What Happens When Insurers Make the Insurance Laws?
State Legislative Agendas and the Occupational Makeup of Government

Nicholas Carnes
Assistant Professor of Public Policy and Political Science
Sanford School of Public Policy
Duke University
nicholas.carnes@duke.edu

Virginia Gray
Robert Watson Winston Distinguished Professor of Political Science
Department of Political Science
University of North Carolina at Chapel Hill

Eric Hansen
Ph.D. Candidate
Department of Political Science
University of North Carolina at Chapel Hill

May 26, 2017

Authors listed in alphabetical order.

The authors are grateful for research assistance from Mason Dufresne, Dan Gustafson, David Joyner, Melissa Lee, Amanda Lewellyn, Katie Pischke, and Adam Weber.
Abstract

Do the occupational backgrounds of politicians affect the government’s agenda? Businesses have long thought so; the first occupational data on state legislatures were collected by the Insurance Information Institute, an interest group representing major insurance companies. In this paper, we test one potential motive for these kinds of efforts: the idea that the occupational makeup of governments affects the agendas they pursue, an argument that has been neglected in research on politicians’ occupational backgrounds. We focus here on the insurance industry. Using original data, we find that states with more insurance employees in their legislatures consider fewer bills regulating insurance (negative agenda control), that former insurers play a disproportionate role in drafting the insurance bills that are introduced (positive agenda control), and that the bills insurers introduce are considerably more favorable to the industry (positive agenda control). The occupational makeup of legislatures seems to affect their agendas—as industry groups have long suspected.

Keywords: descriptive representation; insurance; social class; occupation; agendas; state politics
Does it matter what professional backgrounds politicians come from? Should scholars and activists care as much about the occupational makeup of our political institutions as they do about the racial and gender backgrounds of leaders?

Industry organizations have long thought so. The first people to collect recurring national data on the aggregate occupational makeups of state legislatures in the U.S. were not scholars of American politics, but researchers at the Insurance Information Institute, an interest group representing dozens of major national insurance companies. In the 1960s and 1970s, the Institute began collecting nationwide data on the occupations that state lawmakers came from, including the number who were actively employed in the insurance industry—presumably in the hopes that those legislators would be especially favorable to policies that benefitted insurers.

Was their hunch right? Do politicians tend to favor the industries they worked in? As it stands, scholars of U.S. politics have only limited evidence. Most research on the personal roots of elite decision making (Burden 2007) and the numerical or descriptive representation of social groups (Pitkin 1967) has focused on characteristics like race and gender (e.g., Berkman and O’Connor 1993; Canon 1999; Griffin and Newman 2008; Swers 2002; Thomas 1991; Whitby 1997). Only a handful of studies have explored whether politicians from different occupations behave differently in office (Carnes 2012; 2013; 2016; Eulau and Sprague 1964; Miller 1995; Witko and Friedman 2008). And although their findings generally suggest that occupations matter, these studies still leave many stones unturned.

Perhaps the most pressing weaknesses in the emerging literature on politicians’ occupational backgrounds is that most studies have focused on the associations between a leader’s former occupation and how he or she casts roll-call votes. This is a logical place for researchers to begin, of course; data on roll-call voting are easy to obtain and analyze. But just as
the literatures on the gender and racial backgrounds of politicians eventually expanded past roll-call analysis to consider other consequential forms of pre-vote legislative conduct, it is probably time for the literature on the occupational backgrounds of politicians to move beyond the low-hanging fruit.

In this paper, we ask whether politicians’ occupational backgrounds are associated with the important work that goes on during the agenda-setting stages of the legislative process (e.g., Hall 1996; Kingdon [1984] 2011; Schattschneider [1960] 1975). Does the presence or absence of politicians from a given occupational background affect the kinds of bills that are introduced in a legislature?

As a critical test of the hypothesis that occupations matter, we focus on the trillion-dollar industry that pioneered quantitative research of the occupational makeup of American legislatures: the insurance industry. If any occupational background is associated with a legislator’s agenda-setting activities, it should be insurance. From an electoral standpoint, insurance policy can be an unrewarding issue. Insurance-related legislation is often highly technical, the vast majority of insurance legislation receives little or no media attention, and routine insurance bills rarely excite the passions of the general public.\(^1\) The lawmakers who work on insurance issues are therefore likely to be those who already have expertise and interest in the field—including, we suspect, legislators who have worked in the insurance industry themselves.

