Elazar's classification has been widely used empirically. One drawback of Elazar's classification is that, in

[8] See also Sachs (2003).
[9] The data are taken from Rappaport and Sachs (2002).
[10] Elazar (1984), p. 117. The first edition was published in 1966.

principle, it could change over time. Indeed, he constructed it to explain the political behavior of states in the mid-twentieth century. The point, however, was to capture fundamental, persistent differences rooted in culture. So his classification may not have been substantially different earlier. Berman (1988) presents evidence that Elazar's classification has explanatory power in the Progressive Era.

Elazar calls his variable "political culture," because he is interested in using it to explain differences in state political systems. However, his classification is based on the ethnicity and religion of early settlers as well as later migration streams. So it can be interpreted as measuring culture more broadly. Elazar has a detailed eight-category classification, but these can be thought of as variants on three political cultures – moralistic, individualistic, and traditionalistic. Elazar (1984) describes them as follows:

> Since individualistic political culture emphasizes the centrality of private concerns, it places a premium on limiting community intervention – whether governmental or nongovernmental – into private activities to the minimum necessary to keep the marketplace in proper working order. … In the moralistic political culture, individualism is tempered by a general commitment to utilizing communal – preferably nongovernmental, but governmental if necessary – power to intervene into the sphere of "private" activities when it is considered necessary to do so for the public good or the well-being of the community. … Traditionalistic political culture is rooted in an ambivalent attitude toward the marketplace coupled with a paternalistic and elitist conception of the commonwealth. It reflects an older, precommercial attitude that accepts a substantially hierarchical society as part of the ordered nature of things, authorizing and expecting those at the top of the social structure to take a special and dominant role in government.[11]

We will use Sharkansky's (1969) mapping of Elazar's classification onto a linear scale on which Minnesota (1) is the most moralistic, and Arkansas and Mississippi (both at 9) are most traditionalistic. The state closest to the average (4.97) is Nevada, which has a rating of 5. The average value for the North is 3.97. The average value for the South is 8.35.

[11] Elazar (1984), pp. 94-99.

Table 3.2 lists correlations among our initial conditions. To illustrate its relationship to our initial conditions, we include the South. In general, the correlations are not particularly high. The exceptions to this pattern are climate, culture, and the South. For those variables, the correlations range from 0.72-0.79. In some contexts, the high correlation between culture and climate (0.79) will make it difficult to separately identify the effects of these two initial conditions.[12]

Table 3.2 here

Our focus on these initial conditions does not imply that other factors are unimportant. For example, Mitchener and McLean (2003) include the percentage of workforce in mining in 1880 in their regressions and find that it is related to productivity up to 1940. Other studies have shown that oil is also related to productivity and growth.[13] We exclude these factors for three reasons. The first reason is parsimony, because our data includes just 48 states. The second and more important reason is that oil and mining production is endogenous. Clearly the deposition of minerals and oil thousands of years ago was exogenous. Their discovery and development depended, however, on a variety of other variables, which are in part endogenous. These variables include increases in population and the development of uses for minerals and oil, particularly for oil. The third reason is timing. Oil and mineral discoveries would not happen until the second half

[12] Later in this chapter we will see that we can separate their individual influence in panels that have a large number of observations, but we cannot always identify their individual influence in cross-sectional regressions.
[13] See for example Sachs and Warner (1999) and Isham, Woolcock, Pritchett, and Busby (2005).

of the nineteenth century and often later. In many – though not all – states, the political system was well established prior to a discovery of oil and mineral wealth.

Indeed, parsimony has its costs. It makes it likely that potentially important variables other than ones discussed thus far will be omitted from any specification. Thus, the reader should take our later results to be descriptive rather than exhaustive. We specify a general relationship rather than a unique causal pathway.

State Political Competition

In Figure 3.1, we represent the relationship among initial conditions, voters, a state's constitution, and state legislators. We view initial conditions as acting on a state legislature both directly and through voters and constitutions. Voters and constitutions are not the only constraints on a state legislature. For example, the judiciary also constrains the behavior of a legislature. We will discuss the judiciary and the constraints that it poses in more detail in Chapter 5.

Figure 3.1 here

Initial conditions could affect state legislatures for two reasons. Initial conditions may shape the preferences of the state legislature (as we argue is the case for civil law states), or they may shape the ability of the state legislature to act on its preferences by affecting political competition. What we are interested in here is how initial conditions have shaped political competition.

Political competition is of interest to us for both theoretical and empirical reasons. Theoretically, political competition leads to greater redistribution.[14] Empirically, in the United States, greater inter-party political competition is associated with higher state income and growth, lower state taxes, more business-friendly labor regulation, a larger share of manufacturing, higher quality governors, and higher voter turnout.[15]

Political competition is measured often and at best imperfectly by examining the division of seats between parties in the state legislature. The division of seats is imperfect for a number of reasons, most obviously because legislators do not always vote along party lines. As we go back further, the problem is compounded. In the nineteenth century there were a greater number of distinct groups that can be interpreted either as factions within parties or as actual third parties. There were no longer just Democrats and Republicans or Democrats and Whigs. There were also Jackson Democrats, Anti-Lecompton Democrats, Union Conservatives, and Progressive Republicans to name a few. In addition, in some states dominated by a single party, there was intra-party competition.

The Ranney index quantifies the extent to which one party dominates a state legislature. Some versions of the Ranney index also include the party affiliation of the governor. For simplicity, we compute an additive version of the Ranney index that excludes the governor:

Ranney index = 100 - [abs(percent Democrats in upper house) – 50) + abs(percent Democrats in lower house) – 50)]

[14] See Lindbeck and Weibull 1987, Stromberg 2004, and Roemer 2001.
[15] See Besley, Persson, Sturm 2006, and Holbrook and Dunk 1993.

The political environment is nominally most competitive when the Democrats have 50 percent of the seats in both chambers. In this case, the Ranney index equals 100. Similarly, the political environment is least competitive when the Democrats or some other party holds 100-percent of the seats in each chamber. In this case, the Ranney index equals 0. While data for the Ranney-based measure is available as far back as the 1830s, these data are available for a larger number of states and years after the Civil War. During the period 1866-2000, the state with the lowest average value of the Ranney index was Arkansas (12) and the state with the highest average value of the Ranney index was Illinois (84). Tennessee and Maine were closest to the average value of the Ranney index (56). The average values for the North and the South were 64 and 28 respectively.

One criticism of this version of the Ranney index is that it ignores whether legislative houses are divided and controlled by different parties. For example, suppose the Ranney index equals 72. This measure of political competition corresponds to two outcomes in which both houses are controlled by one party including: 1) the Democrats have majorities of 60-percent and 68-percent in the upper and lower houses, and 2) the Democrats have minority positions of 40-percent and 32-percent in the upper and lower houses. This measure also corresponds to two additional cases in which the chambers are divided: 3) the Democrats have a 60-percent majority and a 32-percent minority in the upper and lower houses, and 4) the Democrats have a 40-percent minority and a 68-percent majority in the upper and lower houses.

It is possible to compute an alternative Ranney index that accounts for whether or not the two state legislative houses are divided:

$$\text{Ranney}^{ALT} = 100 - \text{abs}[\text{percent Democrats in the upper house} - 50$$

+ percent Democrats in the lower house – 50] =

100 - abs[percent Democrats in the upper house

+ percent Democrats in the lower house – 100]

Using our previous example, the alternative Ranney index is, as before, 72, when the Democrats have majorities of 60-percent and 68-percent in the upper and lower houses or the Democrats have minority positions of 40-percent and 32-percent in the upper and lower houses. However, when the upper and lower houses are divided, and the Democrats have either a 60-percent majority and a 32-percent minority, or a 40-percent minority and a 68-percent majority, the alternative Ranney index increases to 92. The correlation between our Ranney index and this alternative Ranney index is 0.97. So they tell similar stories.

Figure 3.2 illustrates the striking difference in the evolution of the average Ranney index in the North and in the South. Between 1866 and 1958, the average state Ranney index in the North ranged between 32 and 68 and averaged 55. Between 1960 and 2000, the average state Ranney index in the North increased to 76 and fluctuated in a narrower band, 68 to 80. Following the Civil War, the average state Ranney index in the South fell as Southern state legislatures came to be dominated by the Democratic Party. Although there were a few temporary upward spikes in the 1870s and 1890s, the Ranney index continued to fall and then hovered near zero from the 1920s through the 1950s. After 1960 the average Ranney index in the South began to grow rapidly. By the end of the twentieth century, the average Ranney index in the South had converged to the average Ranney index in the North.

Figure 3.2 here

In addition to the Ranney index, we consider several other measures that are related to political competition, including citizen voting, the size of state legislatures and the level of professionalism in state legislatures. Regarding citizen voting, we use data starting in 1876 for a broad set of directly elected state-level officials in the executive branch, including low profile "down-ballot officers" such as the Attorney General and Secretary of State.[16] For these officers, voters tend to make their choices along party lines. Thus, in these elections and in down-ballot elections in particular, vote-shares substantially greater than 50 percent for one party indicate weak political competition.

The index of citizen political competition is computed as follows:
100 – 2*abs((votes for Democratic candidates in broad elections) – 50)).
As with the Ranney index, the values range from a low of 0 to a high of 100. During the period 1876-2000, the state with the lowest level of competition was Mississippi (50.5), while the state with the highest level was Indiana (94). The state that was closest to the average was North Carolina (81). The average values for the North and the South were 86 and 64 respectively.

