The Determinants of State Policy Innovativeness[1]

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Abstract

What determines an American state's propensity for innovativeness, or their willingness to adopt new policies sooner or later relative to other states? Most studies focus almost exclusively on one policy area at a time at the expense of a broader understanding of innovativeness as a characteristic of states. Our study therefore revisits the original question of innovativeness by studying policy innovation across a broad range of policies covering over 136 different policies. We study the broad determinants of state innovativeness via a pooled event history analysis of all policies. We account for differences across policies, states, and, for a subset of our policies adopted in the last half century, we include common explanatory variables in the literature, including population, wealth, ideology, and interstate diffusion.

1 Introduction

Do the U.S. states vary systematically in their levels of policy innovativeness? This question formed the basis of Walker's (1969) seminal work over four decades ago, in which he utilized data on states' adoption dates of eight-eight policies to determine whether some states were more innovative, i.e., faster to adopt a policy than other states. His work uncovered systematic regional, demographic, and political differences in innovativeness across states. Shortly thereafter, however, subsequent work raised important questions about critical assumptions underlying his analysis, in particular that his innovation scores assumed that state innovativeness was constant across policies and over time (Gray 1973; Eyestone 1977). While future work attempted to resolve some of these concerns (e.g., Savage 1978), the literature remained small and loosely structured for almost two decades (Savage 1985).

The situation changed dramatically in 1990 with the publication of Berry and Berry's (1990) classic study applying event history analysis (EHA) to the diffusion of state lottery adoptions. The application of EHA offered scholars the opportunity to simultaneously study internal and external causes of state policy innovation while also accounting for the fact that innovativeness on a given policy varied over time. This method reinvigorated the study of state policy innovativeness and influenced the publication of dozens, possibly hundreds, of articles applying the EHA method to a wide variety of policies (Graham, Shipan and Volden 2008).

Over the past two decades, the EHA approach to studying state policy adoptions has led to a vast accumulation of knowledge about the sources of innovativeness and diffusion.[1] But along the way, it has drifted away from Walker's (1969) original question of consistent, systematic differences in innovativeness across the states. This drift results from many legitimate reasons, including scholars' interest in study the causes of diffusion for specific policies or the suitability of certain policies for testing important theories of policy diffusion. Yet we believe it also results partly from the methodological implications of using EHA, which was conceived and adopted, after all,

[1]There are too many works to cite but a few — for reviews of this literature see Berry and Berry (2007) or Karch (2007).

for the very purpose of studying the occurrence of a single event such as a policy innovation. And while EHA has proven very flexible as a tool of quantitative analysis in general (see, e.g., Box-Steffensmeier and Jones 2004), its structure has changed little in the state policy innovation literature (though see Volden 2006; Boehmke 2009).

Our goal here is not challenge the use of EHA for the study of state policy innovation, however, but rather to return substantively to the original question of innovativeness as a trait of the American states and adapt the method to fit the question. In a previous paper (Boehmke and Skinner 2010) we took a first step in this direction by discussing some of the shortcomings in Walker's (1969) innovation scores and by developing an alternative rate score that measures the proportion of innovation opportunities seized by each state. This rate score eliminates biases in the original score and also facilitates measuring innovativeness over specific time periods.

While these innovation scores allow us to demonstrate the presence of systematic variation across the states in innovativeness—even accounting for their associated uncertainty—they do not allow us to isolate or explain innovativeness as an inherent trait of each state. Most obviously, any score that relies only on differences across the states in the timing of their policy innovation can not account for the distinct roles of internal policy innovation forces and external diffusion forces. To the extent that diffusion forces might operate differently on each state, which they likely would if contiguity-based diffusion—whether by social learning or economic forces—exists, then such scores can not distinguish a state's innovativeness from its geographic context and the innovativeness of its neighboring states.

Here we address these shortcomings and extend this work in three ways. First, we utilize a straightforward modification of the standard single-policy EHA method by pooling together adoption data for up to 136 policies and estimating a single, pooled EHA model. With no covariates save state fixed effects, this model generates innovation scores identical to those produced by the rate score. Second, by moving to the pooled EHA approach to calculating these rate scores, we can then include covariates to account for external interstate diffusion forces, differences across policies in the baseline rate of adoption, and common yearly shocks across states. This allows us to generate innovation scores that have purged the adoption data of these various effects and that therefore more accurately reflect differences across states' internal innovativeness. It also allows us to examine the role and magnitude of external diffusion forces across a broad range of policies; we find significant and strong evidence of policy diffusion between contiguous neighbors. Third, once we isolate internal innovativeness, we can then begin to explain it by including a variety of common explanatory factors examined in the literature. With over eighty thousand observations in some models, we study the broad demographic, political, and institutional forces that explain differences in innovativeness across states.

This leverage on innovativeness does come at some cost, of course, as pooling together over a hundred policies limits our ability to include a wide battery of control variables in our analysis, including in particular factors specifically related to the adoption of each policy in its own right. Yet while much of the policy specific variation must be relegated to policy fixed effects, we can still include many of the most frequently examined variables in the literature for time periods of anywhere from a century to half a century. Our analysis therefore gives us an unprecedented opportunity to estimate and explain systematic differences in policy innovativeness across the American states.

2 The Study of Policy Diffusion

As noted earlier, the policy innovation literature began with Walker's (1969) study, in which he attempted to shift the question from the level at which states fund various programs to whether they adopt those programs, arguing that the decision to adopt a program in the first place is at least as important as year-to-year decisions to adjust its funding level. He therefore followed Rogers's (1962) work on the diffusion of innovations and adopted as his definition of innovation "a program or policy which is new to the state adopting it, no mater how old the program may be or how many other states may have adopted it" (Walker 1969, p. 881). This definition has formed the basis for the policy innovation and diffusion literature ever since. Given this focus, Walker then wished to determine why some states were more innovative than others and hypothesized that these levels would depend on regional differences as well as various political and demographic variables including income, population, urbanization, political culture, and party competition.

In order to study these explanations, Walker gathered adoption dates for eighty-eight different policies adopted by at least twenty states by 1965, with about six to eight policies in twelve different issues areas such as education, taxes, civil rights, and labor. Using these adoption dates, he constructed each state's innovation score for each policy as the ratio of the time elapsed between its adoption and the first adoption to the time elapsed between the last (observed) adoption and the first adoption, then subtracted the result from one so that larger scores corresponded to more innovative states.

This approach certainly had some strengths, but it also had some flaws that scholars quickly picked up on. Just four years later, Gray (1973) published a study of innovativeness in which she critiqued Walker's scores for making very strong assumptions regarding the comparability of diffusion patterns over time and across issue areas (see also Eyestone 1977). Further, she also questioned whether it was safe to assume that state innovativeness itself remained constant over time, stating that "'innovativeness' is not a pervasive factor; rather, it is issue- and time-specific at best" (Gray 1973, p. 1185). The empirical analysis supported this claim, but also produced similar patterns in innovativeness on specific policies with the wealthiest and most political competitive states generally among the first ten adopting states.

Despite some attempts to overcome these arguments against a general innovativeness score (e.g., Walker 1973; Savage 1978; Eyestone 1977), these concerns appear to have presented a sufficiently large hurdle at the time that the literature did not flourish and develop as Walker might had hoped (Savage 1985). But the situation changed in 1990 with the introduction of EHA for the study of state policy innovativeness (Berry and Berry 1990). EHA allowed scholars to study the correlates of the timing of policy innovation one policy at a time. Its strength lies in the ability to account for prevailing conditions at the time of adoption by modeling innovation, and therefore noninnovation, in each year at which state is at risk of adoption the policy in question (i.e., it has not yet adopted it). Thus changes in important variables over time are easily incorporated into the analysis. Further, EHA facilitates distinguishing between internal and external factors that may simultaneously influence the decision of whether to adopt in a given year.[2] Thus in studies of lottery and tax innovations, Berry and Berry (1990, 1992) were able to show that both internal factors, such as income, election cycles, and partisanship, as well as external forces such as diffusion between contiguous states influenced policy. Subsequent studies have used the EHA framework to explore the role of internal forces such as policy entrepreneurs (Mintrom 1997), pressure from local adoptions (Shipan and Volden 2008), group conflict (Schildkraut 2001), and political institutions (Boehmke 2005), as well as pressure from external forces via ideological similarity (Grossback, Nicholson-Crotty and Peterson 2004), or population distribution near state borders (Berry and Baybeck 2005).