Drawing on data from two recent legislative sessions (the 2007-2008 and the 2011-2012 sessions), we study the 30 states for which we could obtain both information about legislators’

\(^1\) Of course, high-profile bills like the Affordable Care Act generate far more interest. They are the exception, however, not the rule. The thousands of insurance bills introduced in state legislatures and Congress each year receive far less attention.
occupational backgrounds (either their main occupation before holding office, or for those who were still employed, their main occupation outside of holding office) and data on the bills introduced in each state that affected the insurance industry. Using a mix of human coding and automated text analysis, we classified every insurance bill introduced in each state based on whether it benefitted the insurance industry.

With these data, we then explore whether politicians from the insurance industry affect the legislative agenda on insurance regulation, either by promoting favored legislation (*positive agenda control*) or by blocking unwanted regulations (*negative agenda control*). Our analyses find evidence of both. States with more insurance industry employees in their legislatures consider fewer bills regulating the industry overall (Study 1). But the bills that are introduced are disproportionately influenced by former insurers (Study 2), and the bills insurers introduce are considerably more favorable to the industry (Study 3).

These findings have important implications for the study of descriptive and substantive representation and the personal roots of elite decision making, and especially the emerging research on the occupational makeup of governments in the US and elsewhere. Just as the racial and gender makeup of legislatures can affect whether racial and gender issues make it onto the agenda, the professional makeup appears to play a role in determining which problems and policies our government focuses on, too.

**Agenda Setting and Occupations**

The legislative agenda—the set of problems lawmakers hope to take action on and the set of policies they are considering to solve them—is one of the most important sites of power in the policymaking process. If lawmakers are unwilling to entertain a given policy, it cannot be
considered or debated, let alone enacted. If they are uninterested in a problem, government interventions to solve it stand little chance of getting off the ground.

Scholars of legislative politics have long recognized that the government’s agenda depends at least in part on the personal views and backgrounds of legislators. Of course, crises, unexpected events, and sudden shifts in public opinion sometimes force problems or policies into the spotlight. Lawmakers sometimes sponsor bills, work on committees, and participate in floor debates in the hope of building reputations that constituents, donors, and interest groups will view favorably (Koger 2003; Weingast and Marshall 1988). But lawmakers also routinely champion causes that they have some special expertise in, or some personal connection to (Burden 2007; Fenno 1973; Hall 1996; Kingdon [1984] 2011; Krehbiel 1991; Mayhew 2000; Schiller 1995; Wawro 2000). That is, lawmakers often fight for proposals that they know more about or care more about.

The proposals lawmakers know and care about are in turn often correlated with their personal backgrounds and life experiences. Black lawmakers work harder than their white colleagues to promote legislation on issues that affect the black community (Bratton and Haynie 1999, Grose 2011). Women in legislatures work harder to promote legislation on women’s issues (Little, Dunn, and Deen 2001; Swers 2002). Gay, lesbian, and bisexual legislators sponsor more legislation advancing LGBT+ rights (Haider-Markel 2010; Hansen and Treul 2015). Religious lawmakers work harder to promote legislation on religious issues (Burden 2007, ch. 5). The numerical or descriptive representation of many social groups seems to affect whether their concerns are mirrored in the legislative agenda.

Is the same true for occupational groups? Do legislators from different lines of work champion different kinds of bills? There are good theoretical reasons to expect them to. People
from different occupations often tend to have different views, especially on issues that directly pertain to their industries. This may be because they simply have different material or political incentives: a simple capture model would predict that legislators from a given industry would have personal financial incentives (e.g., the revolving door) or political incentives (e.g., campaign contributions from lobbyists) to promote new laws that favor the industry, as scholars of bureaucracy have long recognized (Carpenter 2014). Alternatively, lawmakers’ careers might simply socialize them to prioritize different problems and to think differently about proposed solutions. Cultural capture models would predict that legislators from a given industry would work to promote it, not because of personal material interests, but because their experiences in the industry shaped their perceptions about what constitutes good public policy (Kwak 2014, Jansa and Gray 2017). For example, a retired public school teacher serving in the legislature may be expected to support legislation increasing teacher salaries, not because she expects to benefit personally but because her time working as a teacher influenced her opinion on how much teachers should be paid. Whatever the exact mechanism, lawmakers from different occupations may well bring different priorities to the agenda-setting process.