Figure 3.3 illustrates the evolution of citizen political competition in the North and in the South. Figure 3.3 is surprising because it shows that there were citizens in the South who were voting Republican around the turn of the century. When comparing the Ranney index for the South in Figure 3.2 with citizen political competition in Figure 3.3, it also appears that there were not enough citizens or a sufficient concentration of citizens

[16] Ansolabehere and Snyder (2002, and updated)

who voted Republican to have a meaningful impact on the composition of state legislatures.

Figure 3.3 here

There are several other notable differences between the evolution of citizen political competition and the evolution of the Ranney index in Figures 3.2 and 3.3. First, while the Ranney index gradually increased in the North during 1866-2000 on a path that included many upward and downward spikes, citizen political competition in the North remained relatively stable. It averaged roughly 85 throughout 1876-2000 on a path that included fewer and smaller spikes. Second, while both measures of political competition fell in the South after the Civil War, citizen political competition in the South converged to Northern levels around 1970. It took the Ranney index in the South nearly 30 more years to converge to Northern levels.

Although the number of seats in a state legislature might at first glance appear peripheral to political competition and outcomes, it is not. The number of seats will determine, for example, the number of votes that need to be acquired in a close vote. A 55 percent - 45 percent division of seats in a small chamber may mean the difference of only a few votes. In a larger chamber, it can represent a significantly larger number of votes. Further, Gilligan and Matsusaka (1995) show that during 1960-1990, state government expenditures were positively related to the number of seats in the legislature. They suggest the reason for the relationship was logrolling.

During the period 1866- 2000, Delaware had the smallest number of seats in a state legislature (48), and New Hampshire had the largest number (280). Iowa and Maryland were both close to the average of 154 seats. Interestingly, in light of the conventional wisdom regarding the South's dislike of government, Southern states had slightly larger state legislatures (158 seats on average) than Northern states (153 seats). In contrast to the Ranney index, the number of seats in each state legislature rarely changed during 1866-2000.

A related measure of state legislatures, the index of state legislative professionalism developed by Squire (2006, 2007) became available in the twentieth century. For nine years at varying intervals during the twentieth century, the Squire index compares the averages for pay, staff size and number of days in session of state legislators with their counterparts in the United States Congress. "In essence, the measure shows how closely a legislature approximates these characteristics of Congress on a scale where 1.0 represents perfect resemblance and 0.0 represents no resemblance."[17] When the Squire index is close to 0, state legislatures meet infrequently and have small staffs. This can be associated with a culture where legislators are pressed to find alternative income sources and are poorly informed about technical aspects of issues. The state with the lowest average level of legislative professionalism was Wyoming (0.05). The state with the highest average level of legislative professionalism was Massachusetts (0.42). Rhode Island was closest to sample average (0.16). The average values for the North and the South were 0.17 and 0.12.

[17] Squire 2006, p.4

State Political Competition and Initial Conditions

In this section we will show that measures of state political competition, which we discussed in the previous section, are systematically related to initial conditions. However, before proceeding, it is useful to discuss how initial conditions will affect the measures. International evidence shows that countries having more tropical climates, whether defined by latitude, disease environment, or other variables, have weaker political institutions.[18] Although these papers do not explicitly measure political competition, the weakness of political institutions may well derive in part from lower levels of political competition. In the United States, any effect of climate on political competition is undoubtedly confounded with the effect of the American Civil War. Following the war and especially after Reconstruction, virtually all politicians in the South were Democrats. This one-party monopoly is likely to have weakened political institutions. Thus, climate will almost certainly have predictive power for political competition in the United States. We expect Elazar's culture variable to follow a similar pattern to climate because of the correlation between climate and culture.

In the international context, legal origin has been found to be negatively related to property rights and to a large number of outcome variables such as entry, regulation, and the quality of government, and investor protection.[19] Thus, it would not be particularly surprising if legal origin were related to American state political competition.

Access to water transportation has received somewhat less attention in the international context. Easterly and Levine (2003) show that being landlocked relates negatively to the quality of political institutions, although the effect was not always

[18] See, for example, Acemoglu, Johnson and Robinson (2001), Easterly and Levine (2003), Sachs (2003).
[19] See Levine (2005) and a large number of papers by La Porta and his coauthors beginning with La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998).

statistically significant. To the extent that access to water transportation is a proxy for trade, the demands imposed on the political and legal systems by trade and competition with other locations for trade may lead to stronger political institutions. Thus, access to water transportation may be positively related to political competition.

Having outlined the predicted effects, we begin by examining the Ranney index and citizen political competition. To understand how initial conditions influence political competition, we estimate the following time-trend model:

$$PC_{it} = \alpha_0 + \alpha_1 CLIM_i + \alpha_2 CLIM_i * t + \alpha_3 CIV_i + \alpha_4 CIV_i * t + \alpha_5 TRANS_i + \alpha_6 TRANS_i * t + \alpha_7 CULT_i + \alpha_8 CULT_i * t + \beta_t t + u_{it} \quad (1)$$

Subscripts i and t index a state and a year, and t denotes the period: $t = (year_t - year_0)$, where $year_0$ is 1866 and 1876 for the Ranney index and citizen political competition respectively. The variable PC_{it} denotes political competition in state i in period t. The variables $CLIM_i$, CIV_i, $TRANS_i$ and $CULT_i$ are the initial conditions including climate, civil law origins, access to water transport, and culture in state i. u_{it} is a state specific error term. For ease of interpretation, climate, transportation and culture are standardized to have mean of 0 and variance of 1. We estimate equation (1) taking the four initial conditions, denoted IC_i, to be the fixed effects. To correct for the potential influence of serial correlation, we cluster the standard errors at the state level and correct for heteroskedasticity. It is worth noting that with the data we have, we cannot simultaneously estimate both effects of these initial conditions and state-fixed effects.

We can use equation (1) to measure the impact of an initial condition in any sample year. Consider, for example, the influence of climate on the Ranney index during

1866-2000. The variable α_1 is the marginal influence of a one-standard-deviation increase in climate in year$_0$ = 1866, and α_2 is the marginal influence of climate on the average annual change in political competition during 1866-2000. For example, if $\alpha_1 = -24$, and $\alpha_2 = -0.08$, then, in 1866, 1900 and 2000, a one-standard-deviation increase in the climate index is associated with a 24-point decline, a 21.3-point decline and a 13.3-point decline in the Ranney index.[20]

In practice, we estimate a variant of equation (1) in which the annual change in the marginal influence of each initial condition is allowed to differ across periods. We split our sample into three periods: 1866-1895, 1896-1959, and 1960-2000. In the political science literature, 1896 is considered to be a critical year, because of the surge in industrialization. 1960 is also considered to be a critical year for state politics, as Democrats saw sharp gains in Northern urban areas.[21] This model is summarized in equation (2):

$$
\begin{aligned}
PC_{it} = {} & \alpha_0 + \alpha_1 CLIM_i + \alpha_2 CLIM_i * t_1 + \alpha_3 CLIM_i * t_2 + \alpha_4 CLIM_i * t_3 \\
& + \alpha_5 CIV_i + \alpha_6 CIV_i * t_1 + \alpha_7 CIV_i * t_2 + \alpha_8 CIV_i * t_3 \\
& + \alpha_9 TRANS_i + \alpha_{10} TRANS_i * t_1 + \alpha_{11} TRANS_i * t_2 + \alpha_{12} TRANS_i * t_3 \qquad (2)^{22} \\
& + \alpha_{13} CULT_i + \alpha_{14} CULT_i * t_1 + \alpha_{15} CULT_i * t_2 + \alpha_{16} CULT_i * t_3 \\
& + \beta_t year_t + u_{it}
\end{aligned}
$$

[20] -24 + (1900-1866)*(0.08) = -21.3 and a -24 + (2000-1866)*(0.08) = -13.3.

[21] See Nardulli (1995) and Sundquist (1983). These authors also include 1932 and 1948 as dates when there were major re-alignments in state politics. Because 1932 and 1948 appear to be less important than 1896 and 1960, we do not include them as potential structural breaks.

[22] The model assumes that the marginal influence of each initial continuous; thus, for example, the marginal influence of climate does not jump at any break point such as 1896 or 1960.

Results for the model in equation (2) are reported in Table 3.3. The effects of climate and culture on our two measures of political competition are shown in Figures 3.4 and 3.5. The effect of a warmer and wetter climate on political competition in Figure 3.4 is large and negative for both measures in nearly all years. And the effect of a more traditionalistic political culture on political competition in Figure 3.5 is small and positive for both measures in most years. The positive effect of a more traditionalistic political culture on political competition is somewhat surprising and almost certainly arises because climate and culture are highly correlated (0.79). This high correlation means that their effects need to be interpreted jointly. One way to think about this is that on average, a one-standard deviation increase in climate is associated with nearly a one-standard deviation increase in culture.

Table 3.3 here

Figures 3.4, 3.5, and 3.6 here

Thus, in Figure 3.6, we present the joint effect of climate and culture on political competition. Two things are worth noting about Figure 3.6. First, the joint effects of climate and culture are persistently negative over time. In most years, one-standard-deviation increases in climate and culture had a joint effect of between -10 and -20 on the Ranney index and on citizen voting. This is roughly the difference between the Ranney index in Alabama (63) and Arizona (83) in 2000 or Arkansas (4) and Vermont (20) in 1900. Second, the patterns for the Ranney index and citizen voting are very similar. This

similarity suggests that the pattern is indeed a pattern and not a feature of a particular data set.

The effect of access to water transportation on the Ranney index and citizen voting are shown in Figure 3.7. Three things are worth noting. First, in both cases, the effect of a one-standard-deviation increase in access to water transportation is positive and rising until 1960 and then, while still positive, falls until 2000. Second, the effects are substantially larger for the Ranney index than for citizen voting. This differs from the effects of climate and culture in Figure 3.6, which had a similar magnitude for both measures of political competition. Third, for the Ranney index, in many years the positive effect of transportation was as big as or bigger than the negative effect of climate and culture. This suggests that the narrow focus on North-South differences or on climate more specifically has caused scholars to overlook the importance of access to water transportation for political competition.