This division in the literature between internal and external diffusion forces has been common ever since. In a recent review, Berry and Berry (2007) suggest that the probability of policy innovation should depend on a number of internal factors, including motivation, available resources and obstacles, existing policies, and external factors resulting from the actions of national, local, or other state governments. Specific attention has been paid on the best way to measure external factors, particularly how to study cross-state policy diffusion. These forces generally arise theoretically from either direct economic competition as in lotteries (Berry and Berry 1990; Berry and Baybeck 2005) or casino gaming policies (Boehmke and Witmer 2004) or from social learning. Social learning describes the process whereby states feel pressure to adopt policies as a result of other states doing the same, either because it reduces the costs of looking more broadly for solutions to common problems, provides information regarding policy success, or because they do not want to feel left behind (see, e.g., Boehmke and Witmer 2004; Berry and Baybeck 2005; Mooney 2001; Volden, Ting and Carpenter 2008).

Collectively, these and other studies have added immensely to our understanding of the dif-

[2] See Allison (1984); Box-Steffensmeier and Jones (2004) for overviews and more detailed discussions of the strengths of event history analysis and duration models in general.

fusion of policy innovation across the American states. But almost without exception, they have done so one policy at a time. This results in uncertainty in whether, for example, regional policy diffusion occurs at all: Mooney (2001, p. 103) states that "the empirical evidence regarding the effect has been mixed, at best", with only about half of published studies in the 1990s finding a positive and significant effect (Mooney 2001, p. 107). These concerns have generally led to more sophisticated theoretical and empirical investigation of policy diffusion, whether through simulations (Mooney 2001), formal modeling (Volden, Ting and Carpenter 2008; Boehmke 2005), GIS (Berry and Baybeck 2005), more nuanced measurement strategies (Boehmke and Witmer 2004) or more advanced methodologies (Volden 2006). While significantly advancing our understanding of how both external and internal forces influence policy innovation as well as the circumstances under which we might expect external forces to matter, by examining one policy at a time these studies still leave us uncertain as to the general importance of these phenomena or whether various positive or null findings are the quirks of specific data sets or choices made by the author(s).

Scholars have begun to recognize anew the advantages of studying multiple policies at once.[3] One line of inquiry results from an interest in understanding why patterns of diffusion differ across policies (Boushey 2010; Nicholson-Crotty 2009). The other considers a single policy with multiple components, such as seven components of end of life pain management policy (Imhof and Kaskie 2008), or a closely related policy area, such as three anti-smoking regulations (Shipan and Volden 2008), and either estimates separate models for each policy or component, treats the adoption of each component as part of a sequence of repeatable events, uses these components to determine whether states policies are converging overall (Volden 2006), or pools together the data in one simultaneously estimated EHA model (Boehmke 2009).

Here, we continue this emerging line of inquiry by merging the original general innovativeness approach with the more recent EHA methodology. Rather than utilize a small number of generally

[3]This it not to suggest that this is a purely new phenomenon, of course. Given the origins of the modern innovation literature in the multiple policy approach that begat it (e.g., Walker 1969; Gray 1973; Savage 1978), it is not surprising that multiple policies have occasionally been used after the advent of the EHA approach, for example in Berry and Berry's (1992) study of the adoption of multiple forms of tax innovation.

similar policies, however, we construct a database of adoption dates for over one hundred policies including many, if not most, of those used previously in the literature. Using the strength of EHA analysis, we then examine the general role of internal and external forces on policy innovativeness by simultaneously estimating a single, pooled EHA model of policy innovation for all policies. This analysis offers us significant leverage over a number of questions in the literature, for example whether policy innovation is characterized by the presence of positive and significant diffusion forces between contiguous neighbors. Further, such a large number of policies allows us to investigate this without any strong parametric assumptions regarding the functional form of such diffusion—we include separate indicator variables for the number of previously adopting neighbors along with a variable for the proportion of adopting neighbors—and to rule out various other possibilities through the simultaneous inclusion of state fixed effects, which will subsume other influences such as regional differences in innovativeness. Once we have partitioned diffusion into internal and external components, we again leverage our sizable policy database by testing for the presence of consistent effects for a number of variables generally thought to explain internal innovativeness. Before moving to these analyses, however, we first discuss the assembled policy database and the pooled EHA method.

3 Policy Data

We started with Walker's data set, which is available through the University of Michigan's ICPSR website. The original 88 policies in the set were selected from the following categories: welfare, health, education, conservation, planning, administrative organization, highways, civil rights, corrections, labor, taxes, and professional regulation (Walker 1969, p. 882). We then proceeded to update this data set by conducting searches through JSTOR for all state diffusion articles. We followed from the method employed by Graham, Shipan, and Volden (2008) and used the terms "diffusion", "convergence", "policy transfer", "race to the bottom", "harmonization", and "contagion". We also searched for policies that have not yet been examined in scholarly research through the National Conference of State Legislatures and other interest group websites to further supplement the data set. In doing so, we included every policy for which we could find data to avoid sampling bias. Engaging in this manner provided us with a data set of 188 policies adopted from the country's infancy through 2009.

[Table 1 Here.]

Though we have an expansive set of policies from which to analyze, certain considerations with respect to retaining the possibility of making comparisons across time and space prompted us to reduce the scope. Specifically, we follow four decision rules for this study. First, as is common in the literature, we focus on the 48 contiguous states due to both missing observations for Alaska and Hawaii as well as the geographic remoteness of these two states. Second, we use the first observed year of adoption as the starting date to determine when to set the first year of the risk set for our measure of innovativeness. Third, we determine the last year either by using the last year for which we gathered data or, for policies obtained from other sources, we used the last observed adoption. Fourth, we exclude policies that began diffusing before 1912, which is when Arizona became the 48^{th} state. Since all states are at risk beginning in 1912, we can better interpret policy innovativeness as we eliminate the advantage of achieving statehood earlier. Using these rules, our observations are reduced from 188 to 136, but we remain confident that the sample size is sufficiently large for making valid inferences.

4 Pooled Event History Analysis

We used these policy data previously to construct measures of state policy innovativeness. In addition to the original approach taken by Walker (1969), we also proposed two alternate scores intended to address problems with the original scores. These problems largely result from the bias that right censoring introduces; such censoring occurs when one or more states have not yet adopted the policy in question (or by the time of the original study). Of the two alternatives that we proposed, one in particular was able to address censoring and facilitated constructing innovation scores for particular periods in time. This measure focuses on the rate of policy adoption over a given time period by calculating the proportion of adoption opportunities that resulted in successful policy innovations. If we consider each year an adoption opportunity, then this rate score follows the same logic as event history analysis, which also models the rate at which states adopt a given policy. The similarity between the rate score and EHA provides the intuition for the former advantages over the other innovation scores, a similarity that we make explicit in order to exploit here.

To see the similarity, consider the analysis of a single policy. If we calculate our rate scores, they will provide estimates of innovativeness identical to those produced by an event history analysis with no covariates except fixed effects for each state. Both are maximum likelihood estimates of the probability that each state adopts the policy in question in each year. One may be in probability form and the other in coefficient form, but since the logit link is a monotonic function in the latent scale, translating the coefficients into probabilities produces identical estimates of the probabilities of adoption.

Extrapolated across multiple policies, this equivalence still holds: the innovation rate scores in Boehmke and Skinner (2010) can be estimated either with a simple ratio of adoptions to adoption opportunities or by estimating a state-year-policy EHA with state fixed effects. Estimating this multiple policy EHA involves simply stacking the data for each of the single policy EHAs and estimating one model for all policies with state fixed effects as the only covariates.

