State Policy Innovativeness Revisited[1]

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Abstract

How do the American states vary in their propensity for innovativeness, or their willingness to adopt new policies sooner or later relative to other states? Most studies today use event history analysis to focus almost exclusively on one policy area at a time at the expense of a broader understanding of innovativeness as a characteristic of states. To return to the concept of innovativeness more broadly, our study revisits and updates the original approach taken by Walker (1969) by updating his average innovation scores with new data covering over 180 different policies. We use these data to construct a new, dynamic measure of innovativeness that addresses biases and shortcomings in the original measure, as well as providing associated measures of uncertainty. These new scores build on the logic of event history analysis to address issues such as right-censoring and to facilitate measuring changes in innovativeness over time. We then compare the two measures of innovativeness and evaluate differences across states, spatial patterns, and changes in innovativeness over time.

1 Introduction

Are some states in the U.S. more innovative than others? Beginning with Walker's (1969) seminal study of innovativeness using state adoptions of 88 policies, scholars of state politics have studied this question in myriad ways. Yet over time the literature has moved from the original question of innovativeness as a general trait to the study of innovativeness on a specific policy. This shift largely resulted from concerns with Walker's proposed index of policy innovativeness regarding comparability across policies and over time (e.g., Gray 1973*a*) and was hastened two decades later by the introduction of event history analysis (Berry and Berry 1990), which offered an elegant way to address these concerns within the study of a single policy. In this article we return to the original question of measuring differences in policy innovativeness across the American states by developing a dynamic innovativeness measure that captures the spirit of Walker's score, but that uses the logic of event history analysis to address various biases and to allow for comparisons within and across time periods. We compare our measure to Walker's over comparable time periods and then exploit its dynamic nature to investigate trends in innovativeness over time.

2 The Study of Innovativeness in the American States

Walker (1969) sought to move the study of policy innovativeness away from considering year to year changes in appropriations or in the scope of specific policies towards the study of the initial adoption of policies, arguing that the original decision to adopt is at least as critical as changes in that policy from year to year. Building on Rogers's (1962) work on the diffusion of agricultural technology across farmers, Walker defined policy innovation as "a program or policy which is new to the states adopting it, no matter how old the program may be or how many other states may have adopted it" (Walker 1969, p. 881). Based on this definition, he sought to study why some states were more innovative than others, in the sense that an innovative state would, at least on average, adopt new policies sooner than less innovative states. To answer this question, he developed an index of policy innovativeness using 88 different policies, which was then analyzed to determine the spatial, political, and demographic patterns of innovativeness across states.

In response to this article, Gray (1973*a*) raised a number of concerns about the enterprise of studying innovativeness as an inherent trait of the American states. In particular, she asserted that differences across policies over time made assessing any underlying patterns problematic, since they would change drastically in any given period or for any specific policy (see also Eyestone (1977)). Consistent with these criticisms, her examination of 12 policy areas demonstrated extensive variation in the pattern of diffusion across policy areas (see also Welch and Thompson (1980)), whether measured by the cumulative distribution of innovations or the order in which states adopted the policies, leading to the conclusion that "one might question the fundamental assumption of a 'composite innovation score' " (Gray 1973*a*, p. 1183).[1]

These concerns largely proved fatal for the original enterprise — summarizing the literature only five years later, Savage (1978) notes three primary problems that halted progress: defining an appropriate sample of policies, dealing with differences across policies, and changes in innovativeness over time. Despite attempts to reinvigorate the literature (e.g. Canon and Baum 1981; Savage 1985), the question of policy innovativeness as a trait of the American states was largely put aside. Rather, scholars moved from studying policy innovation as a general trait to studying the patterns of diffusion on single policies or, in particular, explaining cumulative patterns of adoption.[2]

Over a decade passed before Berry and Berry's (1990) introduction of event history analysis (EHA) revolutionized and revitalized the field, allowing scholars to simultaneously account for internal and external determinants of policy innovation. Over the last two decades dozens of articles have been published using EHA in the context of policy adoption in the American states. The event history method has continued to evolve to answer increasingly complex theoretical questions about policy innovation.

Yet the use of EHA has led scholars to abandon the general question of innovativeness as a trait of the American states. The vast majority of published event history studies use only one

[1]For more on the exchange, see Walker's (1973) response and Gray's (1973*b*) rejoinder.

[2]See, e.g., the special issue of *Publius* in 1985 that features an introduction by Savage that notes a lack of a distinct research community, likely due to a "failure to disseminate information about our research" (Savage 1985, p. 5).

policy area and the exceptions to this single policy rule rarely use more than just a handful of policies (e.g., Shipan and Volden 2006; Boehmke 2009). Even recent exceptions to the single policy approach (i.e., Boushey 2010; Nicholson-Crotty 2009), which use 133 and 55 different policies, respectively, do so with a focus on the difference in diffusion patterns across policies rather than across states. The move to the single policy EHA has allowed the literature to established great variation in the patterns of diffusion, including the role of policy-specific factors, regional diffusion, economic and social diffusion, duration dependence, political institutions, etc. It has also helped address the concerns raised by Gray regarding which policies are studied, differences in diffusion across policy areas, and changes in innovativeness over time, but has done so mostly by avoiding them.[3]

Despite these advances, there is only so much that the field can learn through isolated, repeated application of roughly similar models of state policy innovation. Certainly, progress can be made through innovative research designs or new methodological tools, and we can obtain valuable understanding of specific policies through these appropriate tools, but as a theoretical enterprise, the marginal value of the single policy event history study is declining. Recent studies that push against these boundaries suggest that this perspective is shared by other scholars (e.g. Volden 2006; Shipan and Volden 2006; Karch 2007*a*; Boehmke 2009; Nicholson-Crotty 2009; Boushey 2010). Our goal in this paper is therefore to continue this trend by revisiting Walker's (1969) original question of innovativeness as a trait of American states.

In doing so, we attempt to build on the methodological lessons of the literature to develop a measure which addresses many, if not yet all, of the concerns with Walker's original innovation score. We therefore start by reviewing Walker's original score and then highlighting a couple of its known weaknesses. First, it does not properly address issues of right-censoring, a problem endemic to the literature since most studied policies are not adopted by all existing states at the time of analysis. This failure introduces at least two sorts of bias into Walker's innovation score. Second, it does not facilitate comparisons in innovativeness over time. We address these shortcomings

[3] See Berry and Berry (2007) for a recent review of this literature.

by proposing an alternative that explicitly uses the logic of EHA to both account for right censoring and to vastly improve the validity of comparisons across different time periods. We begin by calculating and comparing these two scores using Walker's original data supplemented with adoption information for 101 additional policies. We then use our alternative approach to develop a dynamic measure of state policy innovativeness and highlight its strengths by assessing temporal and geographic patterns in innovativeness.

3 Measuring Policy Innovativeness

In this section we first review Walker's innovation score, which has formed the basis for many studies of innovativeness across the American states (Savage 1978; Canon and Baum 1981; Boushey 2010) and is related to similar measures used in other disciplines.[4] We then discuss some of the important criticisms levied against it. We follow by proposing our alternate measure of state policy innovativeness, which builds directly on the logic of EHA by focusing on state innovativeness at different points in time. By doing so, we not only address some of the statistical concerns with Walker's innovation scores, but we also address some of the criticisms of them in the literature, in particular that they ignore variation in innovativeness over time (e.g. Gray 1973*a*).

3.1 Walker's Innovation Scores

Walker (1969) scores evaluate a state's year of adoption relative to the first and last states to adopt. This measure make scores comparable across policies by normalizing by the total time between the first and last adoptions. More formally, if we let Y_k^{MIN} represent the year that the first state adopts policy k and Y_k^{MAX} represent the year of the last adoption of that policy, then Walker's innovation

[4]Walker's measure is a continuous version of the Rogers measure (Rogers 1962), which divides adopters into multiple discrete categories based on their position in the overall order of adoption. Alternatively, Robertson's (1971) cross-sectional measure of adoption considers the proportion of a set of available innovations in use at a given point in time. Recent studies have suggested a composite score based on features of both (e.g. Fell, Hansen and Becker 2003). Criticisms of the Rogers measure generally rest on concerns about people or firms' ability to accurately recall when they adopted a given innovation. Given our ability to accurately determine the year states adopt policies and the focus on adoption of policies in political science rather than on their continued existence, the use of a relative order measure seems appropriate.

score for state i adopting policy k in year Y_{ik} can be expressed as

$$W_{ik} = \frac{Y_k^{MAX} - Y_{ik}}{Y_k^{MAX} - Y_k^{MIN}}. \tag{1}$$

This score varies from zero to one, with larger values indicating quicker adoptions and a greater innovation score for state i on that policy. To generate a general measure of innovativeness for each state, Walker then averages that state's scores from each policy:

$$\overline{W}_i = \frac{1}{K}\sum_{k=1}^{K} W_{ik}. \tag{2}$$

These average innovation scores have some desirable properties. Normalizing them across policies increases comparability. They are also fairly intuitive: the first state to adopt a policy receives a score of one whereas the last state receives a score of zero. On the other hand, Walker's scores have critical shortcomings related to how they attempt to address right-censoring. Walker deals with this problem by assigning an innovation score of zero to states that have not adopted by the last observed adoption. This treats states that haven't adopted identically as the last observed adopter, despite the fact that this is empirically false. Subsequent applications of Walker's score have improved on this by assigning nonadopters an adoption date of one year after the last observed adoption (Savage 1978; Canon and Baum 1981; Boushey 2010). This approach at least gives the last observed adopter a larger innovation score than nonadopters, but it still suffers from the assignment of an unlikely adoption date to nonadopters.[5]

This approach to filling in missing adoption dates will generally lead to biases in the scores for any policy with right-censoring and these biases will then infect the overall average scores for each state in two ways. First, since scores are set to zero for states that adopt after the last

[5] One way to address this involves making an assumption about the distribution of adoption dates, for which normality has some precedence, estimating its parameters using the corresponding censored distribution for the observed data, and then calculating the expected adoption date conditional on not having adopted by the end of the time period examined. This generates unbiased estimates given the distributional assumption. The resulting scores can then be standardized across policies before averaging by subtracting the mean and dividing by the standard deviation. We calculated such scores and include them with our replication data, but since they offer no advantage in making over time comparisons in innovativeness, we do not discuss them further here.

observed adoption, their scores will actually be too small since most of them would not actually have been the last state to adopt. Any state that would adopt before the final state would have a score greater than zero if the entire set of adoptions were observed. Second, when the last observed adoption is not actually the final adoption, then the value of Y_k^{MAX} used in the formula will be too small, producing a downward bias in the scores for every state (except the first adopter since its score is always one).[6] Of course, these two forces will likely not act equally across states, leading to different amounts of bias in each state's innovation score. In the next section we discuss an alternate measure of innovativeness that addresses both of these biases.

A second challenge involves how to address Gray's (1973*a*) criticism that these and similar scores largely ignore changes in innovativeness over time. While Walker and others (Savage 1978; Canon and Baum 1981; Boushey 2010) have attempted to construct measures of innovativeness for specific periods of time, the process is fraught with difficult choices. For almost any set of policies, we would need to figure out how to assign scores for policies that were adopted in different periods. The approach often adopted in the literature (e.g. Walker 1969; Savage 1978; Boushey 2010) is to assign scores to the period in which the tenth state adopted it. While this is an arbitrary cutoff, any such decision will create problems. Consider the creation of innovation scores for the first and second half of the twentieth century. For states that adopt a policy in the first half, assignment is straightforward, but for states that adopt in the second half of the century it is not. If we use this policy in constructing the average score for the first half of the century then we base the score for that period on decisions made by governments in the second half of the century. If we assign it to the second half, then we punish those governments for the many decades in the first half of the century for which previous governments failed to innovate. In either case, then, we are assigning scores to one period based on actions taken or not taken in other periods. Further, this problem would become more acute as we focused on smaller and smaller periods of time (e.g., decades or election cycles).

Both of these issues emerge because the approaches to generating innovation scores do not

[6] This is easy to prove since $\partial W_{ik}/\partial Y_k^{MAX} \geq 0$.

account for the timing of adoption outside the context of the relative timing of adoption of the specific policy. If we are interested in studying changes in innovativeness over time, then we need a measure of the tendency for states to adopt policies at specific points in time, one that credits states and their current governments for adopting policies and punishes them for not adopting policies. It is to this task that we turn in the next section.

3.2 Adoption Rate Scores

To address the various problems with previous measures of innovativeness, we rely on the methodological advancements that have taken place in the literature. Specifically, we build on the logic of EHA, which addresses most of the methodological problems with previous scores by focusing on the underlying quantity of interest, or the rate at which a state adopts a policy over some interval of time.