Figures 3.7 and 3.8 here

Finally, the effects of civil law on the Ranney index and citizen voting are shown in Figure 3.8. The effects of civil law on citizen voting are very small and never statistically significant. The effects of civil law on the Ranney index are positive and in some instances substantial. In many years the effects fall between 10 and 20 and so are on par with the magnitudes of the negative joint effects of climate and culture and the positive effects of water transportation. It is worth noting, however, that in contrast to those effects, which typically were statistically significant at the 5 percent level or better,

the positive effect of civil law on the Ranney index is only statistically significant in one of the four years and only significant at the 10 percent level in that one year.

To address the criticism that the climate variable is simply picking up the effect of the Civil War, we estimate the model in equation (3), which allows climate to have differential effects in the South.

$$
\begin{aligned}
PC_{it} = {} & \alpha_0 + \alpha_1 CLIM_i + \alpha_2 CLIM_i * t_1 + \alpha_3 CLIM_i * t_2 + \alpha_4 CLIM_i * t_3 \\
& + \alpha_5 CLIM_i * South + \alpha_6 CLIM_i * t_1 * South + \alpha_7 CLIM_i * t_2 * South \\
& + \alpha_8 CLIM_i * t_3 * South \\
& + \alpha_9 CIV_i + \alpha_{10} CIV_i * t_1 + \alpha_{11} CIV_i * t_2 + \alpha_{12} CIV_i * t_3 \\
& + \alpha_{13} TRANS_i + \alpha_{14} TRANS_i * t_1 + \alpha_{15} TRANS_i * t_2 + \alpha_{16} TRANS_i * t_3 \\
& + \alpha_{17} CULT_i + \alpha_{18} CULT_i * t_1 + \alpha_{19} CULT_i * t_2 + \alpha_{20} CULT_i * t_3 \\
& + \beta_t year_t + \gamma South + u_{it}
\end{aligned}
\qquad (3)
$$

In this model, the regressor for $CLIM_i$ measures the marginal influence of climate in the North in the starting year ($year_0$). And, the regressor for $CLIM_i$,*South measures the differential marginal influence of climate in the South (compared to the North). The regressor for $CLIM_i * t_1$ measures the differential marginal influence of climate in the North in any year until 1896 compared to $year_0$, while the regressor for $CLIM_i * t_1$*South measures the differential influence in the South. Similar interpretations apply for t_2 and t_3. Point estimates and standard errors for the climate regresssors are reported in Table 3.4.

Table 3.4 here

Figures 3.9 and 3.10 depict the marginal influence of climate in the North and South. Figure 3.9 shows that the effect of climate on the Ranney index is qualitatively similar in the North and the South. During most of the period, the negative marginal effect of climate is only slightly stronger in the South. Thus, for the Ranney index, climate is not merely capturing a North-South difference.

Figures 3.9 and 3.10 here

Figure 3.10 shows that the effect of climate on citizen political competition is generally negative through 1960. However, the negative influence of climate until 1960 is stronger in the South, which suggests that in the case of citizen political competition climate is capturing the effect of the Civil War. Between 1960 and 2000, citizen political competition dramatically increased in the South, and Figure 3.10 suggests that Southern states with warmer and wetter climates experienced disproportionate gains in competition.

In Table 3.5 we examine the relationship between initial conditions and the total seats in state legislatures during 1866-2000. Because the change in total seats in any given state over time is small, we average over the entire period, 1866-2000.[23] In column (1) we control for all initial conditions. In columns (2) and (3) we exclude culture and climate, respectively. In column (1) the effect of climate is positive and statistically significant while the effect of culture is negative and statistically significant. Thus, states with warmer and wetter climates and less traditionalist cultures tended to

[23] We have also averaged over sub-periods including 1866-1895, 1896-1959 and 1960-2000 and obtained qualitatively similar results.

have larger state legislatures. In column (2), where we exclude culture, climate remains positive and statistically significant. However, the magnitude of the effect falls dramatically. Moreover, the regression fit falls from an R-squared of 0.18 to 0.07. In column (3), where we exclude climate, none of the variables is statistically significant, and the R squared falls to 0.04.

Table 3.5 here

In Table 3.6, we analyze the relationship between initial conditions and the Squire index of state legislative professionalism. Because the correlation of legislative professionalism for a state across years is very high, we averaged the value for a state during 1935-2003.[24] In column (1) we include all four initial conditions as explanatory variables. We find that transportation has a positive and statistically significant effect on legislative professionalism. Neither climate nor culture is statistically significant individually. As we noted previously, these two initial conditions are highly correlated, which makes it difficult to separately identify their influence with a small number of observations. Thus, in columns (2) and (3) we exclude culture and then climate. We find that transportation remains positive and statistically significant in both cases. Further, climate and culture, when included individually, are negative and statistically significant. Thus, over the period 1935-2003, states with greater access to transportation and which have colder and drier climates had more professional state legislatures.

Table 3.6 here

[24] We obtain qualitatively similar results if we average the index over the 1935-1960 and 1979-2003.

Across the measures of state political competition that we examined – the Ranney index, citizen voting, the number of seats in the state legislature, and the level of professionalism in the state legislature – we observed some common patterns. Climate was associated with lower levels of political competition, slightly larger state legislatures, and lower levels of legislative professionalism. Typically, the effect of culture was of the opposite sign to climate and somewhat smaller in magnitude. Thus the joint effect of climate and culture was negative. Access to water transportation generally had the opposite effect. Namely, greater access was associated with higher levels of political competition and more professional state legislatures. The effect of civil law was generally small and not statistically significant.

Voter Control Over State Legislatures

The most obvious way in which voters control state legislatures is through voting for individual state legislators. But there are other ways as well. We will consider two additional ways in which voters control state legislatures – voter initiatives and state constitutions. As before, we are interested in the relationship between these measures of voter control and initial conditions.

Initiatives allow voters in some states to propose constitutional amendments or legislation or both. The most common process is direct. A subset of voters craft an initiative that is then voted on by all voters. In some instances it is indirect. A subset of voters craft an initiative that is sent to the state legislature, which may either adopt the initiative or send it to all voters. In comparison to voter initiatives, voter referenda are

much weaker because they allow voters only to accept or reject actions taken by a state legislature. Thus, we will focus on voter initiatives.

As of 2000, twenty four-states had direct or indirect voter initiatives for statutes or the constitution or both. The first state to permit voter initiatives was South Dakota in 1898. Twenty years later, nineteen states permitted voter initiatives. A second wave of adoption began in the late 1960s and ended when Mississippi adopted voter initiatives in 1992. Table 3.7 lists the dates when various states introduced voter initiatives.

Table 3.7 here

Why are voter initiatives even necessary? Why does the state legislature not just implement the preferences of voters? As Matsusaka (2004) points out, theories based on the median voter typically do not allow legislatures to behave in a way that differs from the preference of the median voter. He offers a number of possible explanations for deviations from these preferences, including ignoring the wishes of the electorate, misunderstanding the wishes of the electorate, and gerrymandering. Matsusaka (2004) also shows that the differences in spending in initiative and non-initiative states appear to vary over time. The intuition for this variation is straightforward. Changes in preferences regarding spending are reflected more rapidly in initiative states than in non-initiative states. However, non-initiative states eventually do shift, and the gap closes.

The effects of voter initiatives on state legislatures can take two forms. The first effect is direct. Use of voter initiatives and the threat of their use constrain the behavior of the state legislature. Matsusaka (2004) provides evidence on spending and taxes that is

consistent with this view. The second is an indirect effect on interest groups. Boehmke (2005) shows that states that have initiatives and states that do not have initiatives differ in the number and composition of state interest groups and in the membership, resources, and lobbying tactics of these groups.

In Table 3.8, we investigate the relationship between initial conditions and voter initiatives between 1890 and 2000. During this period, 23 of the 48 continental states introduced a system of voter initiatives. These introductions appear to be permanent in that none of them have yet been abolished. The share of state years ranges from 0.92 (South Dakota) to 0 (25 states). We present the results of Tobit regressions where the share of state-years is censored below at 0. In column (1) we include all four initial conditions. It is striking that while climate and culture are individually statistically insignificant, we reject the null that climate and culture can be jointly excluded at the 2-percent level. Thus, as we have already shown in the case of legislative professionalism, the high correlation between climate and culture makes it difficult to identify their individual impact. Thus, we exclude culture and then climate from columns (2) and (3). Column (2) shows that states with cooler and drier climates were more likely to have adopted legislation that allowed for voter initiatives than states with warmer and wetter climates. The influence of climate is consistent with what we found earlier when we examined the relationship between initial conditions and the Ranney index. In all three regressions, the effect of civil law on voter initiatives is positive, large and statistically significant. One interpretation of this finding is that civil law states are more populist.

Table 3.8 here

State Constitutions

The second way in which voters exert influence over a state legislature is through the state constitution. State constitutions are at least nominally binding on state legislatures, because they require both time and money to change and they may be enforced by a state supreme court. Voters can shape a constitution by proposing or lobbying for amendments, voting on proposed amendments at the ballot box, or participating in state constitutional conventions. Constitutional conventions are a more extreme version of constitutional amendments. In principle, all parts of a state constitution may be changed during a convention. Who participated in the state constitutional convention has varied over time and across states. Legislators and other political elites were represented in some times and places more heavily than in others. Constitutional conventions were more common during the nineteenth century than the twentieth century. By the mid-twentieth century, constitutional amendments had supplanted constitutional conventions to a significant degree.