This equivalence does more than merely facilitate calculation of the previous innovation scores, however, it allows us to begin to sort out the distinct effects of internal and external sources of innovativeness and to isolate factors that increase or decrease either. Combining multiple EHA models into one model allows us to include more than just state fixed effects, of course, which means that we can include other covariates in our analysis. These covariates can help us improve upon our previous innovation rates scores in two distinct ways. First, we can include variables to account for differences across policies and over time in order to better estimate state innovativeness. Second, we can also add variables to distinguish between internal innovation and external diffusion forces in order to isolate the former while also studying the latter. In addition, the pooled EHA approach allows us to begin to identify some of the sources of innovativeness by accounting for the demographic and political characteristics of each state.

While scholars have only begun to use the pooled EHA approach, it has received attention mainly in the context of studying the diffusion of small groups of related policies or policies with multiple components, (e.g., Imhof and Kaskie 2008; Shipan and Volden 2008; Yackee 2009). In an overview of this approach, Boehmke (2009) argues that pooled EHA is a flexible estimation method that allows scholars to obtain a better understanding of policy diffusion by leveraging the similarities across policies through the inclusion of covariates with common effects while also accounting for important differences across policies by including policy fixed effects and also by allowing some variables to have different effects across components or policies. Here, we borrow the structure of pooled EHA but extend its use by applying it to an intentionally broad set of policies. Our goal remains similar, though our controls more limited, since we also wish to estimate commonalities in innovativeness for each state across policies while simultaneously accounting for blunt differences across those policies. Specifically, then, pooled EHA allows us to begin to address some of the major criticisms of existing state policy innovation scores—that they do not account for differences across policies and over time (Gray 1973; Eyestone 1977)—and to begin to sort out the general sources of variation in innovativeness.

5 State Innovativeness

In this section we used the pooled EHA model just discussed to examine the general sources of policy innovativeness across the American states. We do so in two stages. First, we focus on the difference between internal and external sources. In this first step we test for the presence of cross-state policy diffusion through contiguous neighbors while introducing controls for state, policy, and year fixed effects. This allows us also to disentangle internal and external forces and to isolate internal innovativeness, which we can compare to our previous rate score measure of state policy innovativeness. Second, we then additionally introduce a series of variables to test common explanations of differences in innovativeness across states.

5.1 External versus Internal Determinants

One of the most important distinctions in the literature on policy innovation and diffusion has been between the different role of internal and external factors. Internal factors explain why individual states adopt policies at different points in time whereas external factors allow us to understand how the existing pattern of adoption across all states influences current innovations by states that have not yet adopted. In order to study either, then, it is necessary to account for the other. Therein lies the motivation for the dominance of EHA, which allows one to account for both simultaneously.

Taken a step further, this also suggests that we can not obtain valid measures of state policy innovativeness without accounting for the role of external forces. If the prevailing pattern of innovations on a given policy influences the probability that remaining states adopt, then innovation scores that do not account for diffusion will conflate state innovativeness with the consequences of diffusion. To see this, consider a simple case with positive diffusion pressures between contiguous neighbors. Early adopters will generally experience no such pressures since few or no contiguous states will have adopted whereas late adopters will experience abundant diffusion pressures since most of their neighbors will have adopted. Thus very innovative states adopt despite the lack of diffusion pressure and less innovative states hold out despite the presence of such pressure. Ignoring these differences will therefore produce innovation scores that understate the differences in internal innovativeness. Further, conflating the two has a different effect across states since it makes it difficult to separate a state's level of innovation from its geography: if a state is surrounded by less innovative neighbors, then it will appear to be less innovative than if it were surrounded by more innovative neighbors.

In addition to helping us obtain better estimates of state innovativeness, accounting for cross-state diffusion allows us to test whether such processes operate consistently across a broad set of policy areas. We can test, for example, whether there exists in general a positive pattern of diffusion between contiguous neighbors. And we can do so without making any strong assumptions about the specification of such a relationship. The literature has typically examined either the raw number of adoptions by contiguous states or the proportion of neighboring states that have adopted. This choice makes a difference since some states have only one bordering neighbor while others have up to eight. Further, we can also estimate the functional form more flexibly rather than assume a linear, additive relationship. While this is common in the literature, Mooney (2001) finds evidence of a nonlinear, decreasing relationship.

In order to study this, we estimate a pooled logit EHA model of policy innovation using our database of 136 policies. We create one observation per state-year-policy and code the dependent variable one if the state adopts the policy the in question and zero if it does not. We only consider adoptions for observations at points in time at which a state is in the risk set for the policy in question, where we define the risk set as usual: starting in the year of the first observed adoption and ending once a state has previously adopted the policy. We treat all observations after the last observed adoption as right censored.[4] We then estimate a series of models that test for the presence of diffusion between contiguous neighbors by constructing a variable that counts the number of bordering states that have already adopted that same policy. Thus we only consider diffusion pressures within a single policy and not across policies. In order to avoid making assumptions about the functional form, we create indicator variables for each observed number of neighboring adoptions, ranging from one to eight. We also calculate the proportion of neighboring states that have adopted, though we do not create indicators for this variable since there are twenty-three unique values. We then estimate a series of models that account for state, year, and policy fixed effects, as well as clustering standard errors by state and policy.

[Table 2 Here.]

Table 2 presents the results of these models. The first two models include only the number of

[4]Across such a large set of policies this seemed the most straightforward and accurate decision rule. For some policies, we may know for sure whether the source indicates the presence of years after the last observed adoption with no policy activity, but in many cases we can not be sure. Since EHA easily accounts for right censoring without introducing bias, treating all observations in the same way should not cause any problems.

lagged adoptions by contiguous states whereas the last four also include the proportion of neighbors that have adopted. The second and fourth models add in state fixed effects to distinguish internal and external diffusion while the last two models add policy and then year fixed effects. Overall, the results indicate the presence of positive and significant diffusion pressures. Across all six models, the effect of the number of lagged adoptions by neighboring states is positive and increasing with the number of such adoptions. This pattern is not perfect as there are occasionally cases in which adding one additional adoption does not increase diffusion pressures, e.g., moving from six to seven neighbors already having adopted the policy generally does not lead to a greater chance that the state in question will adopt the policy. But rarely do we see major decreases in diffusion pressures. We also find evidence that the proportion of neighboring states that have adopted also increases the pressure to innovate: a state bordered by one other state that has adopted will feel more pressure if that is its sole neighbor than if it has seven other neighbors that have not adopted. Interestingly, though, the proportion effect disappears once we include policy fixed effects and becomes negative when we also add year fixed effects. Still, even with this change, the overall effect is of positive diffusion given the large values of the coefficients for the number of neighboring states that have adopted.

[Figure 1 Here.]

In order to see this, Figure 1 plots the estimated diffusion effect based on the combination of the number and proportion of neighboring states that have adopted. We used the results of the fourth model, which includes state fixed effect, and calculated the estimated change in the probability of adoption that results from a move from zero neighbors' adoptions to all neighbors having adopted. We did these calculations for two hypothetical states with four or eight contiguous neighbors.[5] For both hypothetical states, we see a nearly linear increase in the probability of adoption from about three percent with just one neighboring adoption to over twenty percent with eight. Because the state with fewer neighbors experiences a more rapid increase in the proportion of its bordering

[5] In order to set the baseline level adoption rate, we set the fixed effect for this state at the average of the estimated state effects.

states that have adopted, it experience a quicker increase in its own probability of adoption, though only on the order of a percentage or two. If we use the results from the final model, the figure looks almost identical, except the state with four neighbors has a slightly smaller, rather than slightly larger, change in the probability of adoption.

Overall, then, these results provide solid evidence of diffusion between contiguous states. While they can be interpreted as providing such evidence in general, at least within the context of the 136 policies we examine, they do not imply that diffusion constitutes an important force on every policy, even on every policy that we examined. Nor do they tell us the source of that diffusion. The pooled EHA model merely allows us to test whether diffusion occurs on average across a broad set of policies, even when controlling for constant differences across states, policies, and years.