To construct such a score, then, our notation must shift from when a state adopts a policy to whether it adopts a policy in a specific time period, usually a calendar year.[7] To reflect this, let the outcome of interest be measured by a variable, Y_{ikt}, that takes on the value zero in years of nonadoption, one in the year of adoption, and is treated as missing in subsequent years. If states face some set of policies in year t that they have not yet adopted, then we can estimate how innovative that state is at that specific point in time by calculating the proportion of possible adoptions that it undertakes. If we let K_{it} represent the number of policies adopted by at least one state — but not by state i — by year t (that is, the number of policies that state i could potentially adopt in year t), then we can measure innovativeness at a given point in time, t, for state i as

$$R_{it} = \frac{\sum_{i=1}^{K_{it}} Y_{ikt}}{K_{it}}. \tag{3}$$

This measure can be calculated over arbitrary periods of time to produce our rate measure of

[7]Using calendar years is ubiquitous in EHA studies despite the fact that historically many state legislatures meet every other year. We stick with this convention and note that our data show that states do frequently adopt policies in off years.

innovativeness by adding up total adoptions over a period beginning in year T_0 and ending in year T and dividing by total annual adoption opportunities over the same period:

$$\overline{R}_{ij} \quad = \quad \frac{\sum_{t=T_0}^{T} \sum_{i=1}^{K_{it}} Y_{ikt}}{\sum_{t=T_0}^{T} K_{it}}. \tag{4}$$

This measure incorporates many of the strengths of EHA. For example, it addresses right censoring by including unadopted policies as zeros in each year, thereby accounting for them in the denominator and reducing the level of innovativeness. After the last observed adoption of policy k, the policy is included in neither the numerator nor the denominator. This measure also allows us to make better use of the available data since it uses information about adoption and nonadoption in each year to construct the score, rather than only using the moment of adoption. By doing so, this measure properly credits states and their governments as innovative when they adopt and uninnovative when they fail to do so. This feature facilitates construction of this measure for different intervals of time, e.g., years or decades, or across all states in a given year to develop a measure of aggregate innovativeness across all states. With enough policies in the database, we will be able to obtain a finely grained measure of innovativeness with sufficient variability from year to year, thereby allowing us to explore the dynamic of innovativeness over time, something widely seen as lacking in current measures (Gray 1973*a*).

Before implementing and comparing these two approaches, note the implicit assumption in both that all right censored states have some chance, however small, of adopting the policy. This assumption is likely reasonable for the vast majority of policies and previous studies of innovativeness in general or the diffusion of single policies make it as well. The contagion literature does, however, contain discussions of "immune" or "cured" individuals — corresponding to states that would never adopt a given policy. While we believe such situations are rare, such policies do exist and including them in the calculation of innovation scores would introduce bias: treating immune states as right censored rather than simply not at risk would mean dividing total adoptions by a greater than appropriate number of policies, therefore biasing it downward. We see two ways to address this concern. First, researchers should inspect their policies to ascertain whether some states would never adopt them and then omit such observations. Second, one can take a probabilistic approach and assume that some proportion of right censored states are immune and, rather than have them contribute one potential adoption to the numerator, they would contribute π_{ij}, the probability state i is at risk of adopting policy j. Within the event history framework, one could apply a "split population" model (Schmidt and Witte 1989) to estimate this probability.

4 Database of Policies and Adoption Dates

Explanations for general policy innovativeness requires both a sufficiently large sample of policies along with an appropriate selection of policies from a broad set of categories. Walker's original database provides our starting point as it contains adoption dates for 85 policies that diffused across the 48 contiguous states in the policy areas of welfare, health, education, conservation, planning, administrative organization, highways, civil rights, corrections, labor, taxes, and professional regulation (Walker 1969).[8]

The next step we took was to incorporate additional policies to cover the last four decades of innovativeness. We initially identified policies included in Graham, Shipan and Volden's (2008) review of the diffusion literature(s), where they attempt to identify all articles on policy diffusion across the American states (as well as international policy diffusion). We replicated their search of JSTOR's website for articles that included the following words: "diffusion", "convergence", "policy transfer", "race to the bottom", "harmonization", and "contagion". Given our focus on the American states, we further limited the results to those that exclusively pertain to state policy diffusion.[9] Many of the articles uncovered in our search did not report information about which

[8]These data are available from ICPSR as study #66. Note that while Walker's article uses 88 policies, the database only includes adoption dates for 85 policies. We depart from Walker's restriction of only using legislative adoptions by including policies that were implemented through the initiative and referendum process. This reflects an interest in state innovativeness rather than in legislative innovativeness. A policy adopted through the direct legislation process results in an innovation under Walker's definition and has the same general potential to influence adoption in other states. Initiative state are often seen as more innovative and we would not want to ignore one reason for the innovativeness. Further, ignoring this institution would require us to either omit the policy for that state or treat it as right censored since the legislature would never have the opportunity to innovate on that policy.

[9]Many of these articles also included the years of adoption for the District of Columbia. Though a compelling case

states adopted the policy and in which years they did so. In all, we were able to include an additional 43 policies through these searches.

To further increase our sample of policies, we turned to alternative sources. One in particular is the National Conference of State Legislatures, which yielded 15 new policies such as public breast feeding protections, restrictions on the influence health insurance companies have over doctors and prescriptions, and new state eminent domain laws in response to the Supreme Court's *Kelo* ruling. Then we searched through interest group websites (e.g., the National Highway Safety Institute), which yielded policies such as primary seat belt laws, zero tolerance restrictions, and DUI per se laws. Beyond these interest advocacy websites, we also searched through independent policy think-tanks such as the Cato Institute. Overall, we obtained information for an additional 57 policies, bringing the overall total to 189.[10]

Our online appendix provides a listing of all 189 policies, along with the first and last observed adoptions and the total number of observed adoptions. Inspection of this list indicates that we have information from a broad array of policy areas, running the gamut from environmental policies (bottle deposit laws) to tax restrictions (TELs) to the ubiquitous lottery adoption data to seat belt laws.

Despite this apparently broad array of policies, our sampling approach is admittedly convenience-based. While consistent with recent research in this field (e.g. Boushey 2010), this approach differs from Walker's, which sampled policies equally across pre-defined policy areas. We therefore remain uncertain as to whether our database of 189 policies constitutes a representative sample from the universe of state policies. Of course, by giving equal weight to twelve different policy areas, Walker's sampling strategy will likely overrepresent some policies and underrepresent others, making its representativeness perhaps even more dubious.

While we hope to address in future work the critical question of how to generate a random sample of policies from the population of all possible policies, for now we remain confident of

can be made for D.C.'s role as an innovator of policies, we simply decided to exclude it for no other reason than the fact that it is not a state.

[10]Sources for the new policies are available with out replication data.

the value of our current database. First, our data from published studies, including Walker's, represents as thoroughly as possible the sample of policies already studied by political scientists, so any biases produced by including these policies are already inherent in the literature. Second, in adding policies from additional sources, we simply added as many as we could with the information available, with no evaluation of whether the policy is substantively important, diffused widely, or otherwise. Third, covering such a broad period makes it difficult to assess representativeness since the types of policies adopted varies across eras. For example, Walker's policies restricted to the period 1912-1969 do not fall equally across his twelve categories, with welfare and corrections jointly constituting over one third rather than one sixth of all policies.[11] A comparison of our policies, mostly from the last half century, shows an overrepresentation (both relative to Walker's post-1912 data and to an equal distribution) of corrections and health policies and an underrepresentation of welfare and administrative organization policies. Fourth, while an analysis of the difference in average state innovativeness across policy categories indicates some variation, this variation is not statistically distinguishable from a normal distribution.

At this point, then, we believe that our policy database offers a sufficiently rich sample of policies to illustrate the value of our dynamic measure of innovativeness and to support comparisons across states and over time. Our calculation of measures of uncertainty for innovativeness also mitigate against unwarranted conclusions regarding distinctiveness. Still, we believe that future work should prioritize a more comprehensive evaluation of this issue.

5 Measures of State Innovativeness

We use our database of 189 policies described in the previous section to calculate and compare the two different innovation scores we outlined in Section 3. Before proceeding, though, we must address a number of issues with our set of policies and states. First, we only calculate innovation scores using policies that began diffusing after a state achieved statehood. In order to include as

[11] Since Walker's data do not provide the category for each policy we went through them ourselves and coded them into the twelve categories listed in his paper as well as a thirteenth for election policies. This information is available in our replication data.

many policies as possible and to compare innovativeness over long periods of time, we therefore construct one score that uses policies that begin diffusing in 1912, which is the year that the last of the contiguous states (Arizona) achieved statehood, and exclude Alaska and Hawaii from these calculations.[12] We then include them in a second set of scores using policies that begin diffusing in 1959 or later. Second, we use the first observed year of adoption as the starting date, either to determine Y_k^{MIN} for Walker's scores or to set the first year of the risk set for our rate measure. Third, to determine the last year of adoption we use the year of the forty-eighth adoption for policies that begin diffusing between 1912 and 1959 and the fiftieth adoption for those starting in 1959 or later. For policies not adopted by all 48 (50) states, we account for right censoring in the Walker score by using the year after the last adoption as the value of Y_k^{MAX} and assigning nonadopters a score of zero, as has become common in the literature. The rate measure accounts for right-censoring explicitly through the risk set. Finally, we exclude two policies with fewer than ten total adoptions. This is a slightly less rigorous rule than the twenty adoptions usually used in the literature (e.g., Walker 1969), but our rate score makes the associated right-censoring problems less of an issue. These decisions leave us with a total of 137 policies, 41 of which originate from Walker's database.

With these preliminaries in hand, we now turn to the evaluation of the resulting scores. In order to facilitate comparison, we initially calculate the rate score over the same time period as the Walker score and turn to our dynamic measure afterwards. Table 1 reports our estimated scores and their standard errors, while Figure 1 presents the results with confidence intervals and each score ordered according to state innovativeness. In addition to presenting the innovativeness measure itself, we also construct associated measures of uncertainty, something rarely done in the literature. Accounting for uncertainty in these estimates is critical for answering even the fundamental question of whether states vary in their level of innovativeness. In order to accomplish this, we used a bootstrap procedure in which we repeatedly drew samples of size 137 (with replacement) from

[12] Previous studies have either excluded scores for states on policies that began diffusing before statehood (Walker 1969) or before they achieved territorial status (Savage 1978). Given the longer period of time we have we believe it makes sense to almost completely avoid this issue and enhance comparability by starting in 1912.

our list of 137 policies and then calculated each state's mean score and standard deviation from the 500 draws. We used this to construct a 95% confidence interval, which we also present in the figure.[13]

[Insert Table 1 here.]

Overall, both scores tell similar stories about state innovativeness. Well known innovators such as California, New York, Illinois and Massachusetts come out in the top 10 states in all three measures whereas notorious laggards such as Mississippi, Alabama, and Wyoming are all in the bottom 5. A quick glance also indicates that the ordering of states is quite similar across all three measures and this sense is confirmed by the correlation of 0.97 between the two scores. Some states do shift positions a bit, though. The big upward movers include Arkansas, Indiana, Maryland, Kentucky, and Nevada, with jumps of 6 or more spots, while Idaho and Ohio both move down at least 6 spots. Despite these small shifts, the large correlation suggests that these scores likely tap into some common underlying feature of state policy adoption such as innovativeness.[14] Given the fairly different ways in which they are calculated, this correspondence is reassuring. Further, given the potential problems with the Walker innovation scores, the close match to our rate scores suggests that these problems do not bias the scores much.

[Insert Figure 1 here.]

While these results might fit with our general sense of differences in innovativeness, we would also like to know the level of distinction of the scores. Given the size of the 95% confidence intervals, it seems wise to take the exact location of any state in the overall ordering with a grain of salt. While we may be fairly certain that California is at the top of the heap, we have less confidence about whether Minnesota or Wisconsin tends to innovate more quickly. Yet we might be willing to conclude that Ohio is more innovative than Indiana. In terms of magnitude, compare the relative order of adoptions of the most and least innovative states in our sample, California and Mississippi.

[13] We calculate the confidence intervals with the normal approximation of $\widehat{W_i} \pm 1.96 * \widehat{\sigma_i}$. Intervals constructed with the 2.5th and 97.5th percentiles produced virtually indistinguishable results.

[14] We also note these scores correlate highly with the imputed and standardized measure discussed previously and also with an alternate measure of policy leadership that we calculated, which measures the proportion of policies on which a state was among the first 5 or 10 adopters (i.e., $\rho > 0.87$).

If our scores are useful, then California should frequently adopt before Mississippi. Indeed, it does so for 86% of the policies. In short, the amount of uncertainty in the data indicates that while some care should be taken in making specific statements about relative innovativeness, it does not appear to be so great that we can not broadly distinguish more innovative states from less innovative states based on a wide sample of policies.

Aside from state to state comparisons, we can also use our measures of uncertainty to answer the fundamental question of whether differences in innovativeness exist. This is clearly an important question that the literature has so far left unanswered. We evaluate this in a couple of ways. First, we compare the variation for each state's score to the total variation across states. For example, across the 48 states, the average of the Walker scores has a standard deviation of 0.063. Yet the standard deviation of each state's average score ranges from 0.025 to 0.032, which implies that state level differences constitute 83% of the total variation across states and draws. This suggests that a fairly large portion of the differences across the innovation scores arises from systematic variation across states in the timing of policy adoption.