State constitutions have undergone much more change on average than the U.S. Constitution, which includes a relatively small number of amendments. State constitutions not only have been subject to many more amendments – tens and in some cases hundreds – over their lifetimes. In many cases, they have also been completely rewritten during constitutional conventions.[25] As in previous sections, we are interested in ways in which initial conditions have shaped state constitutions.[26]

[25] See Friedman (1988) and Lutz (1994).
[26] For more details on this point, see Berkowitz and Clay (2005).

We will examine five dimensions of state constitutions. The first dimension is the length of the original constitution. The original state constitutions were 11,400 words on average and ranged from 1,100 words in New Hampshire to 58,200 words in Oklahoma.

The second dimension is the length of the state constitution in 1990. The average state constitution was 17,200 words in 1941 and grew to 28,800 words in 1990. In 1990, Vermont had the shortest state constitution at 6,600 words while Alabama had the longest state constitution at 174,000 words.

The third dimension is the duration of a state constitution, which is the number of constitutions that a state had as of 1991 per 100 years of statehood. The average duration was 0.78, and it ranged from one constitution every 16 years in Louisiana to one constitution every 211 years in Massachusetts.

The fourth dimension is the number of amendments to the current state constitution. As of 1991, the average state amended its constitution 1.41 times per year. Vermont has amended its constitution least frequently, 0.25 times per year. Alabama has amended its constitution most frequently, 8.07 times per year.[27]

The fifth dimension is the amount of particularistic content in the constitution as of 1997 as coded by Hammons (1997). State constitutions are composed of two types of provisions – framework provisions and statutory laws. Framework legislation covers governmental principles, processes and institutions. Unlike framework legislation, statutory laws are not observed in the federal constitution and are simply laws that have

[27] Because constitutional amendment is more common in some periods than others, we can also compute the rate for fixed intervals in the twentieth century. Between 1970 and 1990, the average state amended its current constitution 1.98 times per year. Vermont and Alabama remained the least and most frequent amending states with 0.30 and 9.65 amendments per year, respectively. The correlation between the average annual amendment rate of the current constitution and the annual amendment rate between 1970 and 1990 is 0.78. They both tell the same basic story, and so we only report the former measure in Table 3.9.

been upgraded to constitutional status. Hammons (1999) calls statutory laws particularistic legislation. He offers some examples of particularistic provisions: "All telephone and telegraph lines, operated for hire, shall each respectively, receive and transmit each other's messages without delay or discrimination, and make physical connections with each others lines, under such rules and regulations as shall be prescribed." Oklahoma, Article 9, Section 5, 1907. "The people hereby enact limitations on marine net fishing in Florida waters to protect saltwater finfish, shellfish, and other marine animals from unnecessary killing, overfishing, and waste." Florida, Article 10, Section 16, 1968. Generally speaking, longer constitutions contain more particularistic content. The share of particularistic content ranged from 0.04 in Vermont to 0.73 in Alabama and averaged 0.31.

In Table 3.9 these five variables are regressed on climate, civil law and access to water transportation. We exclude culture because, as we observed in the cases of legislature professionalism and voter initiatives, it is difficult to separately identify the influence of climate and culture.[28] We will also control for the year in which the constitution was written. States tended to both borrow heavily from other states when writing their own constitutions and to add provisions to correct for omissions in other states. This process of accretion tended to lead to longer first constitutions over time.

It is worth briefly describing what we expect to find. Because of civil law's use of statutes and bright-line rules, we expect civil-law states to have longer and more particularistic constitutions. The predictions for the two other initial conditions are less clear. The aggregate effect of climate on particularistic content and length might be negative if Southern states were anti-government. However, because many Southern

[28] The results are similar if we use culture instead of climate.

states rewrote their constitutions after the Civil War, the effect of climate on the number of constitutions could be positive. Access to transportation might increase length and particularistic content, if, for instance, merchant elites demanded constitutional protections. Or perhaps they preferred shorter more ambiguous constitutions.

Table 3.9 here

In column (1) of Table 3.9, we examine the relationship between the length of the initial constitution and our three initial conditions, controlling for the year in which the first constitution was written. We find that the effect of climate on the length of the initial constitution is positive and statistically significant. The effect of civil law on the length of the initial constitution is positive, although only marginally statistically significant. Moreover, as expected, the year in which the first constitution was written is positively and statistically significantly associated with its length.

In columns (2)-(5), we investigate the relationship between our four remaining variables and state initial conditions, again controlling for the length of the first state constitution. In addition to having had longer first constitutions, states with warmer and wetter climates also had more state constitutions than states with cooler, drier climates. Civil law states had less durable constitutions and more particularistic content, although these effects were only marginally statistically significant. Access to water transportation had a positive and statistically significant association with the length of the constitution in 1990. The most striking result is the importance of the length of the first constitution

to the length of the constitution in 1990, the amendment rate, and the share of particularistic content.

Conclusion

In this chapter, we documented three state initial conditions – climate, access to water transportation, and culture. And in the previous chapter we documented a fourth state initial condition, legal origin. Having documented these four initial conditions, we then turned to the question of how initial conditions have affected the evolution of state political institutions.

What have we learned? As we noted in the introduction to this chapter, political scientists have long been aware of the relationships between climate and political competition and between political culture and political competition. Our contributions with respect to climate and culture are twofold. First, we quantified the effects of climate and political culture on many different measures of state political competition. These measures included the Ranney index of political competition in state legislatures, citizen political competition, the number of seats in state legislatures, the professionalism of state legislatures, the extent to which states use voter initiatives and the character of state constitutions.[29] Second, we showed that the negative effect of climate on the Ranney index and on citizen voting was not merely a North-South phenomenon. Rather, it operated within both the North and the South.

In contrast to climate and culture, relationships between access to water transportation and political competition and between legal origins and political

[29] It is also worth pointing out the somewhat obvious – that the effects of initial conditions on political competition and voter control over the state legislature have varied over time. Mitchener and McLean (2003) have made a similar point in the United States context with respect to worker productivity.

competition in the United States context are not well understood. Therefore, our main contribution here is documenting the positive relationship between access to water transportation and state political competition. This positive relationship holds for a number of measures of political competition, including the Ranney index, citizen political competition, and the professionalism of state legislatures. Further, the magnitude of the effect of a one-standard-deviation increase in access to water transportation in these cases is often comparable in magnitude to the joint effect of one-standard-deviation increases in climate and culture. So not including access to water transportation in any analysis of these variables is likely to lead to an incorrect inference. We also show that having been settled by a civil law legal system appears, with a few exceptions, to have a limited effect on state politics. In the next chapter, we examine the channels through which climate, culture, and access to water transportation are likely to have acted on political competition in political institutions.

Table 3.1: Initial Conditions

State	Climate	South	Civil	Water Transportation	Culture
Alabama	4.55	1	1	0.42	8.57
Arizona	-1.43	0	1	0.00	5.66
Arkansas	3.78	1	1	0.32	9.00
California	-0.83	0	1	0.41	3.55
Colorado	-3.85	0	0	0.00	1.80
Connecticut	-0.37	0	0	1.00	3.00
Delaware	2.82	0	0	1.00	7.00
Florida	4.95	1	1	0.93	7.80
Georgia	4.67	1	0	0.19	8.80
Idaho	-4.18	0	0	0.00	2.50
Illinois	0.63	0	1	0.53	4.72
Indiana	0.69	0	1	0.30	6.33
Iowa	-0.40	0	0	0.18	2.00
Kansas	-1.03	0	0	0.06	3.66
Kentucky	0.81	0	0	0.48	7.40
Louisiana	8.74	1	1	0.59	8.00
Maine	-0.83	0	0	0.63	2.33
Maryland	1.57	0	0	0.87	7.00
Massachusetts	-0.47	0	0	0.71	3.66
Michigan	-1.59	0	1	0.86	2.00
Minnesota	-3.26	0	0	0.16	1.00
Mississippi	6.18	1	1	0.29	9.00
Missouri	1.95	0	1	0.37	7.66
Montana	-4.81	0	0	0.00	3.00
Nebraska	-2.00	0	0	0.12	3.66
Nevada	-3.99	0	0	0.00	5.00
New Hampshire	-0.51	0	0	0.50	2.33
New Jersey	2.05	0	0	1.00	4.00
New Mexico	-1.87	0	1	0.00	7.00
New York	-1.60	0	0	0.71	3.62
North Carolina	4.02	1	0	0.32	8.50
North Dakota	-4.09	0	0	0.00	2.00
Ohio	-0.40	0	0	0.51	5.16
Oklahoma	1.32	0	0	0.12	8.25
Oregon	-3.77	0	0	0.44	2.00
Pennsylvania	-1.28	0	0	0.34	4.28
Rhode Island	-0.25	0	0	1.00	3.00
South Carolina	4.26	1	0	0.26	8.75
South Dakota	-3.56	0	0	0.02	3.00
Tennessee	2.94	1	0	0.49	8.50

Table 3.1 – continued					
Texas	2.33	1	1	0.12	7.11
Utah	-3.52	0	0	0.00	2.00
Vermont	-1.23	0	0	0.00	2.33
Virginia	1.02	1	0	0.43	7.86
Washington	-1.85	0	0	0.59	1.66
West Virginia	-0.72	0	0	0.42	7.33
Wisconsin	-1.74	0	0	0.51	2.00
Wyoming	-3.85	0	0	0.00	4.00

Notes: In subsequent analysis, we standardize climate, culture and water transportation to have mean 0 and variance 1.