While the above results indicate that states do tend to respond to policy activity in neighboring states on average, they also allow us to create better estimates of internal innovativeness since we have stripped out the role of various external factors. As noted previously, purging state innovativeness of external effects allows us to obtain a better estimate of internal innovativeness, thereby removing likely bias in the original estimates and separating states from their fixed geographic locations. In order to create these estimates, we use the results from the fourth model in Table 2, which includes multiple measures of diffusion between contiguous states as well as state fixed effects. The estimated fixed effect for each state provides an estimate of state innovativeness independent of the included external forces. We then compare these to the original innovativeness scores reported in Boehmke and Skinner (2010) by estimating a pooled EHA with only state fixed effects, but rather than convert the coefficients into probabilities, we keep them in the underlying latent variable scale. To account for the uncertainty in these estimates, we also report 95% confidence intervals based on the standard errors for each fixed effect.

[Figure 2 Here.]

Figure 3 presents plots of both scores along with the estimated 95% confidence intervals. Four features stand out. First, the scores that account for diffusion are smaller overll. This makes sense diffusion has a positive effect on every state: once we remove it, state innovativeness based only on internal differences decreases. Second, the scores that have removed the diffusion component exhibit a greater spread, with scores ranging from -4 to -2.6 compared to a range of -3.5 to -2.3 for the scores that include diffusion effects. The standard deviations tell a similar story with the purged scores being 25% greater at 0.3 compared to the original scores 0.24. Third, the estimated standard errors of the scores are on average about 10% greater in the model that accounts for diffusion. Fourth, the relative ordering of states changes a bit, but remains relatively constant. For example, California and New Jersey sit at the top in both plots while Wyoming and Mississippi remain as the bottom two. We explore these differences in more detail in the next figure.

[Figure 3 Here.]

Figure 3 compares the two scores more directly by presenting a scatter plot of the purged scores against the original scores. As noted earlier, there is a clear downward shift in all of the scores, indicated by the fact that all lie below the dashed identity line. This plot makes clear which states experience the greatest change in estimated innovativeness due to the removal of external considerations. Some states, like Florida, Georgia, and Maine, move up ten spots or more whereas others, such as Missouri, Kentucky, and Arizona move down a few slots. The difference is fairly clear: the former have relatively few neighbors while the latter have a greater number. Removing external diffusion effects has a greater effect for states with more neighbors since external diffusion plays a bigger role in their innovations. Of course, the effect depends not just on how many neighbors a state has, but on the innovativeness of those neighbors. Thus helps explain why Florida, bordered by Georgia and Alabama, sees the largest relative increase. A simple regression of the change in the score on the number of neighbors underscores these two forces: each contiguous neighbor results in a 0.06 decrease from removing external forces, but the number of neighbors explains only 0.64 of the variation in the change. The rest is due to differences in neighbors' innovation levels.

5.2 Explaining Internal Innovativeness

Having disentangled external and internal diffusion forces, we now move to explaining variation in internal innovativeness across states. Here, we focus on widely used characteristics considered in the literature with an eye to those for which we can obtain data over a long time period.

The internal state factors that drive innovativeness are the resources available from which legislatures can draw upon. These characteristics, termed “slack resources”, provide advantages to states since they serve to increase organizational capacity. Empirical evidence for this relationship shows that wealthy and highly industrialized states with large populations rank highest in terms of policy innovativeness (Walker 1969). For state legislative bodies, the organizational capacity provides a fertile ground for policy outputs. The dimensions of legislative professionalism (i.e., the mean of employees per legislator, length of the legislative session, and mean salary) can be considered to be slack resources (Squire 1992). Previous single policy studies provide empirical support for this relationship, such as the adoption of statewide smoking bans and access to government services through the Internet (Shipan and Volden 2006; Tolbert, Mossberger and McNeal 2008).

In addition to slack resources, other political, economic, and social characteristics of states are factors that can influence policy innovativeness. One barrier to policy innovativeness might be divided government or split branch government (Fiorina 1982; Ranney 1976; Holbrook and Dunk 1993). Therefore, we expect that states with periods of divided government will be less innovative compared to states that have long periods of unified government. States that share similar ideologies tend to adopt the same policies (Grossback, Nicholson-Crotty and Peterson 2004; Roh and Haider-Markel 2003; Volden 2006). If this is the case, then ideologically similar states should rate relatively closely in terms of exhibiting innovative proclivities. Since some policies in this data set diffused through the direct democratic process, initiative states may be more innovative following from the logic of the “gun behind the door” theory. Simply stated, legislators are conscious of the threat of a possible citizen initiative, and if the threat is perceived as credible, the legislature will produce a policy that is closer to the median voter's ideal point to avoid the possibility of the public producing one that is further away (Gerber 1999).

States that have a higher degree of racial and ethnic diversity should also have incentives to innovate new policies as a greater degree of heterogeneity in the population has been shown to produce higher variations in policies than homogeneous states (Hero and Tolbert 1996). The presence of distinct groups may prompt policymakers to either promote policies that burden or benefit them (Ingram, Schneider and Deleon 2007). In either case, this policy promotion should increase state innovativeness.

5.2.1 Measures of Innovativeness

Since it is plausible that resources are integral to the innovativeness of states, we start by operationalizing the measures that capture aspects of these resources. We obtained our measures of income and state population from the Bureau of Economic Analysis. For income, we use real dollars per capita.[6] Both are available annually from 1929-2010 and population is available decennially before that. In order to incorporate as many years as possible, we created an imputed version of state population that linearly interpolated population between the 1910 and 1920 values and between the 1920 and 1929 values.

Legislative professionalism is measured using Squire's (1992) method, which captures the resemblance of each statehouse to Congress and is constructed by indexing the mean staff per legislator, mean legislator salary, and the average number of days per legislative session. We utilize King's (2000) measure of this variable since it is measured decennially since 1963 and assign values for the entire decade in which they were measured.

We include other politically and socially relevant variables as well. For state ideology, we use both citizen and elite components (Berry et al. 1998). These are measured along a 0-100 scale, with increasing values indicating increasing liberalism. Party competition has been hypothesized to be associated with innovativeness (Ranney 1976; Holbrook and Dunk 1993). Therefore we include

[6]We used the BEA's urban consumer price index (CPI-U) to convert nominal income to real.

a measure of unified government based on Klarner's (2003) data from 1959-2007. We include a dichotomous indicator of initiative states, coded 1 in each year that the process is available for each state. These data are from the Initiative and Referendum Institute website. Finally, racial diversity is measured based on statistics coded by the U.S. Census from 1960-2005; in order to maintain comparability over time, we calculate the sum of the squared proportions of white, African American, Native American, and Asian and Pacific Islander.

5.2.2 Empirical Results

We now estimate a series of pooled EHA models to test whether these various factors influence state innovativeness. Because we only have measures for some of them for a few decades, we start with a sparse model that covers then entire time period and then move to more fully specified models over shorter periods of time. Our final model includes data from 1960-2000, but still has almost fifty thousand observations. Note that when we estimate models on smaller time periods we include all valid observations: thus an observation for a state that had not adopted a specific policy before 1960 would be included in the final set of models whereas an for a state that had adopted that same policy before 1960 would not be included. For each set of models, we start with a basic specification and then add policy, year, and state fixed effects. Policy fised effects will account for anything unique to each policy that affects its overall rate of diffusion, for example whether it involved a Federal mandate (cite here) or was particularly salient or complex (Nicholson-Crotty 2009). Year fixed effects account for common shocks across the states such as the Great Depression, oil shocks, wars, or changes in technology. Finally, state fixed effects account for any constant differences across states or regions left after we include various covariates, such as political culture (Elazar 1984; Sharkansky 1969).

[Table 3 Here.]

Table 3 reports the results of the model that covers the entire time period, 1913-2009. As independent variables we include the proportion of neighboring states that had adopted the policy, the state's total population (with interpolated values before 1929, as discussed in the previous section) and whether the state has the direct initiative process.[7] This gives us over eighty-four thousand state-policy-year observations. The results are generally quite consistent. External diffusion continues to positively influence innovation; larger states tend to adopt policies sooner than other states; and initiative states tend not to be be more innovative on average. Some weak evidence to the contrary for the latter conclusion emerges in the model without fixed effects, but disappers once we account for differences across policies, states, or time.