The second approach allows us to test this more precisely by comparing the observed variation across states to what we would expect under the null hypothesis of no systematic state differences. To test this we apply the logic of randomization inference to determine how likely it is that we would randomly obtain the observed variations across states.[15] Randomization inference takes the observed data as given, but then applies the logic of the null hypothesis by randomly assigning the scores to different states. If there are no state level effects, then, on average, this reshuffling would have no consequences for the differences across the final scores. To investigate this, we took our adoption data, randomly assigned states to adoption dates one policy at a time, and calculated the resulting innovation scores. We repeated this procedure 2500 times and calculated the resulting variation across the scores for each of the draws. The largest values across the simulated draws are half the size of the observed ones. Thus the chance that we would obtain as much variation across

[15] See Fisher (1935) or Rosenbaum (2002, pp. 27-29) for explanations of the method and Erikson, Pinto and Rader (2010) for an application to state politics.

states as we do is less than one in 2500 for both scores.

6 Innovativeness Over Time

Having established some confidence that these two scores offer a meaningful measure of state innovativeness and that the states do differ systematically, we now move to studying what these measures tell us about changes in innovativeness over time. We start by comparing scores from the first half of the twentieth century to those from the second half, along the lines of Walker's temporal calculations. This highlights one of the strengths of our rate measure — the ability to easily and more meaningfully calculate innovativeness scores for specific periods of time. We then leverage this strength to conduct a more finely tuned analysis of trends in innovativeness over time, both at the state and national level.

6.1 Comparisons of Innovativeness Before and After 1959

We start by comparing innovativeness in the first half of the period studied, 1912-1958, to the second half, 1959-2009. This follows the approach of previous studies by comparing innovativeness over long eras. Doing so allows us to determine whether overall innovativeness has increased as well as whether individual states have become more innovative over time. We pick 1959 as the beginning of the second era since that allows us to include both Alaska and Hawaii in our calculations for that era.

As noted earlier, Walker's scores have at least two features that make them less suitable for making comparisons over time. First, the normalization process makes it harder to pick up changes in overall innovativeness: if all states adopt a policy twice as fast, the resulting scores would remain the same. This is not true for the rate score. Second, policies do not always diffuse across all 48 or 50 states within a given period of time. Calculating Walker's scores for different time periods therefore requires a decision about how to allocate innovation scores for these policies to one of the two time periods. Our approach follows previous studies by assigning scores to the period in which the tenth state adopts the policy (Walker 1969; Savage 1978; Boushey 2010).[16] In fact, our database includes 42 policies for which the tenth state adopted before 1959 and 30 of them feature at least one adoption after 1958, with a total of 87% of the actual adoptions of these 42 policies occurring before 1959. A total of 95 policies experience their tenth adoption in 1959 or later.

The adoption rate scores do not require a similar decision rule to address such policies since they measure whether a state adopts a policy at a given point in time. Further, because they are based on the number of actual adoptions and the number of opportunities for adoption within a period of time, they both correctly reward a state for adopting a policy within a period and simultaneously punish that state for failing to adopt it in the previous period. Using this approach, we calculate the adoption rate measure for a period by counting the total number of policies adopted during the period and dividing that by the total number of annual opportunities to adopt during the same period.[17]

Figure 2 plots each state's score in the second period against its score in the first period. In order to facilitate comparisons over time, we take three steps. First, we use the same range for both axes to avoid any visual distortions. Second, we include a dashed line representing equal innovativeness in both time periods, so that states below the line became less innovative and those above it more innovative in absolute terms. Third, we plot a solid line representing the best linear fit between the two sets of scores, allowing for an evaluation of trends in overall innovativeness.

[Insert Figure 2 here.]

Because of the differences in scales, the most meaningful comparisons start with changes between the two time periods for each measure and then extend to how those changes differ across measures. Evaluating trends over time for each state indicates considerable change in states' positions, with correlations of 0.42 for Walker's score and 0.51 for the rate score. This is notably greater than the correlation of 0.31 found by Savage (1978) in his comparison of changes in innovative-

[16]The results are generally robust to other assignment schemes. Savage (1978) makes some additional modifications to Walker's scores by double standardizing the scores by policy both within a period and within a given state.

[17]So if a policy is first adopted in year 2 of a period and a state adopts it in year 5 of that period, it counts once in the numerator and four times in the denominator.

ness from 1900-29 to 1930-70, but in line with the correlation of 0.47 found in Boushey's (2010) comparison of policies diffusing between 1930-1959 and 1960-2006.[18]. Our findings indicate that while innovative states in the first half of the twentieth century tend to stay innovative in the second half, many states move around. For example, New York drops from being a clear innovative leader to just above the middle of the pack; Pennsylvania, Michigan, Arkansas, and North Dakota also experience drops of almost 20 or more spots across both measures. On the other hand, Arizona, North Carolina, Florida, Iowa, and Texas all move up at least 20 spots.

The two measures provide very different conclusions about the overall trends in innovativeness across the two time periods. According to the Walker scores, overall innovativeness surprisingly decreases from the first half of the century to the second half, going from an average of 0.37 to 0.28. This could be a consequence of the difficulty in addressing censoring since policies in the second half of the century are observed for a shorter amount of time, so that the denominator in the calculation would tend to be smaller, which would bias the scores downwards. The rate score, however, indicates the exact opposite trend: innovativeness increases 10% from 0.042 to 0.046. Since this measure does not normalize across policies and also addresses censoring in a more appropriate fashion, more stock should be put in these results.[19]

6.2 A Dynamic Measure of Innovativeness

Having illustrated the benefits of our rate score, we now use it to study the dynamics in innovativeness over time, something that would be quite difficult with other measures. Rather than examine broad periods as in the last section, we move to a much finer level by calculating biennial innovativeness. We chose a two year period since it corresponds to the length of state legislative sessions and enhances comparability. Longer periods of time also work and may be necessary with too few policies, but they also obscure short term fluctuations. While such comparisons have rarely been

[18]We suspect that the difference in the former has to do with Savage's second standardization within time periods as we find a greater correlation between his time periods using our data

[19]Note that this difference does not appear to be a result of us introducing faster diffusing policies into the database: both scores show higher levels of innovativeness on Walker's policies than on the ones we added.

performed in the past, analyzing innovativeness at this level helps address the powerful criticism (Eyestone 1977; Gray 1973*a*) that past research has assumed that a state's level of innovativeness remains fixed over long periods of time. The application of EHA to state innovativeness has taught us, however, that states themselves do not innovative, rather that innovation represents the response of actors to a broad array of political and demographic characteristics that vary substantially over time.

To construct a time-varying measure of innovativeness, we calculate our rate measure over two year periods, dividing the total number of adopted policies by the total number of policies that could have been adopted. Even with 137 policies, we have on average 70 potential adoptions per state per two year period, with an average of 3.3 adoptions. Given the relative rareness of adoption, a focus on dynamic innovation will increase the need for expanded databases.

6.2.1 Dynamic Aggregate Innovativeness

We begin by taking a long historical look at state innovativeness in the aggregate. We calculate annual innovativeness by dividing the total number of policies adopted by all states by the total number of opportunities for all states. Note that this is different than taking the simple average of innovativeness across states in a given year since laggard states have more opportunities to adopt than leaders and will be weighted more heavily when pooled together. To examine long trends we extend this measure back to 1804 by using the full data set of 189 policies, but only include observations for a state from policies that started diffusing once it had been granted statehood. This produces an average of 1652 adoption opportunities per period, of which about 58 resulted in innovations. While fewer opportunities exist in the nineteenth century, by the 1850s there are over 500 opportunities, then roughly doubling every 25 years until 1900. This approach affords us the opportunity to make perhaps the most detailed assessment of trends in policy innovativeness in the American states over time, though some caution should be taken in interpreting the results given the nature of our sample of policies.

[Insert Figure 3 here.]

Figure 3 presents a plot of the time trend in the rate of adoption across the states from 1804-2008 as well as the number of new policies emerging each year. The small circles represent the observed biennial adoption rates across states. In order to facilitate interpretation of trends, we also present a smoothed plot of the adoption rate along with its 95% confidence interval.[20] These are indicated by the dark black line and the shaded area surrounding it, with the corresponding innovation rates given on the left vertical axis. The gray bars at the bottom indicate the number of new policies that begin diffusing each year, with values indicated on the right axis.

Over time, our data indicate a persistent and positive trend in innovativeness. On average, innovativeness increases by about a quarter of a percentage point every 20 years. Yet it also exhibits many dramatic fluctuations, with the rate of adoption doubling and then halving on a regular basis. Most of these of these waves of innovativeness correspond to well-known eras, which we have also indicated on the graph, with peaks occurring in the Age of Reform before the Civil War, during the Progressive Era, the recovery from the Great Depression, the Great Society era in the mid-1960s, and again in the New Federalism period starting in the 1980s. Somewhat suggestively, and warranting further investigation, these periods generally start near troughs of innovativeness, but crest to peaks in the latter half.

These spikes could result from states finally adopting policies that they had avoided for a long period of time, or they could indicate the introduction of new, fast-diffusing policies. Either suggests the possibility of collective surges in innovative capacity on the part of states themselves or, alternatively, the latter could be consistent with sets of policies whose time had come — a sort of aggregate policy window opening (Kingdon 1995; Baumgartner and Jones 1993).

Examining the introduction of new policies suggests that it may be a mix of both, with clear spikes in the 1930s, 1970s and 1990s. The first and last of these appear to overlap with periods of great innovativeness. For example, over the period 1920-1929 five new policies appeared whereas from 1930-1939 eighteen new policies emerged. Ten more appeared in the 1940s. Similarly, the

[20] The smoothed trend and the confidence interval are calculated by running Stata's `lpoly` command on the raw binary adoption data, using a bandwidth of 1.5 and a linear functional form. This corresponds fairly closely to a four year moving average local, with a little additional smoothness.

number of new policies increases from fifteen in the 1980s to thirty-nine in the 1990s. Thus the 1930s and 1990s appear to be periods of increased activity on both dimensions. Still, the number of new policies per year remains relatively low, with about 1.4 new policies appearing per year and fewer than 14% of years witnessing more than 3 new policies.

6.2.2 The Dynamics of State-Level Innovativeness

We now turn to a state level analysis of the dynamic of innovativeness. To do so we follow the same procedure employed above, but consider each state separately. In order to enhance comparability we again restrict our set of policies to those that started diffusing in 1912 or after. Our biennial measure of innovativeness therefore starts in 1913-1914 and runs through 2007-2008. While we have fewer potential innovations each year at the state level, the average number stays between thirty and seventy after the 1920s, with an overall average of thirty-six. The average adoption rate is just below 5%.

Given the vast amount of data that these calculations generate, we do not report them all in detail here (interested scholars can download them from our website). Rather we discuss some interesting features of these dynamic, state-level scores and provide some examples. In particular, we compare the dynamics of innovativeness across states and then assess how well they comport with the trends revealed at the aggregate level. Our data indicate a great deal of heterogeneity in innovativeness over time across states, with an average of only 0.26. Of course, one should remember that these are annual correlations and do not necessarily indicate that these states are adopting the same policies, just that they are adopting policies at similar rates over time.

[Insert Figure 4 here.]

Comparing the dynamics of innovativeness over time reveals a few interesting patterns that we highlight here. In particular, four defining periods emerge, with states categorized by which pattern they follow during those periods. Figure 4 presents exemplars of these patterns along with the overall national trend for the same time period.[21] In common with the national trend, virtually

[21] Plots for all 50 states are included in our online appendix.

every state exhibits waves of innovativeness from about 1916 to 1930 and from 1930 until 1940. The first distinguishing wave occurs from the late 1950s through the end of the 1960s. This pattern is clearly visible in Indiana and in New York, but only registers a brief blip in Alabama. Many of the Mountain West and Southern states follow Alabama's pattern. This wave appears to be driven by broad activity across multiple policy areas — using our thirteen areas described earlier shows jumps in health, administrative organization, highways, civil rights, taxes, and professional regulation during this period. The second feature occurs just before this wave, with New York and a handful of states (including Pennsylvania and New Jersey) maintaining a high level of innovativeness from the Great Depression all the way through the 1960s. The final wave occurs beginning in the 1980s and, as in Indiana, for most states continues to climb through the 2000s. This includes many of the Western states and about half of New England. This wave appears to be driven by policies in the education, civil rights, health, corrections, and elections areas.

We intend these results not to be a definitive investigation of the dynamics of state innovativeness — such conclusions would require a larger and more comprehensive database. Rather, we wish to highlight the kinds of information that can be drawn from such a measure and to suggest some preliminary patterns that emerge in our data.

7 Neighborhood Effects or Internal Determinants?

Our final task begins with one of the original questions posed in the literature: does innovativeness exhibit any geographic patterns? Scholars have been interested in this question since Walker's (1969) discussion and investigation of regional policy leaders. Recent attention has focused more specifically on the theoretical mechanisms underlying such patterns within policy areas. The spatial diffusion of policies may emerge from a number of processes, generally grouped into social learning (Walker 1969; May 1992; Boehmke and Witmer 2004; Mooney 2001; Volden 2006) and economic competition (Berry and Berry 1990; Boehmke and Witmer 2004; Berry and Baybeck 2005). Social learning describes a process whereby states look to the policies of other states, whether as a solution to a common problem or merely as a way to keep up with their peers. Economic diffusion forces occur on policies that involve competition between states over residents, payments, or revenues. Such competition is usually most acute between states with common borders since this facilitates less costly movement by individuals or capital across borders.