Table 3.2: Correlations among Initial Conditions

	Climate	South	Civil	Water	Culture
Climate	1.00				
South	0.77	1.00			
Civil	0.43	0.34	1.00		
Water	0.39	0.03	0.04	1.00	
Culture	0.79	0.72	0.40	0.07	1.00

Table 3.3: Initial Conditions and Political Competition with Structural Breaks

Dependent Variable	Ranney index, 1866-2000	Citizen Political Competition, 1876-2000
Column	(1)	(2)
Climate	-20.80***	-14.37***
	(4.11)	(2.81)
Climate*t_1	0.102	0.164*
	(0.169)	(0.184)
Climate*t_2	-0.200**	-0.139***
	(0.076)	(0.041)
Climate*t_3	0.453**	0.494***
	(0.213)	(0.094)
Civil	2.33	-4.43
	(7.37)	(4.09)
Civil*t_1	0.461**	0.104
	(0.205)	(0.149)
Civil*t_2	-0.090	-0.021
	(0.114)	(0.046)
Civil*t_3	0.092	0.253*
	(0.223)	(0.134)
Transportation	7.90***	5.43***
	(2.80)	(1.45)
Transportation*t_1	0.214*	0.132
	(0.127)	(0.080)
Transportation*t_2	0.179***	0.100***
	(0.057)	(0.025)
Transportation*t_3	-0.191	-0.198***
	(0.114)	(0.051)
Culture	5.47	7.31***
	(3.59)	(2.25)
Culture*t_1	0.094	-0.297*
	(0.175)	(0.157)
Culture*t_2	0.088	-0.024
	(0.064)	(0.34)
Culture*t_3	-0.377**	-0.289***
	(0.178)	(0.084)
Observations	3795	2954
R-squared	0.395	
Joint Exclusions	P-values for F-statistic	
Climate = 0, Climate*t_i = 0 (all periods)	0.000	0.000
Civil = 0, Civi*t_i = 0	0.135	0.051
Transport = 0,	0.000	0.000

Transport*t_i = 0		
Culture = 0, Culture*t_i = 0	0.064	0.002

Notes: Notes on where data sources. Controls for national yearly time effects and a constant are estimated but not reported. Each cell contains point estimates for initial conditions. Standard errors are in parentheses and are clustered at the state level and corrected for heteroskedasticity. The Ranney and citizen political competition are both normalized on a scale of 0 to 100. Climate, culture and transportation are standardized to have mean 0 and standard deviation 1. Thus, the point estimates for climate, transportation and culture estimate "quantitative significance", i.e. the influence of a one-standard deviation increase in this initial condition on points of political competition (scaled 0-100). The civil law variable is a dummy variable, so that its point estimates can be interpreted as the influence of civil relative to common law origins. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels. These conventions also apply in Table 3.4.

Table 3.4: Climate and Political Competition in the North and South

Dependent Variable	Ranney index, 1866-2000	Citizen Political Competition, 1876-2000
Column	(1)	(2)
Climate	-8.82 (6.33)	-4.85 (3.21)
Climate * South	-8.11 (7.49)	-7.11 (5.25)
Climate*t_1	-0.124 (0.285)	0.117 (0.207)
Climate*t_1*South	0.319 (0.293)	-0.010 (0.198)
Climate*t_2	-0.139 (0.133)	-0.039 (0.052)
Climate*t_2*South	-0.091 (0.155)	-0.139** (0.054)
Climate*t_3	0.457* (0.263)	0.204 (0.125)
Climate*t_3*South	0.029 (0.282)	0.460*** (0.122)
Additional controls	Yearly time effects; Constant; South; Civil, Civil*t_1; Civil*t_2; Civil*t_3; Transportation, Transportation*t_1; Transportation*t_2; Transportation*t_3; Culture, Culture*t_1; Culture*t_2; Culture*t_3; South	
Observations	3795	2954
R-squared	0.442	0.478

Table 3.5 Initial Conditions and Size of State Legislatures

Dependent Variable	Total Seats in State Legislatures, 1866-2000		
Column	(1)	(2) – Culture excluded	(3) – Climate excluded
Climate	45.94**	12.94*	X
	(18.22)	(6.80)	
Civil Law	-23.32	-25.04	-9.39
	(15.13)	(16.59)	(15.78)
Transportation	-5.02	5.28	10.34
	(10.27)	(9.81)	(9.57)
Culture	-36.90**	X	-3.92
	(16.97)		(8.83)
Constant	157.35***	157.85***	153.61***
	(10.88)	(11.84)	(11.36)
Observations	48	48	48
R-squared	0.176	0.066	0.039
Joint Exclusions	P-values for F-test		
Climate = 0, Culture = 0	0.050		

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels.

Table 3.6 Initial Conditions and Legislative Professionalism

Dependent Variable	Squire Index of Legislative Professionalism, 1935-2003		
Column	(1)	(2) – culture excluded	(3) – climate excluded
Climate	-0.012 (0.016)	-0.028** (0.013)	X
Civil Law	0.044 (0.028)	0.043 (0.029)	0.041 (0.027)
Transportation	0.043*** (0.013)	0.048*** (0.014)	0.039*** (0.011)
Culture	-0.018 (0.014)	X	-0.026** (0.011)
Constant	0.147*** (0.013)	0.147*** (0.013)	0.148*** (0.013)
Observations	48	48	48
R-squared	0.27	0.26	0.27
Joint Exclusions	P-values for F-test		
Climate = 0, Culture = 0	0.079		

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels.

Table 3.7 Continental States with Voter Initiatives

States (in chronological order)	Year of reform
South Dakota	1898
Utah	1900
Oregon	1902
Montana	1906
Oklahoma	1907
Maine	1908
Michigan	1908
Missouri	1908
Arkansas	1910
Colorado	1910
Arizona	1911
California	1911
Ohio	1912
Nebraska	1912
Idaho	1912
Nevada	1912
Washington	1912
North Dakota	1914
Massachusetts	1918
Florida	1968
Wyoming	1968
Illinois	1970
Mississippi	1992

Notes: From Matsusaka (2004).

Table 3.8 Initial Conditions and Voter Initiatives: Tobit Estimates

Dependent Variable	Share of State Years With Voter Initiatives, 1890-2000		
Column	(1)	(2)	(3)
Climate	-0.368 (0.224)	-0.422*** (0.14)	X
Civil	0.591** (0.265)	0.584** (0.26)	0.510* (0.268)
Transportation	-0.081 (0.129)	-0.063 (0.11)	-0.219* (0.110)
Culture	-0.059 (0.193)	X	-0.326** (0.125
Constant	-0.109 (0.155)	-0.106 (0.15)	-0.092 (0.159)
Observations	48	48	48
Pseudo R-squared	0.167	0.166	0.135
Exclusions	P-value for F-test		
Climate=0 Culture=0	0.016		

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels. Estimates are truncated below at 0 for the 25 states that never had voter initiatives.

Table 3.9 State Constitutions and Initial Conditions

Dependent Variable	Log length of first constitution	Log length of constitution. in 1990	Duration of constitution, as of 1990	Annual amendment rate	Particular-istic content
Column	(1)	(2)	(3)	(4)	(5)
Climate	0.145*	-0.070	-0.161***	0.038	-0.001
	(0.079)	(0.043)	(0.047)	(0.14)	(0.018)
Civil	0.259	0.032	-0.112	-0.096	0.042
	(0.170)	(0.088)	(0.071)	(0.31)	(0.039)
Transportation	-0.120	0.134***	0.044	0.103	-0.024
	(0.073)	(0.049)	(0.051)	(0.110)	(0.016)
First year of initial const.	0.003**	-0.004***	-0.004***	-0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.002)	(0.000)
Log length of first constitution	X	1.27***	-0.045	0.820***	0.176***
		(0.100)	(0.107)	(0.240)	(0.036)
Constant	-3.05	7.21***	8.54***	-1.69	-0.900**
	(2.67)	(1.60)	(2.16)	(3.35)	(0.440)
Obs	48	48	48	48	48
R-squared	0.35	0.84	0.64	0.32	0.59

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels.