[Table 4 Here.]

In the next set of models we add in one more variable, real per capita income, for which we have data back to 1929. Given the importance of this variable and population in the literature, it seems worthwhile to estimate models that include them for as long a time period as possible. We report these results in Table 4. The results for diffusion and population change very little and initiative states remain just as innovative as other states. Income is positively and significantly related to innovativeness in the first three models, but switches signs and becomes negative and significant one we include state fixed effects. Interestingly, it seems that this reversal is not due entirely to the inclusion of state fixed effects, but rather to the combined role of state and year fixed effects as models with one but not the other always produce a positive and significant coefficient. This result is certainly surprising and warrants further consideration to understand why the inclusion of state and year fixed effects reverses a common and strong finding.[8]

[Table 5 Here.]

Finally, we include a wider set of variables in the final set of models, which reduces the time period of our analysis from 1960 to 1999. The variables included in previous models produce similar results and while real income again switches sign in the final model, it does not quite attain statistical significance. Few of the additional variables produce consistent results, however. Legislative professionalism has a negative and significant effect in the first two models, but is nowhere near so in the second models with state and year fixed effects. Minority diversity performs

[7]We also included a measure of the number of direct initiatives proposed in each state, but found that it did not affect the interpretation enough to warrant its inclusion.

[8]A similar result obtains if we include a cubic time trend rather than annual fixed effects.

similarly. Neither government nor citizen ideology nor unified government has a significant effect, with one exception.

6 Discussion and Conclusion

Overall our results indicate the presence of three main factors that consistently influence state policy innovativeness. External diffusion, as measured between contiguous states, consistently increases innovativeness. Controlling for this, we find evidence of differences in innovativeness across states with wealthier and larger states being more innovative, though the effect of wealth becomes negative when we include both state and year fixed effects. This latter effect is puzzling and deserves further inquiry.

In future, more attention could be paid to the mechanisms of external diffusion. While we able to estimate in a flexible manner the influence of diffusion between contiguous states, our models assume a constant effect across policies. Theoretical and empirical results lead us to expect different forms of diffusion across policy areas based on the distinct components of social learning and economic competition, which would not necessarily operate consistently across policies. Further, with over 100 policies we could likely begin to specify forms of diffusion that do not focus so specifically on diffusion between contiguous neighbors, for example by weighting adoption by distance or other relationships between states, such as ideology (Grossback, Nicholson-Crotty and Peterson 2004; Volden 2006) or institutional makeup (Boehmke 2005).

In addition to examining the effect of these different factors for explaining differences in innovativeness, our pooled EHA approach allows us to provide better estimates of differences across states in overall internal innovativeness. Removing external diffusion allows us to isolate internal innovativeness, leading to significant changes in our estimates of the relative scores across states. Improvements in specifying our model of external diffusion would potentially improve these estimates. Further, using the pooled EHA model offers many options for estimating innovation scores, whether for subsets of time or policies, allowing us to acknowledge and estimate differences in innovativeness rather than viewing this original shortcoming as a flaw in the concept.

A Supplementary Appendix

Table 1: Information about Policies and Adoptions in the 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	16	Abortion pre-Roe
absvot	1960	2003	24	Unrestricted Absentee Voting
acctlic	1896	1951	48	Accountants Licensing
adc	1936	1955	48	Aid to Dependent Children (Social Sec.)
adcom	1925	1939	41	Advertising Commissions
aging	1974	1991	18	Strategic Planning for Aging
aidperm	1950	1957	44	Aid to Permanently/Totally Disabled
airpol	1907	1973	48	Air Pollution Control
alcbevcon	1926	1948	39	Alcoholic Beverage Control
alctreat	1943	1957	39	Alcoholic Treatment Agency
animcruel	1804	2003	41	Animal Cruelty Felony Laws
antiage	1903	1975	22	Anti-Age Discrimination
antiinj	1913	1939	24	Anti-Injunction Laws
antimis	1691	1913	38	Antimiscegenation law
archlic	1897	1951	47	Architects Licensing
arts	1936	1966	28	Council on the Arts
ausbalsys	1878	1950	48	Australian Ballot System
autoreg	1901	1915	48	Automobile Registration
autosaf	1962	1965	43	Automobile Safety Compact
banfaninc	1996	2001	28	Ban on Financial Incentives for Doctors to Perform Less Costly Procedures/Prescribe Less Costly Drugs
bangag	1975	1999	44	Prohibits Agreements that Limits a Doctor's Ability to Inform Patients of All Treatment Options
beaulic	1914	1948	45	Beauticians Licensing
blind	1936	1953	48	Aid to the Blind (Social Security)
boh	1869	1919	48	Board of Health
bottle	1971	1986	10	Bottle Deposit Law
bradycamp	1989	2000	16	Child Access to Guns Protection Law
broadcom	1990	1997	18	State Law Requiring Broad Community Notification of Sex Offenders
budgstd	1911	1926	48	Budgeting Standards
cappun	1972	1982	38	Capital Punishment
ccreceipt	1999	2008	30	Restrictions on Displaying Credit Card Numbers on Sales Receipts
chartersch	1991	1996	23	Charter Schools
childabu	1963	1967	46	Child Abuse Reporting Legislation
childlab	1901	1919	46	Child Labor Standards
childseat	1981	1984	47	Child Seatbelt Requirement
chirolic	1899	1949	44	Chiropractors Licensing
cigtax	1921	1964	46	Cigarette Tax
citzon	1913	1929	47	Zoning in Cities - Enabling Legislation
civinjaut	1998	2001	14	Civil Injunction Authority
cogrowman	1970	1998	9	Planning Laws Requiring Loc/Reg Planners to Coordinate Growth Management Plan Developments
colcanscr	1991	2007	26	Colorectal Cancer Screening
comage	1945	1955	21	Committee on the Aged

Table 1: (continued)

Policy	First	Last	Total	Description
compsch	1852	1918	48	Compulsory School Attendance
conacchwy	1937	1959	42	Controlled Access Highways
consgsoil	1892	1948	31	Conservation of Gas and Oil
contrains	1996	2007	26	Insurers That Cover Prescription Drugs Cannot Exclude FDA-Approved Contraceptives
correct	1970	1991	18	Strategic Planning for Corrections
credfreez	2001	2006	24	Limits Credit Agencies from Issuing a Credit Report without Consumer Consent
crtadm	1937	1965	25	Court Administrators
cyberstalk	1998	2001	21	Cyberstalking Definition and Penalty
deaf	1822	1921	31	School for the Deaf
debtlim	1842	1936	41	Debt Limitation
denlic	1868	1935	48	Dentists Licensing
dirdem	1898	1972	26	Initiative/Referendum
dirprim	1901	1955	48	Direct Primary
dui08	1983	2001	24	.08 per se penalty for DUI
earlvot	1970	2002	13	In-Person Early Voting
econdev	1981	1992	22	Strategic Planning for Economic Development
education	1970	1991	14	Strategic Planning for Education
edutv	1951	1989	42	Educational Television
elecdayreg	1974	1994	7	Election Day Registration
elecdereg	1996	1999	24	Electricity Deregulation
englic	1908	1947	48	Engineers Licensing
engonly	1811	2007	28	English Only Law
enterzone	1981	1992	37	State Enterprise Zones
environ	1978	1991	14	Strategic Planning for Environmental Protection
equalpay	1919	2002	28	Equal Pay For Females
expsta	1887	1893	48	Agricultural Experiment Stations
fairemp	1945	1963	24	Fair Employment Laws
fairtrade	1931	1938	44	Fair Trade Laws
famcap	1992	1998	21	Family Cap Exemptions
fhpriv	1959	1963	11	Fair Housing - Private Housing
fhpub	1937	1961	15	Fair Housing - Public Housing
fhurb	1945	1963	15	Fair Housing - Urban Renewal Areas
fish	1864	1915	35	Fish Agency
foia	1851	2003	38	Open Records/Freedom of Information Acts
forest	1885	1952	44	Forest Agency
gastax	1919	1929	48	State Gas Tax
gaymarban	1995	2008	31	Constitutional Amendment Banning Gay Marriage
gdl	1996	2009	47	State Graduated Driver's Licensing Program
grandvist	1964	1987	48	Grandparents' Visitation Rights
harass	1998	2001	10	Harassment Crime
hatecrime	1978	1994	32	State Hate Crime Laws
health	1985	1991	23	Strategic Planning for Health Services
higissue	1990	1994	35	Guranteed Issue of Health Insurance
higrenew	1990	1995	44	Guranteed Renewal of Health Insurance
hiport	1990	1995	42	Health Insurance Portability
hiprecon	1990	1994	38	Health Insurance Preexisting Conditions Limits
hmomod1	1973	1988	23	Health Maintenance Organization Model Act (First)
hmomod2	1989	1995	20	Health Maintenance Organization Model Act (Second)
homerul	1875	1962	30	Municipal Home Rule