Traditionally, researchers consider such forces simultaneously and focus on diffusion between contiguous states (see Mooney (2001) for a review), though some studies attempt to distinguish or isolate the two forces (Boehmke and Witmer 2004; Berry and Baybeck 2005; Mintrom and Vergari 1998; Grossback, Nicholson-Crotty and Peterson 2004; Volden 2006). Here, we move away from the explicit role of diffusion in a single policy area to study the overall geographic pattern of innovativeness. Do innovative states cluster into regions of innovation? Do we observe policy leaders surrounded by laggards who slowly follow along?

We can take a first cut at this question through visual inspection of the geography of innovation through Figure 5, which displays our adoption rate scores from 1912-2008. We shade states in clusters of eight, moving from light gray for less innovative states to darker shades for more innovative states. Overall, these results suggest that reality lies somewhere between the two extremes. We see extensive mixing of more innovative and less innovative states across the country. Still, some regional patterns emerge, with a cluster of innovative states on the west coast and around the great lakes and a cluster of less innovative states in the upper mountain west and also in the southeast, in particular in the heart of the Deep South. Despite these detectable regional patterns, the overall impression appears to to be consistent with Walker (1969) and Lutz's (1987) notion of regional leaders surrounded by followers.

[Insert Figure 5 here.]

A more precise measure of geographic patterns can be obtained through measures of spatial autocorrelation. Similar to temporal autocorrelation, these measures tell us whether observations that are nearer to each other tend to have more similar values of our innovativeness measures. Here we calculate Moran's I (Moran 1950) using geographic contiguity as our measure of spatial proximity (see Mooney (2001) or Karch (2007*b*) for more on the literature's use of contiguity as a proxy for diffusion forces).[22] The spatial autocorrelations are 0.22 for Walker's scores and 0.20 for the rate scores ($p < .05$ for both). These results indicate that on average a state that is more (less) innovative will tend to be nearer to other more (less) innovative states. Contrast this with the case of regional leaders surrounded by laggards, which would result in innovative states bordering on noninnovative states. Since we do not see this pattern in Figure 5, the statistical results coincide with the visual evidence, suggesting a general heterogeneity of innovativeness within regions, but with some mild regional clustering.

Of course, the simple approach just taken ignores the effects of internal determinants of innovativeness, which also play a large role. And if regional clustering occurs in these variables, then we may spuriously detect geographic patterns of innovativeness. Therefore, to assess the presence of geographic patterns of innovativeness, we must simultaneously consider the role of internal forces. Previous analysis of general innovativeness scores however, have not accounted for these two source at the same time (Walker 1969; Boushey 2010); in fact, event history analysis rose to prominence based largely on its ability to simultaneously estimate the effects of these two forces. It also provided the opportunity to study innovativeness each year, something that previous innovation scores were not amenable to. Our dynamic innovativeness scores facilitate such over time analysis, suggesting an alternate method for comparing internal and external influences on innovativeness through the application of spatial autoregression estimators (Anselin 1988; Beck, Gleditsch and Beardsley 2006; Franzese and Hays 2007).

Spatial autoregression (SAR) allows the values of the dependent variable for one observation to depend directly on its values for other observations. The researcher models this dependence through a matrix of exogenous spatial weights, W, in which each element of row i indicates how the value of Y in state i relates to its value in each of the other states j. The model can be expressed as $Y = \rho WY + X\beta + \epsilon$, with the estimate of ρ allowing a test of spatial autocorrelation. For this analysis, we utilize a spatial weights matrix based on state contiguity, given its prominent role in the literature. Thus each element indicates whether state i borders state j. Since we have multiple

[22] We row standardized our contiguity matrix, but similar results obtain with the unstandardized version.

years' worth of data, the overall contiguity matrix repeats the fifty by fifty contiguity matrix in a block diagonal fashion — once for each year's worth of data in the analysis. While rarely applied in the single policy EHA framework (though see Rincke (2007)), SAR offers researchers a natural way to account for the interdependence of states' policy adoption decisions; our continuous dependent variable is particularly well suited to such an analysis.

To measure internal determinants of innovativeness, we rely on variables commonly used in the literature, such as a state's population, wealth, urbanization, legislative capacity, institutional features such as direct legislation, and ideology. Many of these variables correspond to the presence of "slack" resources, such that the presence of greater population, wealth, urbanization, or skilled legislative staff makes it more likely that a state will experiment with a new policy due to its ability to invest resources in research or to overcome the associated possible risks if it fails (Walker 1969). In their review of the policy innovation literature, Berry and Berry (2007) describe such variables as allowing states to overcome the obstacle to innovation. They also refer to political factors that influence the motivation to innovate, such as electoral competition and elite ideology. Finally, we also measure institutional incentives for policy innovation by accounting for the twenty-four states that permit direct initiatives — this mechanism has been shown to increase the chance of innovation for specific policies either through its direct use or through the additional pressure to act it puts on the legislature (Gerber 1996; Boehmke 2005*a*).

To estimate the effects of these variables on innovativeness, we gathered data on each variable for as many years as possible.[23] Since many of our variables go back only to the 1960s, our final data set includes biennial data for the 1960s through the 1990s, producing 960 observations. We match the values of each variable in even numbered years to the associated biennial adoption rate score.

[Insert Table 2 here.]

[23]Population (measured in millions) and real per capita income (measured in $10,000s) are available from the Statistical Abstract of the States; Urban Population (proportion between zero to one) from the decennial Census; Legislative professionalism (zero to one) decennially since the 1960s from King (2000); government ideology (zero to one) since 1960 from Berry et al. (1998); and the presence of the initiative process from Boehmke (2005*b*).

Table 2 reports the results of the SAR model as well as the corresponding OLS model with standard errors clustered by state. We present three models of each type, starting with no controls for changes over time then adding first a cubic polynomial and then a set of biennium fixed effects. In order to enhance interpretation we multiplied the dependent variable by one hundred. Similar results generally obtain between the pairs of SAR and linear regression models, so we focus on the SAR since it generally indicates the presence of spatial autocorrelation. The most consistent findings emerge for states with more people, greater per capita income, and greater rates of urbanization, with increases in each variable leading to greater innovativeness. These findings support the slack resources argument. Contrary to this argument, however, we also uncover a negative and significant effect of legislative professionalism, with more professional states less likely to innovate. Of course, this effect becomes insignificant once we control for time, so the general conclusion would be of no effect based on these results. Marginal effects can generally be discerned directly from the coefficients.[24] For example, a one million increase in population increases innovativeness by 0.126, which is about three and a half percent of the standard deviation of innovativeness in these data.

Moving to the political variables, we observe positive and significant effects of state liberal ideology in all six models. While the effect of ideology on adoption certainly varies across policies, our results show that on average, at least for the set of policies that we have included in our model, more liberal states tend to be more innovative. Second, political institutional structure as measured by the presence of the direct initiative process does not produce a consistent effect, though it is generally positive.

Finally, some interesting results obtain for the spatial lag. When we do not include time effects, we find a positive and significant effect of contemporaneous innovativeness in contiguous states. This means that innovativeness in neighboring states in the same year tends to spill over and make

[24]While the linear models' coefficients are easily interpretable given the scale of the variables (see footnote 23), keep in mind that interpreting them in the SAR requires accounting for the spatial multiplier effect: if population increases in innovativeness in state i, positive spatial autocorrelation leads it to also increase innovativeness in state j, when then feeds back to state i directly as well as through state k, etc. Given the results of the model with time fixed effects, we do not focus on the spatial multiplier effect for the first two models.

a state more innovative. This effect persists, though a bit smaller, when we include a cubic polynomial of time. In contrast, though, the spatial lag effect disappears when we include biennium fixed effects. As (Franzese and Hays 2007) note, one of the causes of spatial autocorrelation is common exposure. Thus our spatial lag may shrink when we include fixed effects for time since the latter will capture any common occurrences unique to each time period. These could be national economic conditions, major domestic or international events, or even Federal incentives for innovativeness. Overall, then, these results suggest that the spatial patterns in innovativeness uncovered by Moran's I and the previous SAR models may depend more on common exposure than on diffusion between states. This does not mean that interstate diffusion does not occur, since our models do not measure whether states are innovative on the same policies, just whether they tend to be innovative in the same years for reasons above and beyond those measured by the included covariates.

8 Discussion and Conclusion

The rate of innovativeness score developed in this paper addresses a number of important concerns with Walker's original innovativeness scores and similar measures that largely led to the abandonment of the development of a general measure of state innovativeness. First and foremost our rate score easily addresses concerns about right censoring, which appears not to have been a serious problem with Walker's original scores. Second, by creating measures of uncertainty we are able to statistically evaluate the original motivating question of whether states vary in their proclivity to innovate. Our analysis responds resoundingly in the affirmative. Third, our rate measure also greatly simplifies the creation of a dynamic measure of state innovativeness. This facilitates comparisons of state innovativeness over time — an enterprise that was at best awkward with previous innovation scores — thereby allowing us to address one of the initial criticisms of Walker's time-invariant scores (Gray 1973*a*; Eyestone 1977).

Overall, then, these results suggest that it will be worthwhile to renew the study of state innovativeness as a general concept. Our various analyses have attempted to highlight some of the directions for such research, but here we offer some additional thoughts on three directions: trends in aggregate innovativeness, explaining differences across states and over time, and the use of innovativeness as an explanatory variable.

First, exploration of our dynamic innovativeness measure calculated at the biennial level indicated dramatic swings in innovativeness both in the aggregate and for individual states. The aggregate results suggest waves of collective innovativeness that appear to peak just past the midpoint of various historical eras, only to fall off as one era ends a new one begins. Our investigation of these trends is relatively rudimentary, but suggestive of possibilities for future research, which would require more attention to the types of policies diffusing in different eras to determine whether the waves result from the adoption of similar policies within an era or merely reflect states being active on widely different topics. If the data support the former then a number of forces might converge to produce such waves of innovativeness. While our data seem to suggest that some of the surges result from surges in specific policy areas (such as education, welfare, and civil rights in the 1960s), even with over one hundred policies, our current data do not possess sufficient information to perform such an analysis in detail.

At the individual level, we can use these dynamic scores to better test existing theories of state innovativeness over time and space. Walker (1969) and scores of researchers have developed a multitude of theoretical explanations for variation in innovativeness, many of which have been tested using previous, largely time-invariant scores. Our regression analysis mimics these previous studies but our dynamic scores allow us to contemporaneously match features of each state with its current level of innovativeness. Further, newer methods such as spatial analysis allow us to embed this analysis in its spatial context. While we focused on contiguity, the methods allows for a much more general notion of spatial relationships that could permit a spatial analog to Volden's (2006) dyadic approach.

In some sense, this is what the EHA literature has been up to for the past two decades: theoretically and empirically cataloguing a list of factors that influence the timing of policy innovations. While many of these characteristics may be unique to a given policy, others, such as political and demographic characteristics, are staples of the EHA framework that tend to remain fairly constant for a state over a fairly long period of time. By studying innovativeness across a broad swath of policies, our approach creates the opportunity to complement single policy EHA studies by determining the common factors that lead states to be more innovative. Additional data collection would allow for a comparison of the role of these common forces across policy areas.

Finally, our rate scores may also be useful as one factor explaining other state-level phenomena. For example, Berry and Berry (2007, p. 233) note that what they term generic innovativeness might be seen as just one factor that helps explain states' adoptions of a specific policy. If innovativeness captures some feature of state politics in a given time and place above and beyond those captured by other observed variables, then more innovative states should have a greater proclivity for adopting specific policies, at least on average. While previous studies have attempted this (e.g., Mooney and Lee 1995), they relied on time invariant scores that do not properly capture innovativeness contemporaneously with possible adoption of a single policy.