Figure 3.1

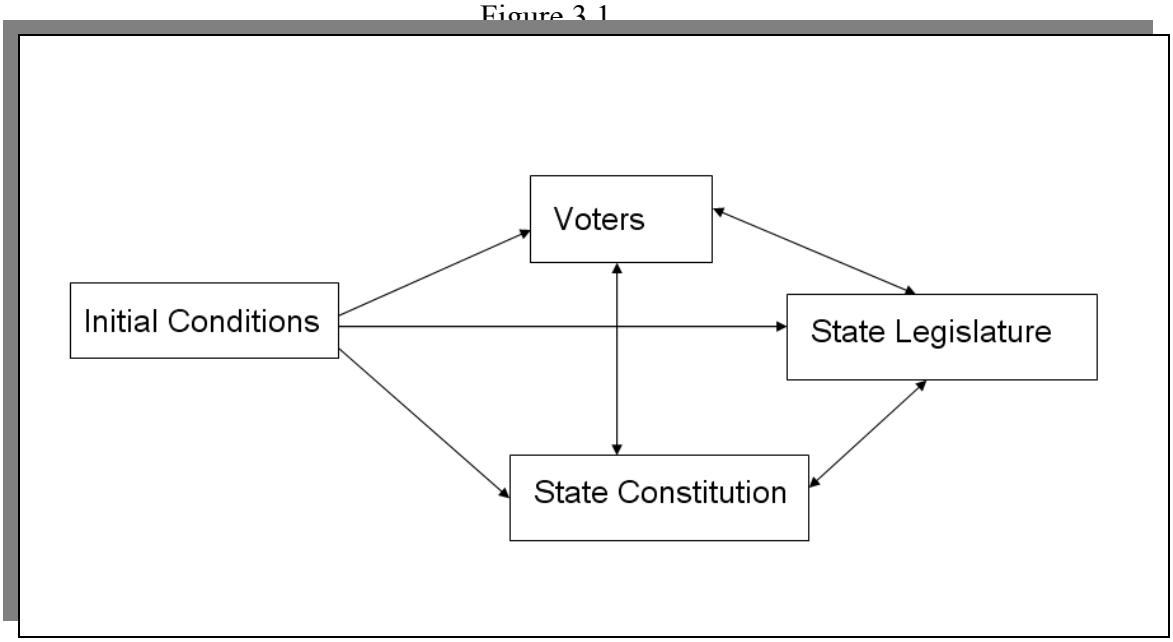

Voters
Initial Conditions
State Legislature
State Constitution

Figure 3.2: Evolution of Ranney index in the North and South

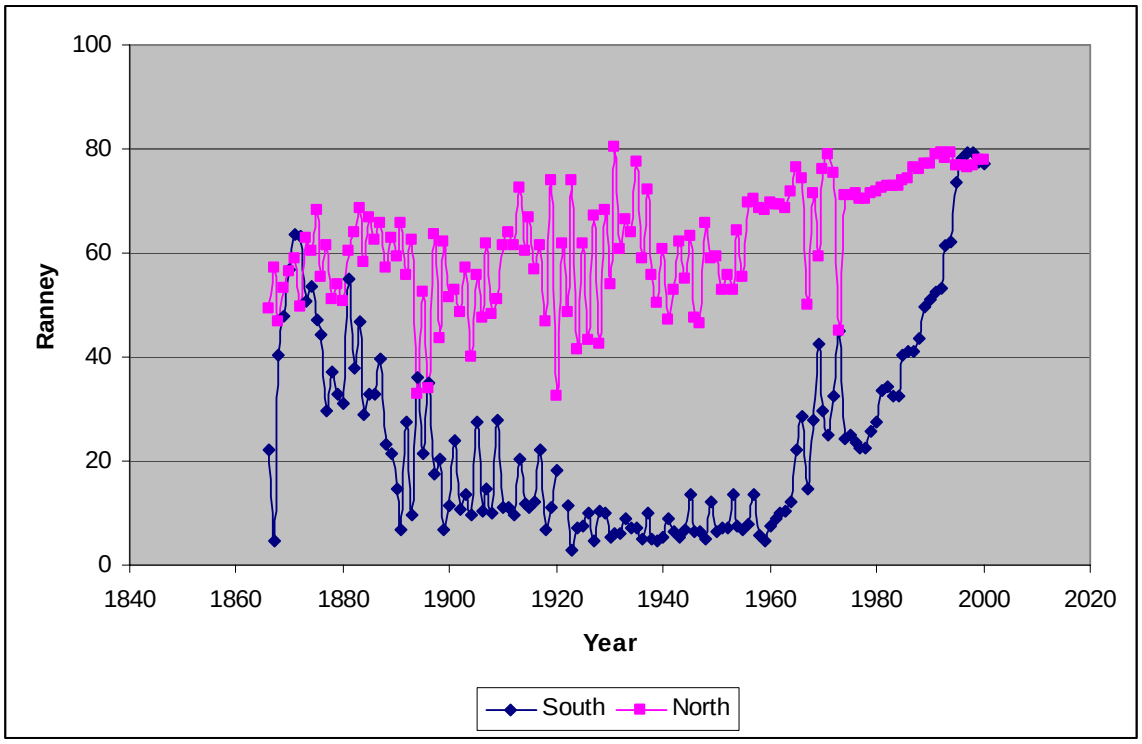


Figure 3.3: Evolution of Citizen Political Competition in the North and South

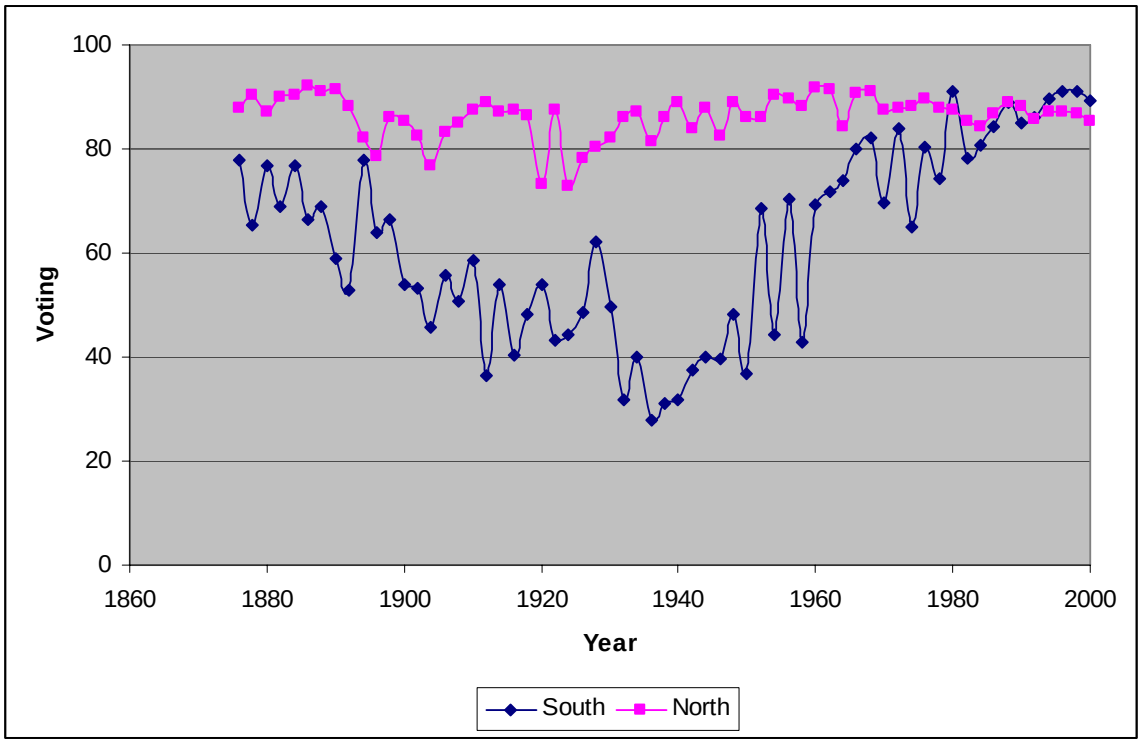
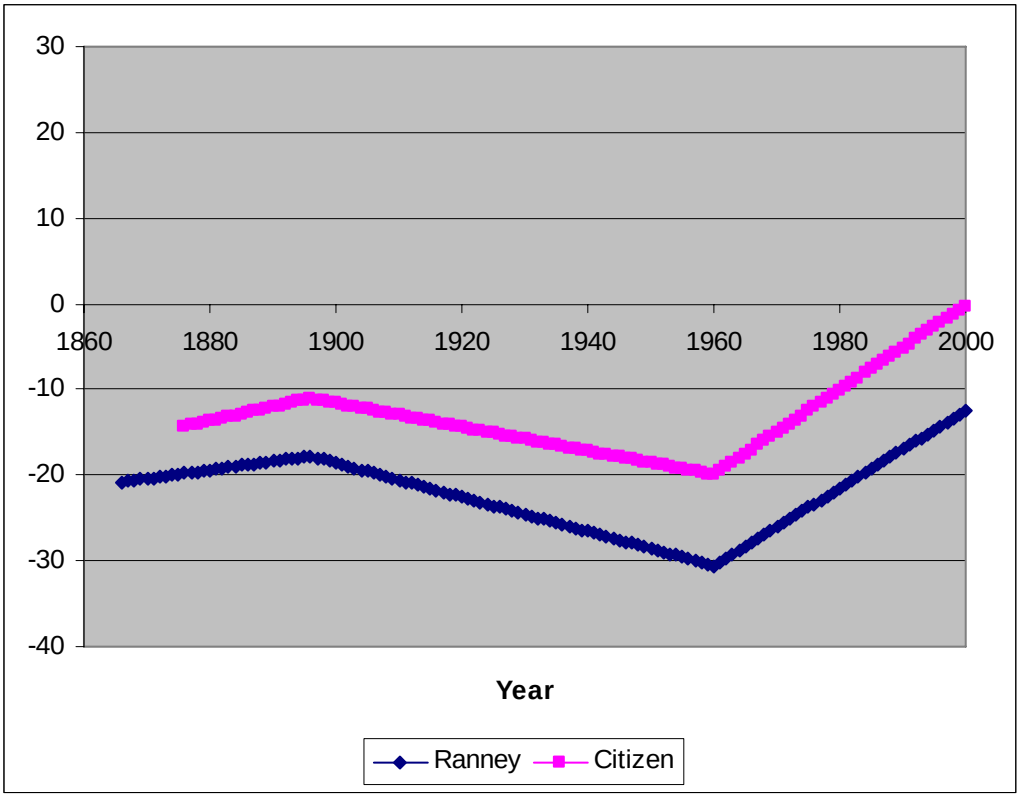