Table 1: (continued)

Policy	First	Last	Total	Description
hsexit	1976	1999	24	High School Exit Exams
humrel	1945	1963	22	Human Relations Commission
hwyagen	1893	1919	48	Highway Agency
idas	1993	2001	34	Individual Development Accounts
idtheft	1996	2001	43	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)
infanthear	1991	2008	42	Newborn Hearing Screening
intbar	1921	1956	26	Integrated Bar
jucoen	1907	1959	31	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	20	Mandatory Bycicle Helmets for Minors
kinship	1998	2006	26	Kinship Care Program
laborag	1869	1935	40	Labor Agency
legpre	1933	1959	30	Legislative Pre-Planning Agency
legresea	1901	1963	48	Legislative Research Agency
lemon	1982	1984	27	Lemon Laws
libext	1890	1949	48	Library Extension System
lien	1995	1999	25	Lien Statutes
livingwill	1976	1986	36	Living Wills
lott	1964	1993	36	Lottery
mailreg	1972	1995	47	Malpractice Reforms
manclin	1994	2008	23	Mandated Coverage of Clinical Trials
medmar	1978	2008	29	Symbolic Medical Marijuana Policy
merit	1883	1953	48	Merit System
methpre	1996	2005	24	Restrictions on OTC Medications with Methamphetamine Precursors
miglab	1943	1960	28	Migratory Labor Committee
minwage	1915	1965	34	Minimum Wage Law
missplan	1940	1976	19	Missouri Plan
mlda21	1933	1988	48	Minimum Legal Drinking Age 21
mntlhlth	1955	1965	30	Mental Health Standards Committee
mothpen	1911	1931	46	Mothers' Pensions
motorhelm	1967	1985	48	Motorcycle Helmet Requirement
motorvoter	1976	1995	47	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	16	State Policy to Refuse to Comply with 2005 Federal Real ID Act
nrmlsch	1839	1910	48	Normal Schools
nrslic	1903	1933	48	Nurses Licensing
offwmh	1993	2009	19	Special Agent/Office for Women's Health
oldagea	1936	1938	48	Old Age Assistance (Social Security)
parksys	1885	1937	46	Park System
parolesup	1935	1951	48	Parolees/Probationers Supervision
pdrugmon	1940	1999	14	Prescription Drug Monitoring
pestcomp	1968	2009	36	Interstate Pest Control Compact
pharmlic	1874	1935	48	Pharmacists Licensing
pldvpag	1935	1947	43	Planning/Development Agency

Table 1: (continued)

Policy	First	Last	Total	Description
postdna	1997	2005	34	Post-Conviction DNA Motions
primseat	1984	2004	20	Primary Seat Belt Laws
prkagcit	1919	1946	21	Parking Agency - Enabling Act for Cities
prob	1878	2005	45	Probation Law
pubbrefeed	1993	2008	44	Allowance of Breastfeeding in Public
pubcamfun	1973	1987	22	Public Campaign Funding
pubhouen	1933	1950	43	Public Housing - Enabling
realest	1917	1949	40	Real Estate Brokers Licensing
recipsup	1934	1959	40	Reciprocal Support Law
renewport	1991	2004	18	State Renewable Portfolio Standards
retainag	1957	1965	14	Retainers Agreement
retstate	1911	1961	48	Retirement System for State Employees
revenue	1981	1991	17	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	1917	48	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	13	Access to Sex Offender Registries
shield	1935	2009	32	Protections Against Compelling Reporters to Disclose Sources in Court
slains	1894	1955	27	Slaughterhouse Inspection
smokeban	1995	2009	24	Statewide Smoking Ban
snrpresc	1975	2001	27	Senior Prescription Drugs
soil	1937	1945	48	Soil Conservation Districts
sprinsch	1813	1891	47	Superintendent of Public Instruction
stalkdef	1998	2001	24	Stalking Definition and Penalty
statrapage	1950	1998	42	Age Span Provisions for Statutory Rape
stplnb	1933	1947	45	State Planning Board
strikes	1993	1995	24	Three Strikes for Felony Sentencing
taxcom	1864	1929	48	Tax Commission
teacelm	1930	1957	34	Teacher Certification - Elementary
teacsec	1896	1956	41	Teacher Certification - Secondary
tels	1976	1994	24	Tax and Expenditure Limitations
termlim	1990	2000	15	Term Limits
timelim	1993	1996	17	Time Limitations
transport	1974	1991	19	Strategic Planning for Transportation
urbrenen	1941	1952	34	Urban Renewal - Enabling
utreg	1839	1917	47	Utility Regulation Commission
viccomp	1965	1988	40	Victims' Compensation
vicrtsamd	1982	1999	31	Victims' Rights Constitutional Amendment
welfagy	1863	1935	48	Welfare Agency
workcom	1911	1948	48	Workmens' Compensation
zerotol	1983	1998	48	Zero Tolerance ($<$.02 BAC) for Underage Drinking

Source: Walker database from ICPSR (#66), authors' data collection efforts.

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Table 2: Pooled Logit Event History Analysis of State Policy Innovation, 1912-2009

1 Neighboring Adoption	$0.499***$	$0.568***$	$0.178***$	$0.389***$	$0.823***$	$0.638***$
	(0.046)	(0.047)	(0.064)	(0.077)	(0.077)	(0.078)
2 Neighboring Adoptions	$0.856***$	$0.981***$	$0.265***$	$0.658***$	$1.219***$	$0.898***$
	(0.056)	(0.056)	(0.101)	(0.126)	(0.125)	(0.127)
3 Neighboring Adoptions	$0.963***$	$1.116***$	0.139	$0.670***$	$1.308***$	$0.903***$
	(0.071)	(0.074)	(0.136)	(0.172)	(0.165)	(0.168)
4 Neighboring Adoptions	$1.236***$	$1.441***$	0.263	$0.900***$	$1.461***$	$1.055***$
	(0.099)	(0.101)	(0.169)	(0.211)	(0.210)	(0.209)
5 Neighboring Adoptions	$1.589***$	$1.862***$	$0.515**$	$1.251***$	$1.589***$	$1.170***$
	(0.138)	(0.146)	(0.207)	(0.260)	(0.257)	(0.253)
6 Neighboring Adoptions	$1.567***$	$1.934***$	0.437	$1.271***$	$1.582***$	$1.147***$
	(0.211)	(0.201)	(0.266)	(0.311)	(0.349)	(0.331)
7 Neighboring Adoptions	$1.502***$	$1.896***$	0.324	$1.190***$	$1.644***$	$1.181***$
	(0.324)	(0.333)	(0.367)	(0.419)	(0.464)	(0.421)
8 Neighboring Adoptions	$2.051***$	$2.591***$	$0.748*$	$1.809***$	$1.594***$	$1.526**$
	(0.402)	(0.399)	(0.444)	(0.480)	(0.578)	(0.597)
Neighbors Adoptions (%)			$1.303***$	$0.659***$	-0.350	$-0.401*$
			(0.180)	(0.230)	(0.233)	(0.233)
constant	$-3.395***$	$-3.883***$	$-3.395***$	$-3.890***$	$-4.949***$	$-8.309***$
	(0.028)	(0.157)	(0.028)	(0.157)	(0.316)	(0.751)
Policy Fixed Effects					Yes	Yes
Year Fixed Effects						Yes
State Fixed Effects		Yes		Yes	Yes	Yes
Observations	84398	84398	84398	84398	84398	84398
Final Log-Likelihood	-15688.82	-15512.60	-15648.84	-15506.85	-13791.19	-13242.08