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Table 1: State Innovation Scores

	Innovations		Walker's Scores				Rate Scores			
	1912-2009	1960-2009	1912-2009 Mean	1912-2009 SD	1959-2009 Mean	1959-2009 SD	1912-2009 Mean	1912-2009 SD	1959-2009 Mean	1959-2009 SD
Alabama	59	34	0.2150	0.0276	0.1449	0.0276	0.0284	0.0041	0.0287	0.0051
Alaska		57			0.1945	0.0309			0.0377	0.0061
Arizona	92	69	0.3396	0.0286	0.3506	0.0349	0.0466	0.0054	0.0658	0.0082
Arkansas	77	49	0.2728	0.0284	0.2066	0.0313	0.0417	0.0049	0.0399	0.0060
California	113	82	0.5025	0.0324	0.5079	0.0397	0.0868	0.0085	0.0983	0.0127
Colorado	98	68	0.3533	0.0277	0.3200	0.0339	0.0542	0.0057	0.0590	0.0078
Connecticut	96	62	0.3960	0.0322	0.3686	0.0387	0.0571	0.0068	0.0651	0.0095
Delaware	87	64	0.3261	0.0281	0.3247	0.0328	0.0462	0.0058	0.0627	0.0087
Florida	98	68	0.3518	0.0297	0.3579	0.0374	0.0524	0.0058	0.0687	0.0088
Georgia	78	56	0.2940	0.0296	0.2966	0.0358	0.0394	0.0050	0.0537	0.0075
Hawaii		63			0.2832	0.0375			0.0559	0.0081
Idaho	76	50	0.3000	0.0303	0.2711	0.0371	0.0384	0.0050	0.0428	0.0073
Illinois	105	75	0.3837	0.0280	0.3670	0.0358	0.0652	0.0064	0.0715	0.0100
Indiana	88	60	0.2825	0.0276	0.2275	0.0308	0.0487	0.0049	0.0472	0.0063
Iowa	74	55	0.2742	0.0287	0.2858	0.0373	0.0375	0.0048	0.0514	0.0076
Kansas	79	52	0.2850	0.0286	0.2679	0.0343	0.0411	0.0049	0.0470	0.0067
Kentucky	78	47	0.2641	0.0269	0.2034	0.0312	0.0417	0.0048	0.0381	0.0063
Louisiana	90	59	0.3540	0.0297	0.3271	0.0354	0.0510	0.0061	0.0601	0.0085
Maine	86	58	0.3189	0.0277	0.3172	0.0350	0.0468	0.0056	0.0595	0.0085
Maryland	92	64	0.3202	0.0286	0.3037	0.0338	0.0486	0.0057	0.0585	0.0082
Massachusetts	91	56	0.3564	0.0313	0.3018	0.0369	0.0538	0.0063	0.0524	0.0079
Michigan	83	49	0.3332	0.0306	0.2636	0.0371	0.0515	0.0057	0.0443	0.0070
Minnesota	94	61	0.3585	0.0299	0.3362	0.0382	0.0541	0.0061	0.0596	0.0090
Mississippi	58	37	0.1868	0.0248	0.1690	0.0280	0.0250	0.0036	0.0314	0.0054
Missouri	76	54	0.2737	0.0282	0.2711	0.0339	0.0369	0.0048	0.0493	0.0074
Montana	75	50	0.2790	0.0287	0.2388	0.0326	0.0388	0.0048	0.0425	0.0067
Nebraska	78	57	0.2648	0.0285	0.2432	0.0344	0.0373	0.0045	0.0432	0.0063
Nevada	76	52	0.2688	0.0274	0.2771	0.0343	0.0384	0.0047	0.0503	0.0077
New Hampshire	78	49	0.2778	0.0286	0.2445	0.0360	0.0396	0.0050	0.0419	0.0071
New Jersey	101	66	0.4319	0.0310	0.3841	0.0378	0.0669	0.0078	0.0785	0.0108
New Mexico	85	55	0.3119	0.0291	0.2547	0.0302	0.0473	0.0053	0.0522	0.0068
New York	90	50	0.4038	0.0317	0.3039	0.0369	0.0625	0.0068	0.0514	0.0082
North Carolina	94	68	0.3507	0.0297	0.3581	0.0366	0.0516	0.0060	0.0660	0.0091
North Dakota	60	37	0.2447	0.0294	0.1612	0.0288	0.0302	0.0043	0.0293	0.0054
Ohio	86	60	0.3442	0.0298	0.3300	0.0375	0.0482	0.0057	0.0555	0.0087
Oklahoma	77	55	0.2824	0.0284	0.2551	0.0336	0.0386	0.0046	0.0450	0.0068
Oregon	99	66	0.4066	0.0298	0.3691	0.0364	0.0611	0.0070	0.0719	0.0091
Pennsylvania	82	45	0.3334	0.0298	0.2444	0.0345	0.0508	0.0059	0.0410	0.0069
Rhode Island	92	60	0.3564	0.0301	0.3128	0.0367	0.0538	0.0060	0.0589	0.0083
South Carolina	75	52	0.2677	0.0284	0.2593	0.0353	0.0369	0.0049	0.0488	0.0075
South Dakota	64	44	0.1935	0.0258	0.1496	0.0271	0.0286	0.0039	0.0338	0.0052
Tennessee	83	59	0.3020	0.0289	0.2838	0.0354	0.0428	0.0053	0.0534	0.0075
Texas	84	61	0.2908	0.0273	0.3072	0.0343	0.0421	0.0051	0.0596	0.0083
Utah	75	47	0.2997	0.0303	0.2332	0.0336	0.0414	0.0055	0.0442	0.0072
Vermont	70	46	0.2500	0.0273	0.2221	0.0317	0.0351	0.0044	0.0420	0.0060
Virginia	88	62	0.3478	0.0290	0.3255	0.0347	0.0469	0.0062	0.0604	0.0087
Washington	97	65	0.3748	0.0286	0.3398	0.0341	0.0576	0.0061	0.0632	0.0079
West Virginia	70	46	0.2477	0.0278	0.2140	0.0323	0.0345	0.0046	0.0386	0.0065
Wisconsin	84	54	0.3301	0.0296	0.2787	0.0337	0.0450	0.0057	0.0501	0.0076
Wyoming	63	42	0.1959	0.0249	0.1511	0.0279	0.0283	0.0037	0.0312	0.0052

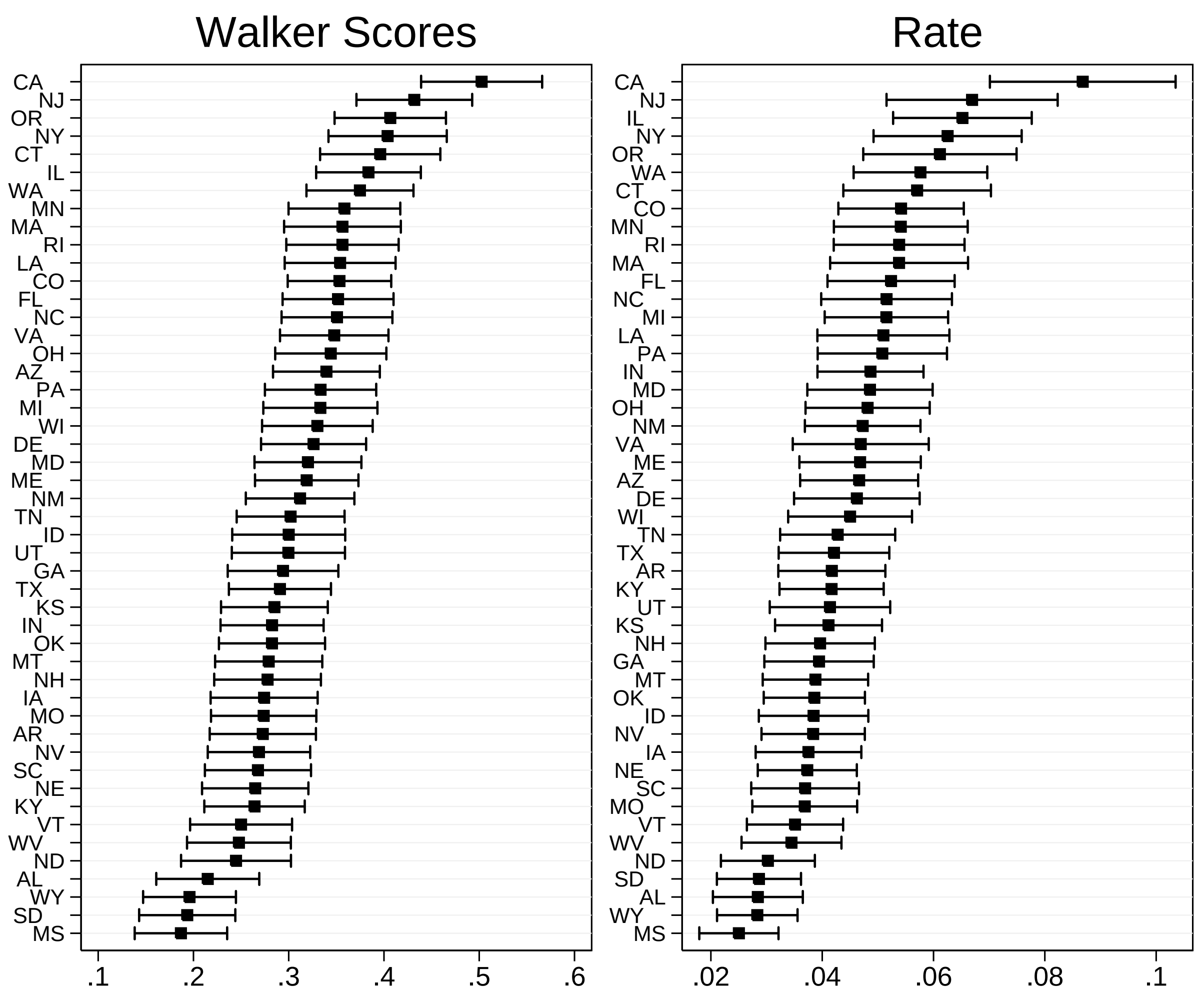
"Innovations" column indicates the number of policy adoptions during this time period. Alaska and Hawaii are only included for policies that begin diffusing in 1959 or later. Right censored states receive a score of zero for the Walker score and the number of zeros until right censoring for the rate score for policies that they do not adopt. Policies that begin diffusing before 1959 use the 48 contiguous states as relevant population for determining right censoring and the final observed adoption for calculating Walker's score. Standard errors obtained through a bootstrap procedure, see text for details. Source: Walker database from ICPSR, authors' data collection efforts.

Table 2: OLS and Spatial Lag Models of State Innovation Scores, 1960-1998

	Spatial Lag			**Linear Regression**		
Total Population	$0.181**$	$0.148**$	$0.126**$	$0.215**$	$0.158**$	$0.126**$
	(0.041)	(0.039)	(0.038)	(0.067)	(0.054)	(0.050)
Initiative State	0.209	0.167	0.126	0.298	0.201	0.130
	(0.221)	(0.215)	(0.205)	(0.268)	(0.238)	(0.235)
Real Personal Income	$0.844**$	$0.718*$	$0.799**$	$1.137**$	$0.711**$	$0.801**$
	(0.240)	(0.378)	(0.372)	(0.248)	(0.321)	(0.321)
Urban Population	$1.752**$	$1.917**$	$1.983**$	1.096	$1.755**$	$1.959**$
	(0.831)	(0.860)	(0.819)	(0.922)	(0.811)	(0.803)
Legislative Prof.	$-2.412**$	-0.846	0.186	$-3.884**$	-1.234	0.155
	(1.169)	(1.167)	(1.119)	(1.794)	(1.513)	(1.426)
Government Ideology	$1.288**$	$1.364**$	$1.033**$	$1.407**$	$1.459**$	$1.039**$
	(0.524)	(0.506)	(0.498)	(0.571)	(0.495)	(0.488)
time		-0.119			$-0.139*$	
		(0.092)			(0.075)	
time^2		-0.003			-0.003	
		(0.005)			(0.004)	
time^3		$0.000**$			$0.000**$	
		(0.000)			(0.000)	
constant	$-1.026**$	0.486	0.526	-0.013	$1.326**$	0.641
	(0.522)	(0.599)	(0.688)	(0.498)	(0.579)	(0.689)
Spatial Lag	$0.277**$	$0.163**$	0.028			
	(0.039)	(0.040)	(0.043)			
$\hat{\sigma}$	$3.212**$	$3.115**$	$2.972**$			
	(0.109)	(0.103)	(0.103)			
Time Fixed Effects			Yes			Yes
Log-Likelihood	-2595.47	-2558.44	-2508.11	-2621.97	-2566.60	-2508.33