Figure 3.4 – Climate and Political Competition with Structural Breaks

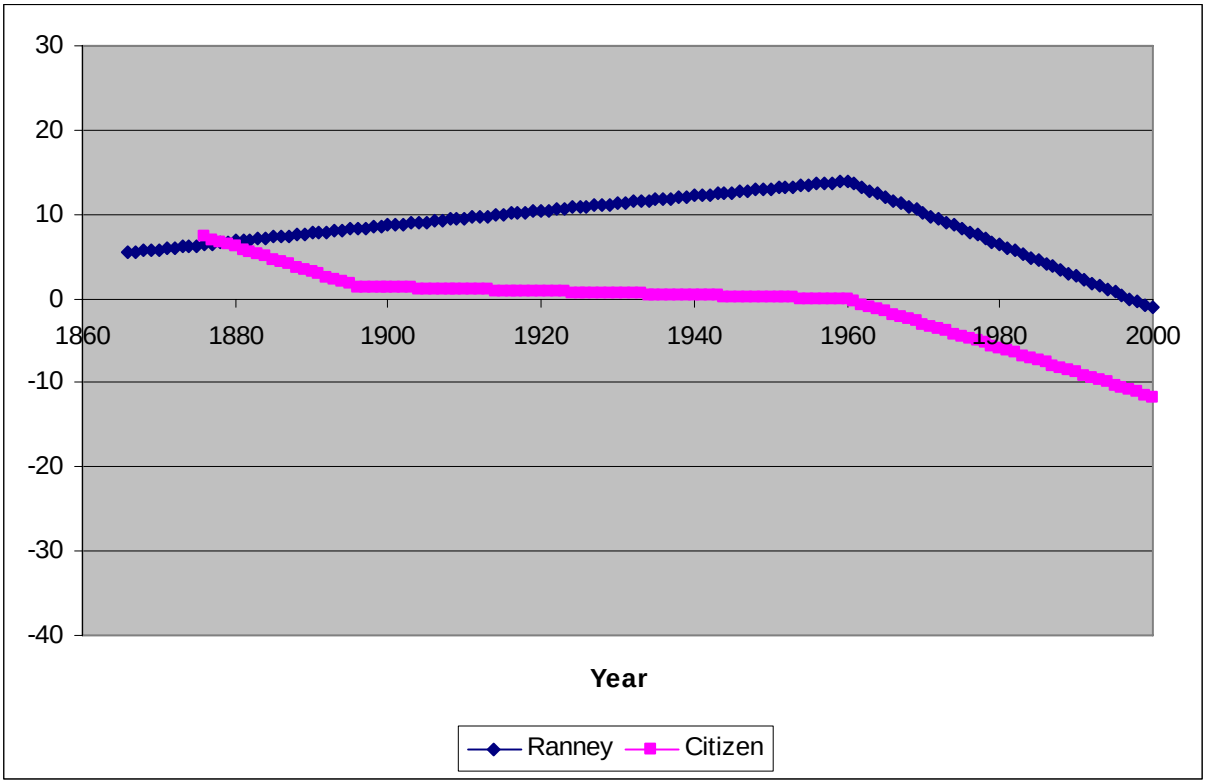


Influence of Climate – Selected Years

Year	Ranney	Citizen
1880	-19.38*** (4.78)	-13.72*** (3.21)
1920	-22.56*** (5.79)	-14.42*** (5.73)
1960	-30.57*** (5.63)	-19.99*** (6.38)
2000	-12.46 (8.60)	-0.220 (4.93)

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels.

Figure 3.5 – Culture and Political Competition with Structural Breaks

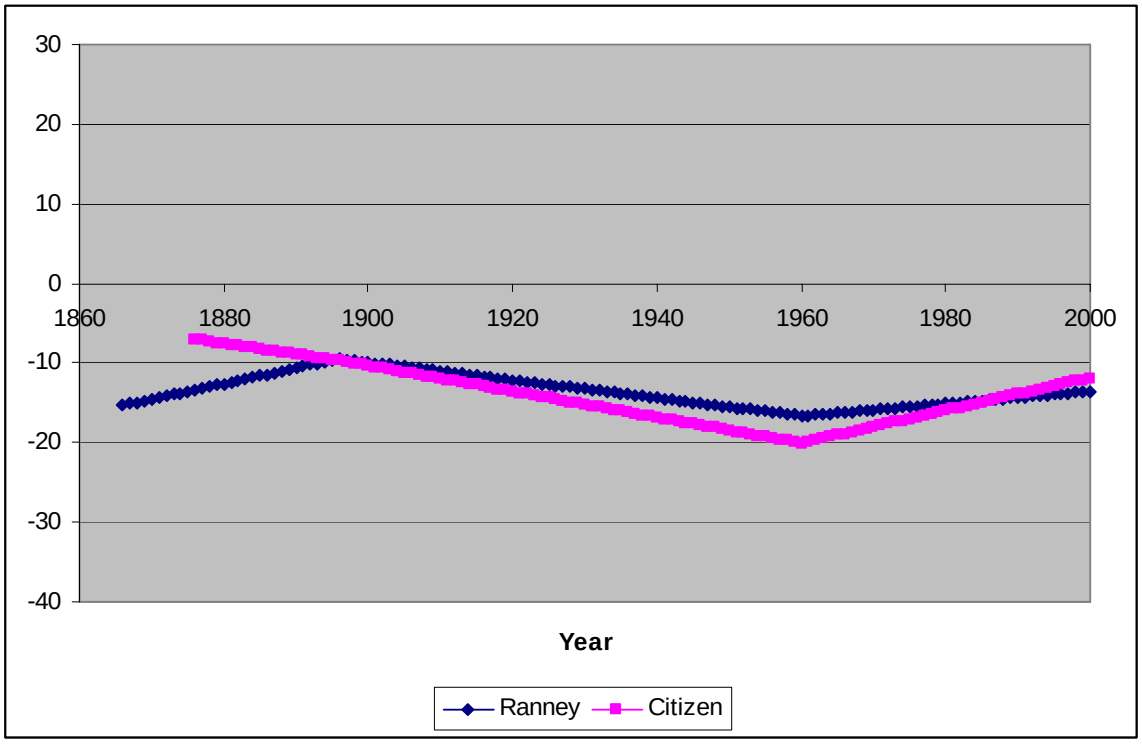


Influence of Culture – Selected Years

Year	Ranney	Citizen
1880	6.79 (4.37)	6.12** (2.51)
1920	10.41* (5.87)	0.800 (4.41)
1960	13.93** (5.82)	-0.142 (4.79)
2000	-1.13 (7.39)	-11.71*** (4.36)

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels.

Figure 3.6 – Joint Influence of Climate and Culture on Political Competition
With Structural Breaks

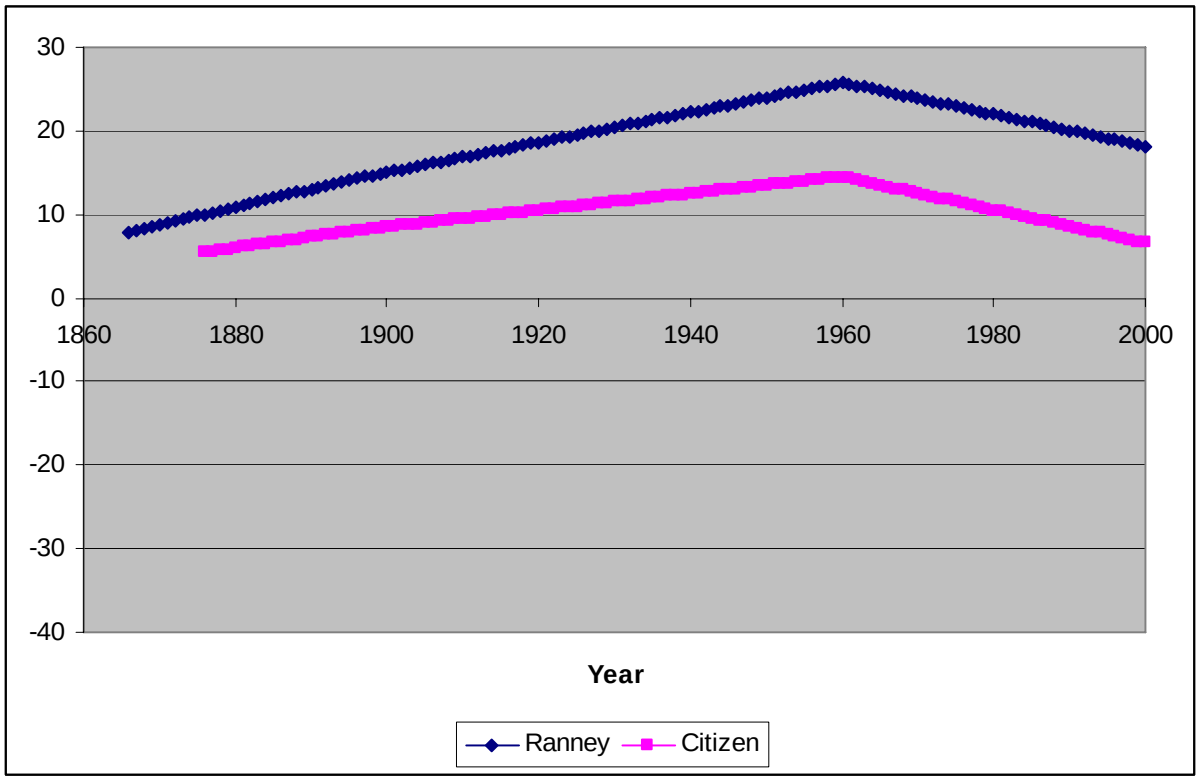


Joint Influence of Climate and Culture – Selected Years

Year	Ranney	Citizen
1880	-12.59*** (2.85)	-7.60*** (1.95)
1920	-12.15*** (3.14)	-13.63*** (2.63)
1960	-16.63*** (3.15)	-20.13*** (3.34)
2000	-13.59** (5.39)	-11.93*** (2.37)

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels.