Source: Walker database from ICPSR, authors' data collection efforts. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Pooled Logit Event History Analysis of State Policy Innovation, 1913-2009

Neighbors Adoptions (%)	$1.6549***$	$1.3370***$	$0.8060***$	$0.8439***$
	(0.0694)	(0.0712)	(0.0829)	(0.0828)
Total Population (Interpolated)	$0.0410***$	$0.0380***$	$0.0363***$	$0.0393***$
	(0.0038)	(0.0040)	(0.0039)	(0.0101)
Initiative State	$0.0661*$	0.0420	0.0303	0.1241
	(0.0396)	(0.0354)	(0.0357)	(0.1209)
constant	$-3.5641***$	$-2.8777***$	$-1.6709***$	$-2.0245***$
	(0.0351)	(0.0662)	(0.4127)	(0.4320)
Policy Fixed Effects		Yes	Yes	Yes
Year Fixed Effects			Yes	Yes
State Fixed Effects				Yes
Observations	84378	84378	84378	84378
Final Log-Likelihood	-15579.96	-13948.04	-13381.33	-13274.90

Source: Walker database from ICPSR, authors' data collection efforts. Values of population measured by decade and annually from 1929-2009 and linearly interpolated between 1910-1920 and 1920-1929. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Pooled Logit Event History Analysis of State Policy Innovation, 1929-2009

Neighbors Adoptions (%)	$1.5870***$	$1.0393***$	$0.7577***$	$0.7992***$
	(0.0715)	(0.0769)	(0.0854)	(0.0848)
Income (Real per capita)	$0.1060***$	$0.5705***$	$0.3075***$	$-0.2935**$
	(0.0247)	(0.0487)	(0.0567)	(0.1327)
Total Population	$0.0345***$	$0.0258***$	$0.0303***$	$0.0452***$
	(0.0041)	(0.0042)	(0.0041)	(0.0109)
Initiative State	0.0409	0.0214	0.0171	0.1519
	(0.0405)	(0.0373)	(0.0368)	(0.1240)
constant	$-3.7002***$	$-4.1754***$	$-2.6358***$	$-1.0827*$
	(0.0531)	(0.1348)	(0.4549)	(0.6214)
Policy Fixed Effects		Yes	Yes	Yes
Year Fixed Effects			Yes	Yes
State Fixed Effects				Yes
Observations	78625	78623	78623	78623
Final Log-Likelihood	-14772.37	-13142.15	-12710.83	-12614.08

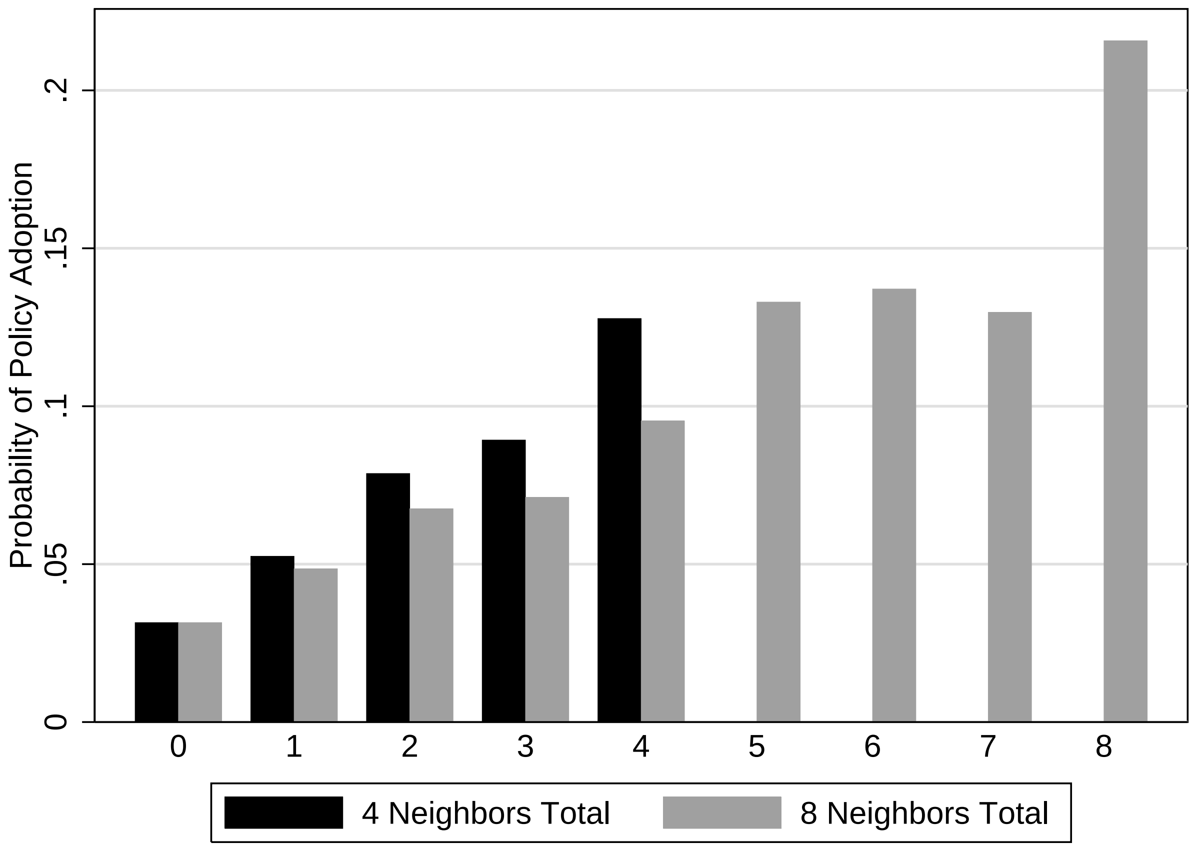
Source: Walker database from ICPSR, authors' data collection efforts. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Pooled Logit Event History Analysis of State Policy Innovation, 1960-2009

Neighbors Adoptions (%)	$1.6613***$	$1.3697***$	$0.8863***$	$0.9370***$
	(0.1019)	(0.1082)	(0.1159)	(0.1156)
Income (Real per capita)	$0.3653***$	$0.7235***$	$0.3274***$	-0.3530
	(0.0538)	(0.0726)	(0.0821)	(0.2222)
Total Population	$0.0410***$	$0.0309***$	$0.0272***$	$0.1037***$
	(0.0082)	(0.0071)	(0.0074)	(0.0371)
Initiative State	$0.1371**$	$0.1073**$	0.0551	0.3597
	(0.0555)	(0.0507)	(0.0513)	(0.2313)
Legislative Professionalism	$-0.9521***$	$-0.7008**$	-0.0547	-0.2772
	(0.2963)	(0.2961)	(0.2954)	(0.6326)
Government Ideology	-0.0005	0.0001	0.0013	-0.0002
	(0.0014)	(0.0014)	(0.0014)	(0.0016)
Citizen Ideology	$0.0047*$	-0.0005	0.0006	0.0021
	(0.0025)	(0.0025)	(0.0026)	(0.0044)
Unified Government	0.0148	0.0084	0.0020	0.0443
	(0.0483)	(0.0501)	(0.0494)	(0.0536)
Minority Diversity	$-0.6644***$	$-0.4834**$	-0.1768	0.9658
	(0.2453)	(0.2363)	(0.2388)	(0.9101)
constant	$-3.9178***$	$-4.1212***$	$-2.3408***$	$-2.1256*$
	(0.2277)	(0.2591)	(0.3019)	(1.0919)
Policy Fixed Effects		Yes	Yes	Yes
Year Fixed Effects			Yes	Yes
State Fixed Effects				Yes
Observations	46843	46843	46843	46843
Final Log-Likelihood	-8482.99	-7552.22	-7371.67	-7307.97