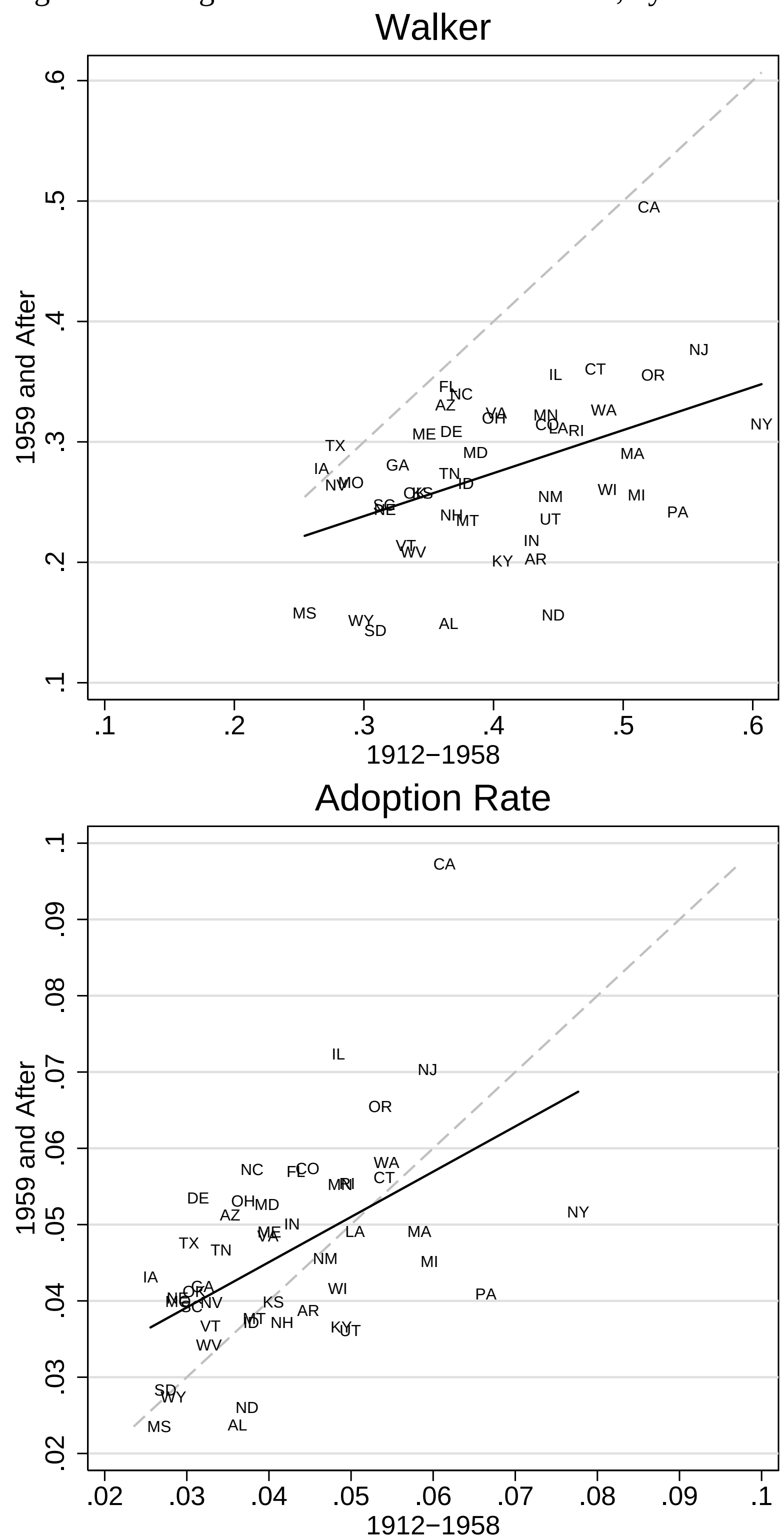
N=1000. Dependent variable scaled by 100 in order to facilitate coefficient reporting and interpretation. ** indicates $p < .05$; * indicates $p < .1$.

Figure 1: Estimated Innovation Scores 1912-2009, With Bootstrapped Confidence Intervals



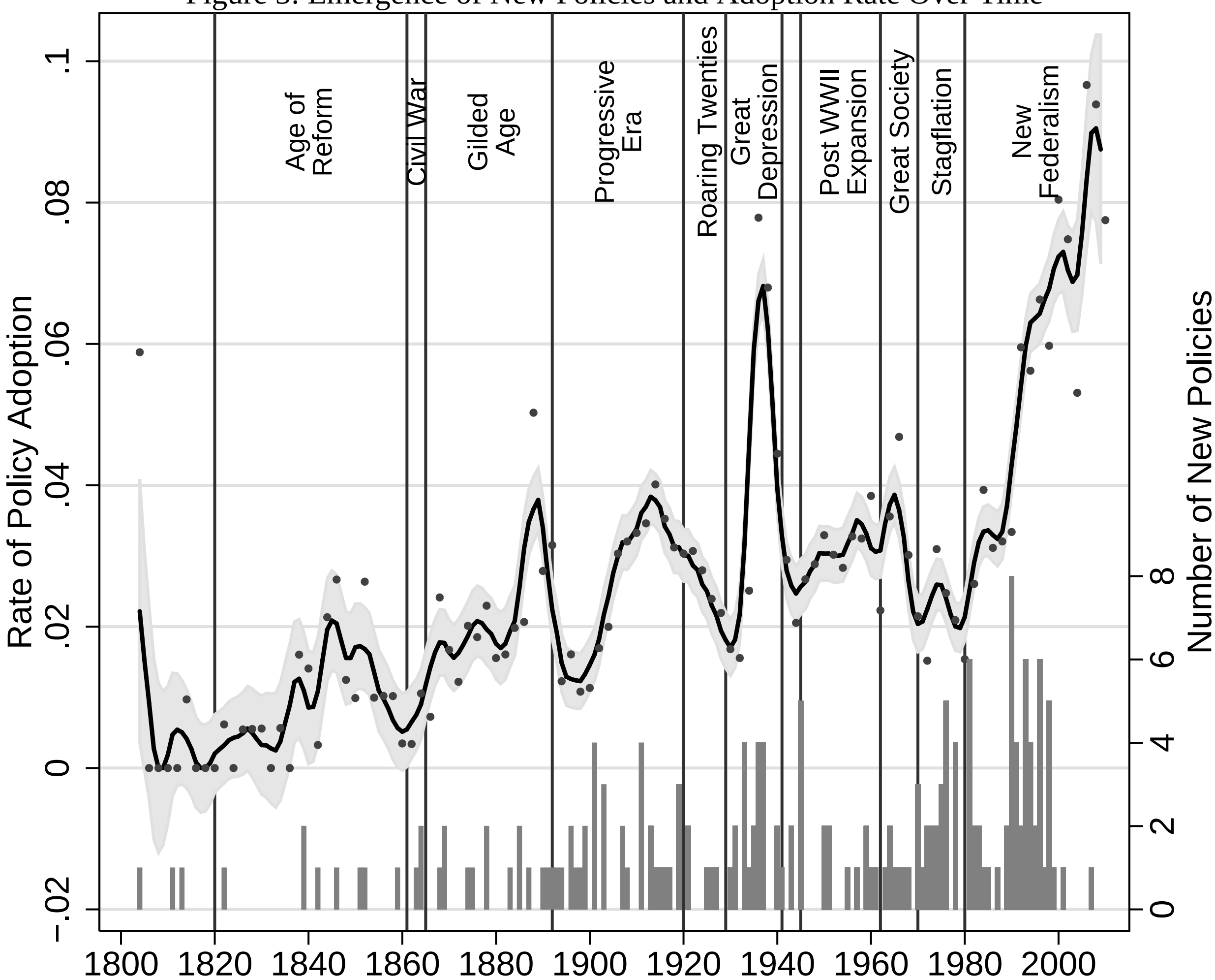
Notes: We bootstrapped these estimates by repeatedly drawing samples of size 137 (with replacement) from the 137 policies left after removing those that started before 1912 and that did not have at least 10 total adoptions. We report the average value for each state and its standard deviation across the 5000 draws.

Figure 2: Changes in Innovativeness Over Time, by Measure



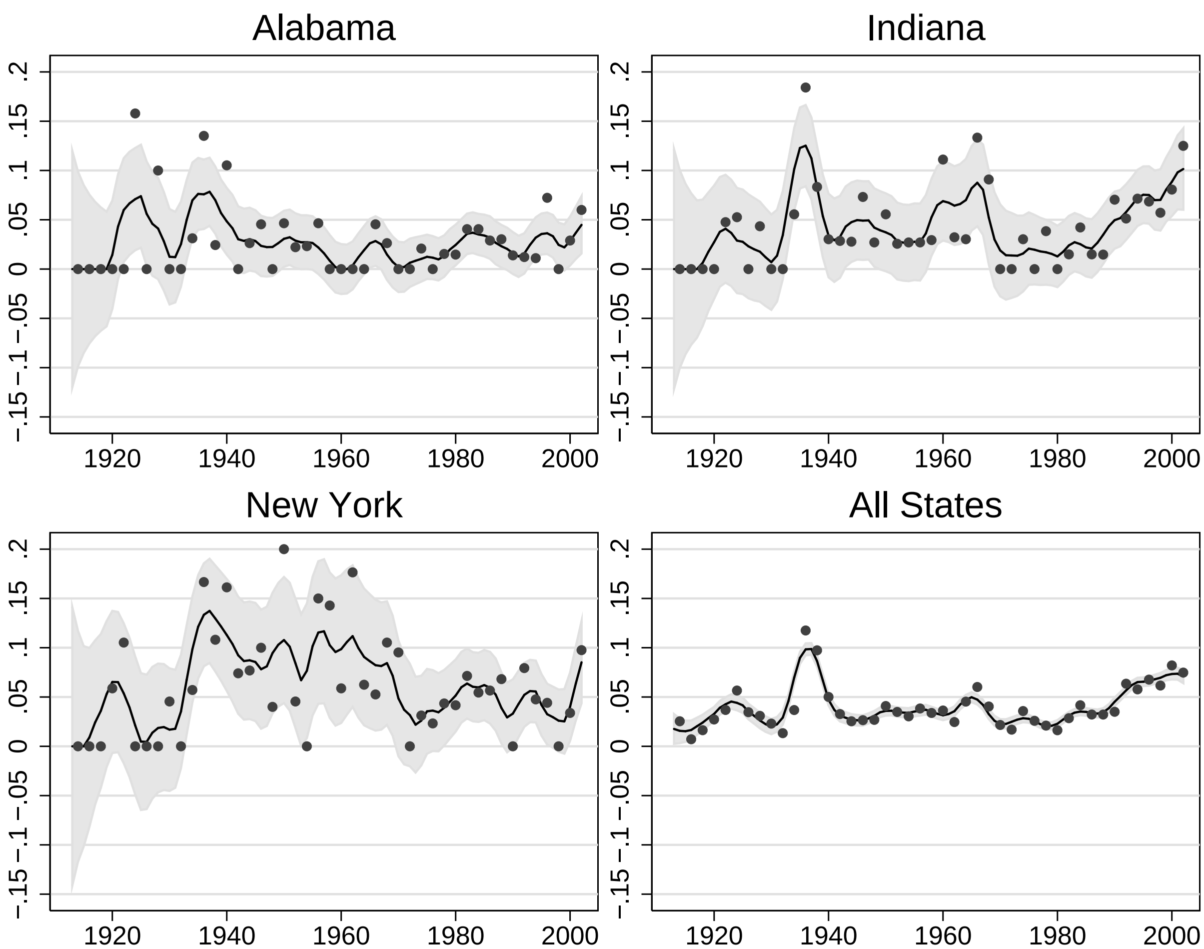
Notes: Dashed lines indicate equal innovativeness between the two time period. Solid lines represent the best linear fit between the two sets of scores.

Figure 3: Emergence of New Policies and Adoption Rate Over Time



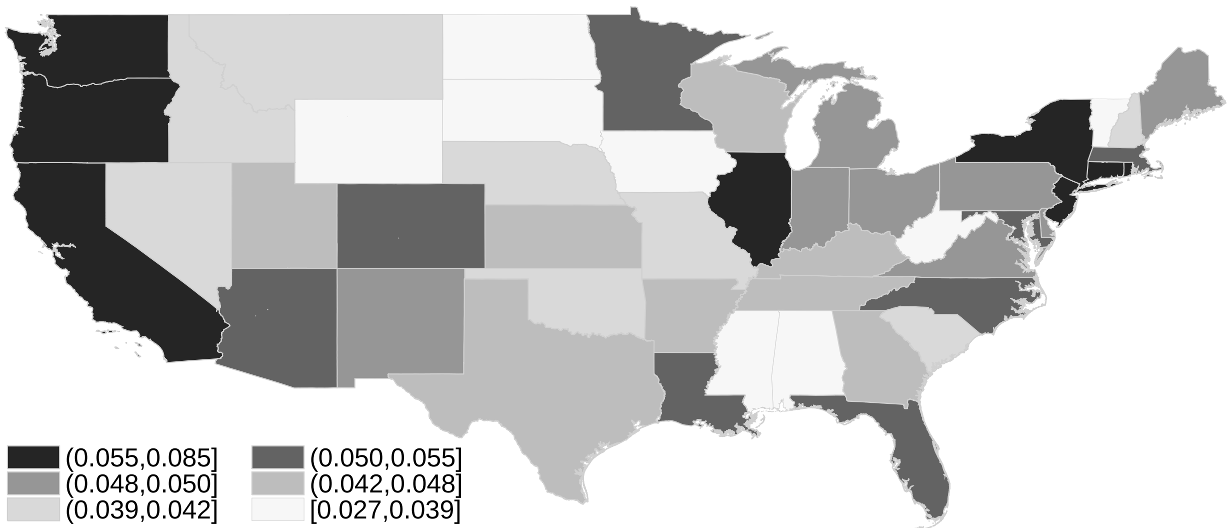
Notes: The plot reports a local linear regression curve of policy adoptions across all states over time with bandwidth set to 1.5 (using Stata's `lpoly` command). The shaded area indicates a 95% confidence interval. The bars represent the number of policies that began diffusing each year. Only policies that started diffusing in 1800 or later are included.

Figure 4: Examples of Smoothed Innovation Rates Over Time



Notes: The plot reports a local linear regression curve over time with bandwidth set to 1.5 (using Stata's `lpoly` command). The shaded area indicates a 95% confidence interval.