Figure 3.7 – Transportation and Political Competition with Structural Breaks

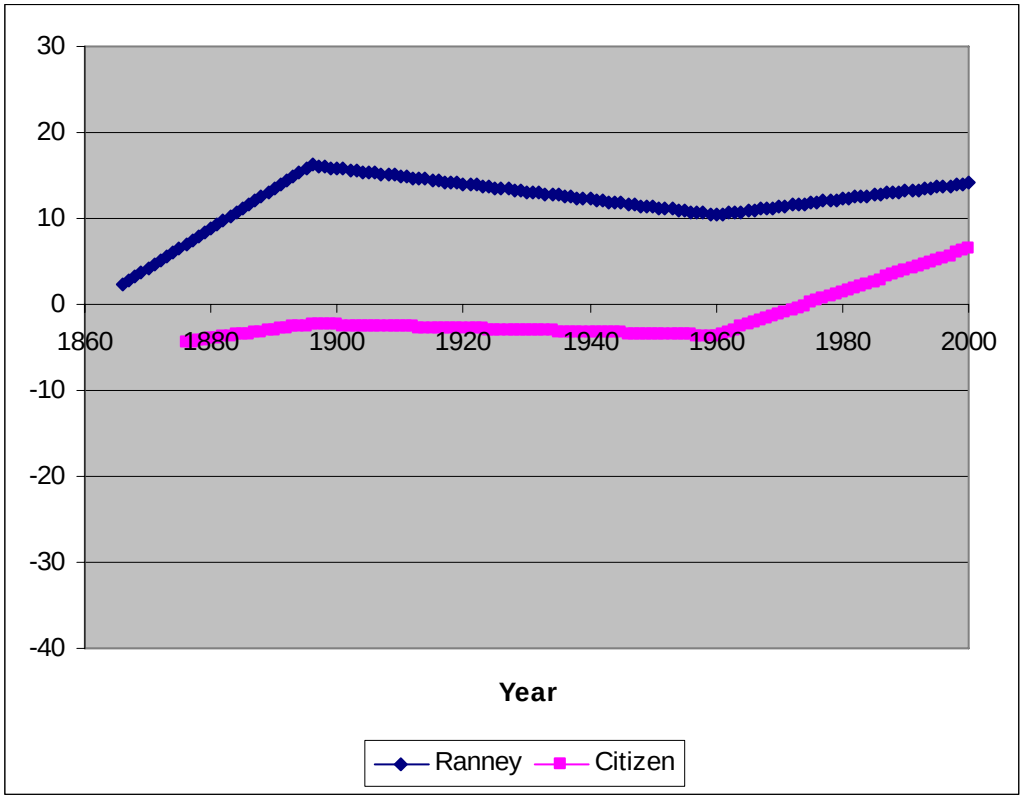


Influence of Transportation – Selected Years

Year	Ranney	Citizen
1880	10.90*** (2.86)	5.96*** (1.58)
1920	18.64*** (3.63)	10.46*** (2.62)
1960	25.80*** (4.03)	14.47*** (3.12)
2000	18.17*** (5.01)	6.55** (2.62)

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels.

Figure 3.8 - Civil Law and Political Competition with Structural Breaks

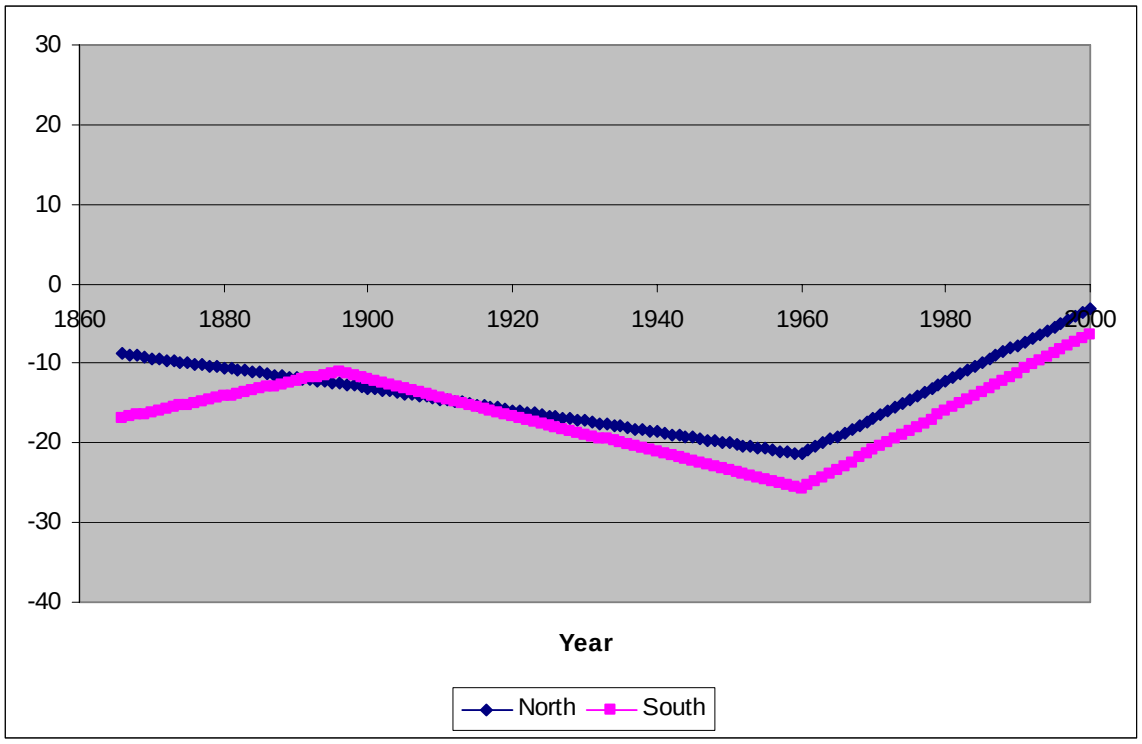


Influence of Civil Law – Selected Years

Year	Ranney	Citizen
1880	8.80 (6.92)	-4.01 (4.32)
1920	14.02* (7.23)	-2.84 (6.00)
1960	10.43 (8.42)	-3.67 (6.78)
2000	14.11 (10.05)	6.44 (4.24)

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels.

Figure 3.9 - Climate and the Ranney index in the North and South

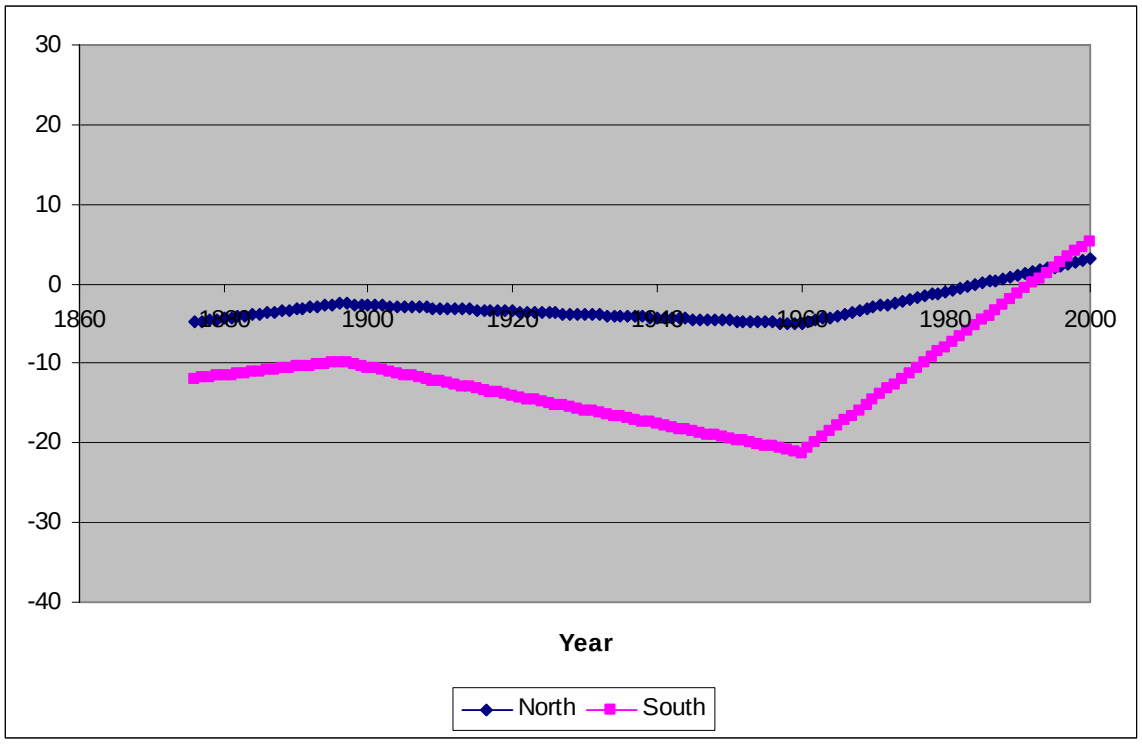


Influence of Climate on Ranney index – Selected Years

Year	North	South
1880	-10.55 (7.45)	-14.20** (5.74)
1920	-15.86* (9.10)	-16.59** (6.78)
1960	-21.41** (8.90)	-25.80*** (7.29)
2000	-3.12 (10.85)	-6.32 (9.59)

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels.

Figure 3.10 - Climate and Citizen Competition in the North and South



Influence of Climate on Citizen Political Competition – Selected Years

Year	North	South
1880	-4.38 (3.60)	-11.54** (4.56)
1920	-3.45 (6.03)	-14.10** (5.86)
1960	-5.03 (6.46)	-21.22*** (6.41)
2000	3.13 (5.98)	5.35 (5.47)

Notes: The standard errors are in parentheses and are robust. The notation ***, ** and * denotes significance at the 1 percent, 5 percent and 10 percent levels.

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