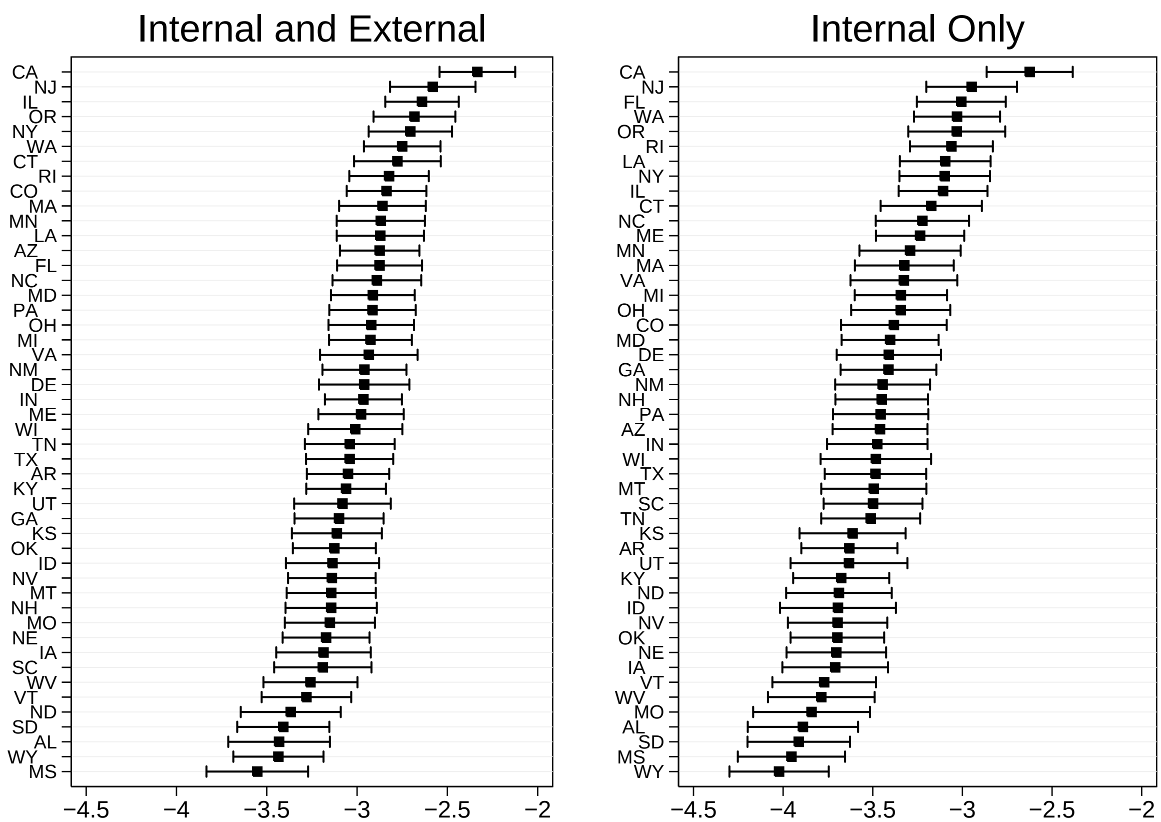
Source: Walker database from ICPSR, authors' data collection efforts. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Figure 1: Effect of Neighboring States' Adoption on Probability of Policy Innovation



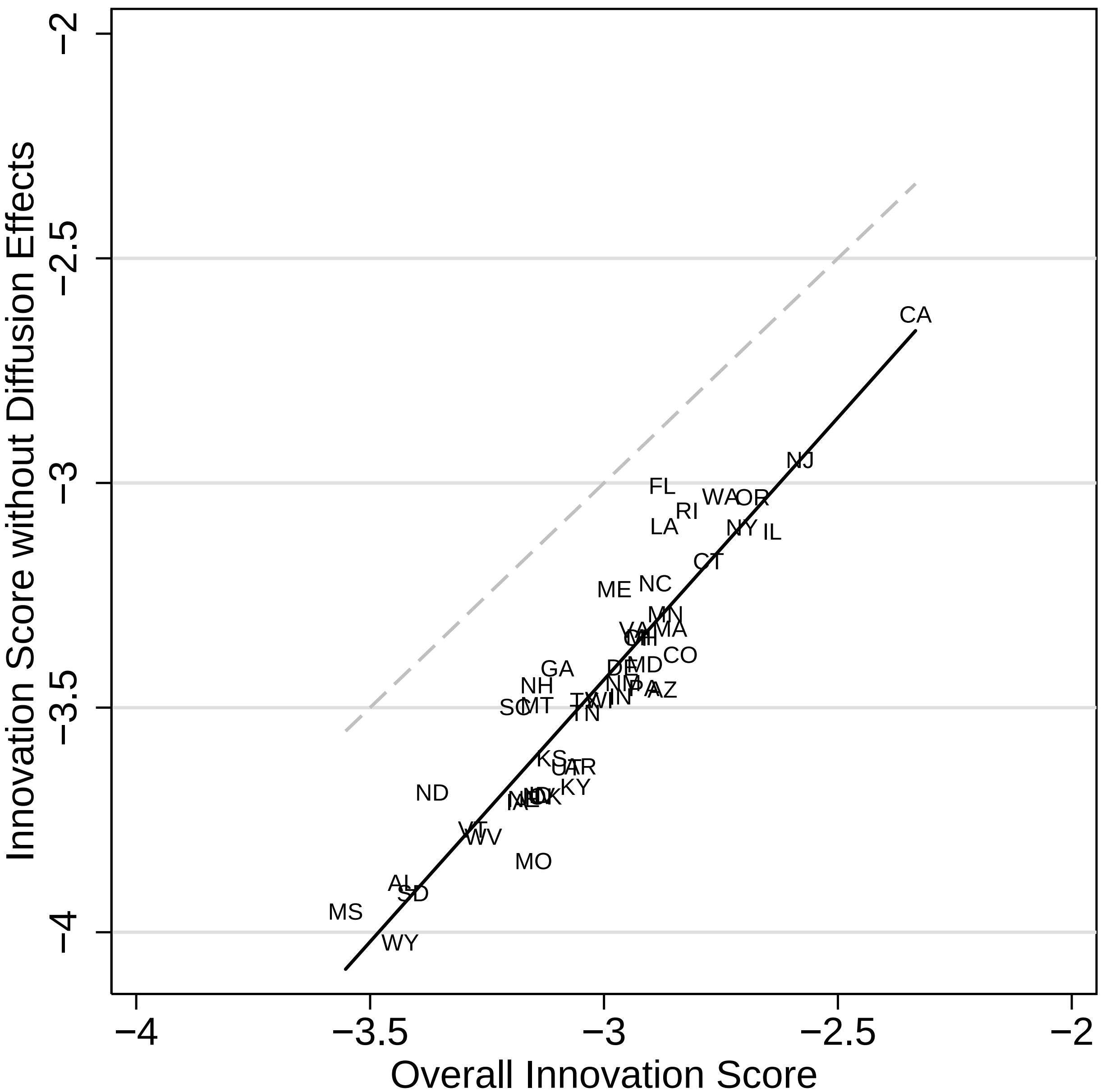
Notes: Calculated using estimates from Table 2 using the model with state fixed effects. We averaged across the state effects before predicting the probablity of adoption.

Figure 2: Estimated Innovation Scores and Standard Errors with and Without External Diffusion



Notes: Calculated using estimates from Table 2 using the model with state fixed effects and a model with just state fixed effects. Standard errors represent 95% confidence interval using the estimated standard error for each state's fixed effect.

Figure 3: Comparison of Innovation Scores with and Without External Diffusion



Notes: Calculated using estimates from Table 2 using the model with state fixed effects and a model with just state fixed effects.