Figure 5: Choropleth Map of State Innovativeness, 1912-2009, Using Adoption Rate Measure



Notes: States are partitioned into six groups of eight states.

Authors' Appendix for:
"State Policy Innovativeness Revisited"

Original article appears in

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March 2, 2012

A Supplementary Appendix

Table 1: Information about Policies and Adoptions Database

Policy	First	Last	Total	Description
aboldeapen	1846	1969	13	Death Penalty Reform
aborparc	1981	1999	15	1-parent Consent for Abortion by a Minor
aborparn	1981	2000	17	1-parent Notification for Abortion by a Minor
aborpreroe	1966	1972	18	Abortion pre-Roe
absvot	1960	2003	26	Unrestricted Absentee Voting
acctlic	1896	1973	50	Accountants Licensing
adc	1936	1955	48	Aid to Dependent Children (Social Sec.)
adcom	1925	1939	41	Advertising Commissions
aging	1974	1991	19	Strategic Planning for Aging
aidperm	1950	1969	45	Aid to Permanently/Totally Disabled
airpol	1907	1993	50	Air Pollution Control
alcbevcon	1926	1980	40	Alcoholic Beverage Control
alctreat	1943	2002	40	Alcoholic Treatment Agency
animcruel	1804	2003	40	Animal Cruelty Felony Laws
antiage	1903	1975	23	Anti-Age Discrimination
antiinj	1913	1939	24	Anti-Injunction Laws
antimis	1691	1913	38	Antimiscegenation law
archlic	1897	1978	48	Architects Licensing
arts	1936	1980	29	Council on the Arts
ausbalsys	1878	1970	45	Australian Ballot System
autoreg	1901	1977	49	Automobile Registration
autosaf	1959	1971	45	Automobile Safety Compact
banfaninc	1996	2001	29	Ban on Financial Incentives for Doctors to Perform Less Costly Procedures/Prescribe Less Costly Drugs
bangag	1975	1999	46	Prohibits Agreements that Limits a Doctor's Ability to Inform Patients of All Treatment Options
beaulic	1914	1980	46	Beauticians Licensing
blind	1936	1982	49	Aid to the Blind (Social Security)
boh	1869	1959	47	Board of Health
bottle	1971	2002	11	Bottle Deposit Law
bradycamp	1989	2000	17	Child Access to Guns Protection Law
broadcom	1990	1997	18	State Law Requiring Broad Community Notification of Sex Offenders
budgstd	1859	1926	48	Budgeting Standards
cappun	1972	1982	39	Capital Punishment

Table 1: (continued)

Policy	First	Last	Total	Description
ccreceipt	1999	2008	31	Restrictions on Displaying Credit Card Numbers on Sales Receipts
chartersch	1991	1996	25	Charter Schools
childabu	1963	1967	48	Child Abuse Reporting Legislation
childlab	1901	1969	47	Child Labor Standards
childseat	1981	1984	49	Child Seatbelt Requirement
chirolic	1899	1949	44	Chiropractors Licensing
cigtax	1921	1964	47	Cigarette Tax
citzon	1913	1957	47	Zoning in Cities - Enabling Legislation
civinjaut	1998	2001	15	Civil Injunction Authority
cogrowman	1961	1998	10	Planning Laws Requiring Loc/Reg Planners to Coordinate Growth Management Plan Developments
colcanscr	1991	2007	27	Colorectal Cancer Screening
comage	1945	2003	23	Committee on the Aged
compsch	1852	1996	40	Compulsory School Attendance
conacchwy	1937	1960	43	Controlled Access Highways
consgsoil	1892	1948	31	Conservation of Gas and Oil
contrains	1996	2007	27	Insurers That Cover Prescription Drugs Cannot Exclude FDA-Approved Contraceptives
correct	1970	1991	18	Strategic Planning for Corrections
credfreez	2001	2006	25	Limits Credit Agencies from Issuing a Credit Report without Consumer Consent
crtadm	1937	1965	26	Court Administrators
cyberstalk	1998	2001	21	Cyberstalking Definition and Penalty
deaf	1822	1921	28	School for the Deaf
debtlim	1842	1936	31	Debt Limitation
denlic	1868	1980	45	Dentists Licensing
dirdem	1898	1972	24	Initiative/Referendum
dirprim	1901	1970	49	Direct Primary
dui08	1983	2001	25	.08 per se penalty for DUI
earlvot	1970	2002	15	In-Person Early Voting
econdev	1981	1992	24	Strategic Planning for Economic Development
education	1970	1991	14	Strategic Planning for Education
edutv	1951	1966	34	Educational Television
elecdayreg	1974	1994	7	Election Day Registration
elecdereg	1996	1999	24	Electricity Deregulation
englic	1908	1972	49	Engineers Licensing
engonly	1811	2007	29	English Only Law
enterzone	1981	1992	38	State Enterprise Zones

Table 1: (continued)

Policy	First	Last	Total	Description
environ	1978	1991	14	Strategic Planning for Environmental Protection
equalpay	1919	1966	27	Equal Pay For Females
expsta	1887	1901	43	Agricultural Experiment Stations
fairemp	1945	1964	25	Fair Employment Laws
fairtrade	1931	1969	45	Fair Trade Laws
famcap	1992	1998	21	Family Cap Exemptions
fhpriv	1959	1965	12	Fair Housing - Private Housing
fhpub	1937	1961	15	Fair Housing - Public Housing
fhurb	1945	1963	15	Fair Housing - Urban Renewal Areas
fish	1864	1985	35	Fish Agency
foia	1851	2003	38	Open Records/Freedom of Information Acts
forest	1885	1978	45	Forest Agency
gastax	1919	1929	48	State Gas Tax
gaymarban	1994	2008	33	Constitutional Amendment Banning Gay Marriage
gdl	1996	2009	49	State Graduated Driver's Licensing Program
grandvist	1964	1987	50	Grandparents' Visitation Rights
harass	1998	2001	11	Harassment Crime
hatecrime	1978	1994	33	State Hate Crime Laws
health	1985	1991	23	Strategic Planning for Health Services
higissue	1990	1994	36	Guranteed Issue of Health Insurance
higrenew	1990	1995	45	Guranteed Renewal of Health Insurance
hiport	1990	1995	43	Health Insurance Portability
hiprecon	1990	1994	39	Health Insurance Preexisting Conditions Limits
hmomod1	1973	1988	23	Health Maintenance Organization Model Act (First)
hmomod2	1989	1995	22	Health Maintenance Organization Model Act (Second)
homerul	1875	1985	31	Municipal Home Rule
hsexit	1976	1999	26	High School Exit Exams
humrel	1945	1993	24	Human Relations Commission
hwyagen	1893	1963	47	Highway Agency
idas	1993	2001	35	Individual Development Accounts
idtheft	1996	2001	44	ID Theft Protection
inctax	1916	1937	28	State Income Tax
indgaming	1990	1995	24	State allows Tribal Gaming
indorgris	1994	1997	14	State Law Requiring Notification to Individuals/Organizations at Risk (Sex Offender Policy)

Table 1: (continued)

Policy	**First**	**Last**	**Total**	**Description**
infanthear	1990	2008	43	Newborn Hearing Screening
intbar	1921	1956	26	Integrated Bar
jucoen	1907	1962	32	Junior College - Enabling Leg.
juvct	1899	1959	48	Establishment of Juvenile Courts
juvisup	1951	1966	41	Juveniles Supervision Compact
kegreg	1978	1999	12	Beer Keg Registration Requirement
kidhelmet	1992	2007	21	Mandatory Bycicle Helmets for Minors
kinship	1998	2006	26	Kinship Care Program
laborag	1869	1959	41	Labor Agency
legpre	1933	1972	31	Legislative Pre-Planning Agency
legresea	1901	1972	50	Legislative Research Agency
lemon	1982	1984	29	Lemon Laws
libext	1890	1949	48	Library Extension System
lien	1995	1999	27	Lien Statutes
livingwill	1976	1986	38	Living Wills
lott	1964	1993	36	Lottery
mailreg	1972	1995	49	Malpractice Reforms
manclin	1994	2008	23	Mandated Coverage of Clinical Trials
medmar	1978	2008	31	Symbolic Medical Marijuana Policy
merit	1883	1953	48	Merit System
methpre	1996	2005	25	Restrictions on OTC Medications with Methamphetamine Precursors
miglab	1943	1960	28	Migratory Labor Committee
minwage	1915	1965	35	Minimum Wage Law
missplan	1940	1976	20	Missouri Plan
mlda21	1933	1988	50	Minimum Legal Drinking Age 21
mntlhlth	1955	1987	32	Mental Health Standards Committee
mothpen	1911	1931	46	Mothers' Pensions
motorhelm	1967	1985	50	Motorcycle Helmet Requirement
motorvoter	1976	1995	49	Voter Registration with Driver's License Renewal
msas	1993	1997	28	Medical Savings Accounts
natreso	1975	1991	16	Strategic Planning for Natural Resources
norealid	2007	2009	18	State Policy to Refuse to Comply with 2005 Federal Real ID Act
nrmlsch	1839	1910	41	Normal Schools
nrslic	1903	1970	49	Nurses Licensing
offwmh	1993	2009	19	Special Agent/Office for Women's Health
oldagea	1936	1938	48	Old Age Assistance (Social Security)
parksys	1885	1978	48	Park System
parolesup	1931	1985	49	Parolees/Probationers Supervision

Table 1: (continued)

Policy	First	Last	Total	Description
pdrugmon	1940	1999	14	Prescription Drug Monitoring
pestcomp	1968	2009	36	Interstate Pest Control Compact
pharmlic	1874	1955	42	Pharmacists Licensing
pldvpag	1935	1978	44	Planning/Development Agency
postdna	1997	2005	35	Post-Conviction DNA Motions
primseat	1984	2004	21	Primary Seat Belt Laws
prkagcit	1919	1970	22	Parking Agency - Enabling Act for Cities
prob	1878	2005	47	Probation Law
pubbrefeed	1993	2008	46	Allowance of Breastfeeding in Public
pubcamfun	1973	1987	23	Public Campaign Funding
pubhouen	1933	1950	43	Public Housing - Enabling
realest	1917	1964	41	Real Estate Brokers Licensing
recipsup	1934	1959	40	Reciprocal Support Law
renewport	1991	2004	19	State Renewable Portfolio Standards
retainag	1957	1965	14	Retainers Agreement
retstate	1911	2005	49	Retirement System for State Employees
revenue	1981	1991	18	Strategic Planning for Revenue
right2work	1911	2001	22	Protects Employees from Termination for Not Joining Unions/Paying Dues
rightdie	1976	1988	15	Right to Die
roadshwy	1891	1957	46	Aid for Roads and Highways
sals	1945	1965	25	Seasonal Agricultural Labor Standards
schoolchoi	1987	1992	16	School Choice
sdce	1994	2008	25	Dependent Coverage Expansion Insurance for Young Adults
segoss	1927	1943	10	Provisions by the States Maintaining Segregated Educational Systems for Out-Of-State Study by African-Americans
sexreginfo	1991	1997	15	Access to Sex Offender Registries
shield	1935	2009	34	Protections Against Compelling Reporters to Disclose Sources in Court
slains	1894	1969	28	Slaughterhouse Inspection
smokeban	1995	2009	25	Statewide Smoking Ban
snrpresc	1975	2001	27	Senior Prescription Drugs
soil	1937	1974	49	Soil Conservation Districts
sprinsch	1813	1966	35	Superintendent of Public Instruction
stalkdef	1998	2001	24	Stalking Definition and Penalty
stateptr	1903	1953	48	Establishment of State Patrol/Highway Police
statrapage	1950	1998	43	Age Span Provisions for Statutory Rape
stplnb	1933	1959	46	State Planning Board

Table 1: (continued)

Policy	First	Last	Total	Description
strikes	1993	1995	24	Felony Sentencing Guidelines for Three Strikes
taxcom	1864	1959	49	Tax Commission
teacelm	1930	1957	34	Teacher Certification - Elementary
teacsec	1896	1956	41	Teacher Certification - Secondary
tels	1976	1994	26	Tax and Expenditure Limits
termlim	1990	2000	15	Legislative Term Limits
timelim	1993	1996	18	Time Limits on Welfare Benefits
transport	1974	1991	20	Strategic Planning for Transportation
urbrenen	1941	1952	34	Urban Renewal - Enabling
utreg	1839	1977	44	Utility Regulation Commission
viccomp	1965	1988	42	Victims' Compensation
vicrtsamd	1982	1999	32	Victims' Rights Constitutional Amendment
welfagy	1863	1975	49	Welfare Agency
workcom	1911	1948	48	Workmens' Compensation
zerotol	1983	1998	50	Zero Tolerance ($<.02$ BAC) for Underage Drinking

Source: Walker from ICPSR (#66), authors' data collection efforts. This table includes information based on all recorded adoptions for states or territories of every policy in our database. Various analyses exclude some policies based on the year they began diffusing or adoptions for states before they achieved statehood. These restrictions are explained in the text for the various analyses.

Table 2: Source and Policy Category Codings for Selected Policies

Policy	Source	Subject Area
aborparc	Authors	Health
aborparn	Authors	Health
absvot	Authors	Elections
adc	Walker	Welfare
adcom	Walker	Administrative Organziation
aging	Authors	Planning
aidperm	Walker	Welfare
alcbevcon	Walker	Corrections
alctreat	Walker	Corrections
antiinj	Walker	Corrections
arts	Walker	Administrative Organziation
autosaf	Walker	Highway
banfaninc	Authors	Health
bangag	Authors	Health
beaulic	Walker	Professional Regulation
blind	Walker	Education
bottle	Authors	Conservation
bradycamp	Authors	Corrections
broadcom	Authors	Corrections
cappun	Authors	Corrections
ccreceipt	Authors	Professional Regulation
chartersch	Authors	Education
childabu	Authors	Corrections
childseat	Authors	Highway
cigtax	Walker	Taxes
citzon	Walker	Planning
civinjaut	Authors	Corrections
colcanscr	Authors	Health
comage	Walker	Administrative Organziation
conacchwy	Walker	Highway
contrains	Authors	Health
correct	Authors	Corrections
credfreez	Authors	Professional Regulation
crtadm	Walker	Administrative Organziation
cyberstalk	Authors	Corrections
dui08	Authors	Corrections
earlvot	Authors	Elections
econdev	Authors	Planning
education	Authors	Education
edutv	Walker	Education

Table 2: (continued)

Policy	Source	Subject Area
elecdereg	Authors	Planning
enterzone	Authors	Planning
environ	Authors	Planning
equalpay	Walker	Labor
fairemp	Authors	Labor
fairtrade	Walker	Civil Rights
famcap	Authors	Welfare
fhpriv	Walker	Welfare
fhpub	Walker	Welfare
fhurb	Walker	Welfare
gastax	Walker	Taxes
gaymarban	Authors	Civil Rights
gdl	Authors	Highway
grandvist	Authors	Corrections
harass	Authors	Corrections
hatecrime	Authors	Corrections
health	Authors	Health
higissue	Authors	Health
higrenew	Authors	Health
hiport	Authors	Health
hiprecon	Authors	Health
hmomod1	Authors	Health
hmomod2	Authors	Health
hsexit	Authors	Education
humrel	Walker	Professional Regulation
idas	Authors	Labor
idtheft	Authors	Corrections
inctax	Authors	Taxes
indgaming	Authors	Civil Rights
indorgris	Authors	Corrections
infanthear	Authors	Health
intbar	Walker	Corrections
juvisup	Walker	Corrections
kegreg	Authors	Taxes
kidhelmet	Authors	Corrections
kinship	Authors	Welfare
legpre	Walker	Administrative Organziation
lemon	Authors	Professional Regulation
lien	Authors	Taxes
livingwill	Authors	Corrections
lott	Authors	Taxes

Table 2: (continued)

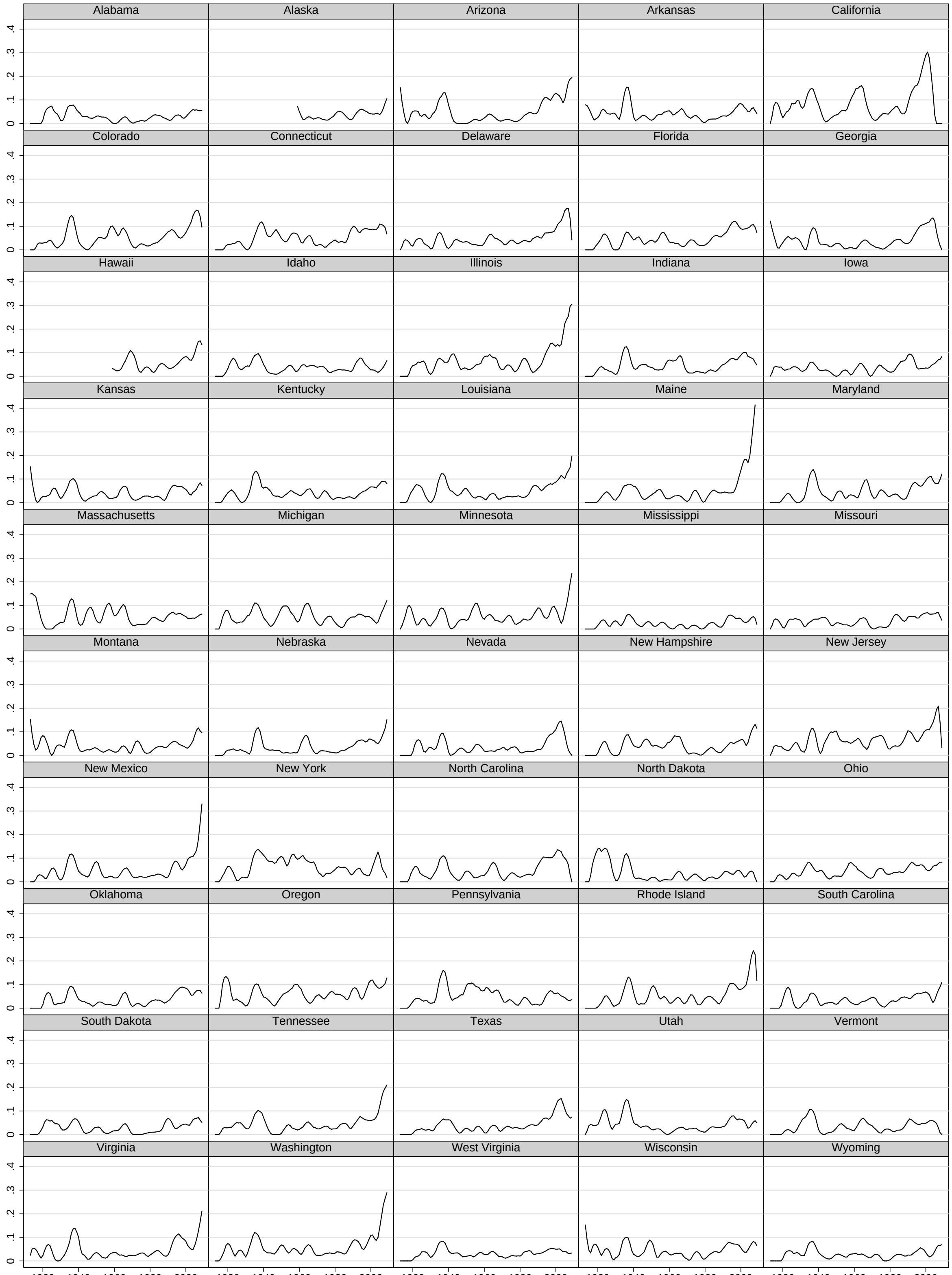
Policy	Source	Subject Area
mailreg	Authors	Elections
manclin	Authors	Health
medmar	Authors	Corrections
methpre	Authors	Corrections
miglab	Walker	Labor
minwage	Walker	Labor
missplan	Authors	Corrections
mlda21	Authors	Corrections
mntlhlth	Walker	Health
motorhelm	Authors	Highway
motorvoter	Authors	Elections
msas	Authors	Health
natreso	Authors	Conservation
norealid	Authors	Planning
offwmh	Authors	Administrative Organziation
oldagea	Walker	Welfare
parolesup	Walker	Corrections
pdrugmon	Authors	Corrections
pestcomp	Authors	Conservation
pldvpag	Walker	Planning
postdna	Authors	Corrections
primseat	Authors	Highway
prkagcit	Walker	Planning
pubbrefeed	Authors	Health
pubcamfun	Authors	Elections
pubhouen	Walker	Welfare
realest	Walker	Professional Regulation
recipsup	Walker	Corrections
renewport	Authors	Health
retainag	Walker	Corrections
revenue	Authors	Taxes
rightdie	Authors	Corrections
sals	Walker	Labor
schoolchoi	Authors	Education
sdce	Authors	Health
segoss	Authors	Civil Rights
sexreginfo	Authors	Corrections
shield	Authors	Labor
smokeban	Authors	Health
snrpresc	Authors	Health
soil	Walker	Conservation

Table 2: (continued)

Policy	Source	Subject Area
stalkdef	Authors	Corrections
statrapage	Authors	Corrections
stplnb	Walker	Planning
strikes	Authors	Corrections
teacelm	Walker	Education
tels	Authors	Taxes
termlim	Authors	Elections
timelim	Authors	Welfare
transport	Authors	Highway
urbrenen	Walker	Planning
viccomp	Authors	Corrections
vicrtsamd	Authors	Corrections
zerotol	Authors	Corrections

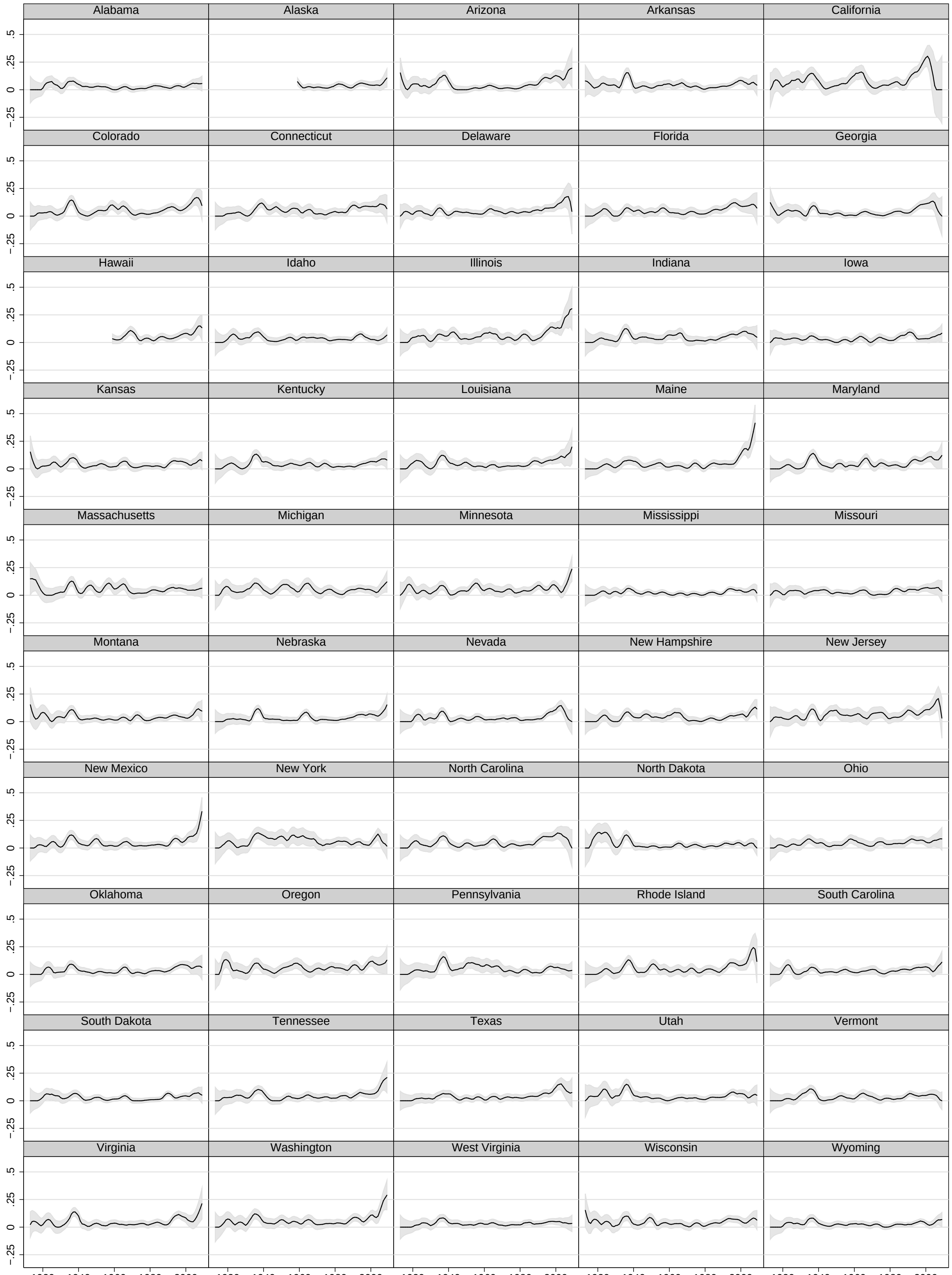
Source: Walker from ICPSR (#66), authors' data collection efforts. This table provides information about data source and policy area coding for 135 of the 137 policies that began diffusing after 1912. We used Walker's twelve categories and added Elections as a thirteenth. All codings done subjectively by the authors (the policy categories are not included in the Walker data on ICPSR).

Figure 1: Smoothed Innovation Rates Over Time



Notes: The plot reports a local linear regression curve over time with bandwidth set to 1.5 (using Stata's `lpoly` command).

Figure 2: Smoothed Innovation Rates Over Time, with Confidence Intervals



Notes: The plot reports a local linear regression curve over time with bandwidth set to 1.5 (using Stata's `lpoly` command). The shaded area indicates a 95% confidence interval.