To date, however, there has been almost no research on the links between the occupational backgrounds of politicians and the agendas that institutions pursue. In general, research on the descriptive representation of occupational groups has been somewhat sporadic. In the 1960s, there was a burst of scholarship on the careers and social circles politicians were drawn from (e.g., Matthews 1964; Domhoff 1967), but this line of research slowed to a trickle in the 1970s (for a review, see Putnam 1976), and was more or less dormant until the early 2000s (but see Miller 1995). In the last decade, scholars have taken a renewed interest in this topic (e.g., Bonica 2017; Campbell and Cowley 2014; Carnes 2013; Carnes and Lupu 2015; Sojourner
2013; Witko and Friedman 2008). However, this new wave of research on politicians’ occupational backgrounds has still left many stones unturned. Scholars have only examined a handful of occupations. For instance, we know something about politicians from law (Miller 1995; Bonica 2017), business (Witko and Friedman 2008), farming (Bellemare and Carnes 2015), and working-class jobs (Carnes and Hansen 2016), but not other lines of work. Perhaps more problematic, the recent work on the effects of politicians’ occupational backgrounds (or related measures like their wealth or outside income) has focused almost exclusively on just one measure of legislative conduct, namely, how lawmakers cast roll call votes (e.g., Carnes 2012; 2016; Eulau and Sprague 1964; Grose 2013; Griffin and Anewalt-Remsburg 2013; Kraus and Callaghan 2014; Witko and Friedman 2008). This is an understandable choice, of course; roll-call voting is far easier to measure than agenda-setting activities like introducing bills (e.g., Hall 1996). Moreover, most studies have found important links between occupation and roll calls; just as ordinary citizens from different occupations often have different views about economic issues, lawmakers from different occupational backgrounds tend to vote differently on economic legislation. However, most modern research has stopped short of asking whether the occupational differences in how legislators vote are also apparent when they do the important work of crafting bills, advocating problems, and setting the legislative agenda.

The rare studies that have broached this important subject have had significant (and admitted) methodological limitations. One approach has been to focus on the issues lawmakers work on, but not the stances they take. For instance, Carnes (2013, ch. 3) used data on the bills that individual members of Congress introduce and the number of cosponsors they attract to show that legislators from working-class occupations work harder to promote domestic
economic policies. However, as the study notes, the research design could only identify the issues each bill addressed (e.g., economic policy vs. agricultural policy), not the actual policy implications of each proposal (e.g., pro-worker vs. pro-business proposals).

A second approach has been to ask whether legislators are disproportionately likely to serve on committees that regulate the industries they work in (or worked in in the past). This research has found clear evidence that legislators seek out committee assignments related to their current or former industries (e.g., Battista 2012; Buchanan 1962; Hamm, Hedlund and Post 2011; Renzulli and Center for Public Integrity 2002). But as these studies often note, data on committee appointments is not the same as data on the actual policies or proposals legislators pursue. In principle, at least, a lawmaker who worked in health care might use a seat on a health-related committee to increase taxes and regulation on health care providers.

Whereas most prior research on the occupational backgrounds of politicians has focused on committee assignments or numbers of bills introduced, in this paper we analyze the links between legislators’ occupations and both the volume and direction of new legislation on relevant issues. That is, we go beyond past research, which has asked whether legislators from a given occupational background are more likely to introduce related bills or join related committees. We ask whether legislators from a given occupational background are more likely to give their former or current industry not just more legislation, but the kind of legislation that it wants.

This approach has the important advantage that it allows us to study both negative and positive agenda control. When a group or industry wants to exert positive agenda control—getting preferred policies or problems onto the government’s agenda—existing measures of legislative effort (number of bills, number of cosponsors, and so on) should capture that
phenomenon, albeit somewhat imprecisely. But for many groups and industries, negative agenda control—preventing undesirable ideas or proposals from ever getting serious consideration in government (Bachrach and Baratz 1962; Haider-Markel 2010; Schattschneider [1960] 1975)—is just as important. And if a social group or industry wants a mix of both positive and negative agenda control, studying legislative effort alone may lead us astray. Suppose, for instance, that farmers-turned-legislators fight harder than other members for new farm subsidies, but are also less likely than other members to introduce bills regulating food safety in agricultural production. In this case, a simple measure of total legislative effort might suggest that farmer-legislators introduce about as many agricultural bills as other members on average and lead researchers to the wrongly conclude that farmer-lawmakers are just like other members. By studying both the aggregate volume of legislation introduced on a given issue (which can capture instances when negative agenda control outweighs positive agenda control, or vice versa) and the direction or substance of individual bills (which can be either beneficial or harmful to a given industry), our research captures a wider range of agenda-setting behaviors.

Insurance and State Legislative Agendas

To test the idea that lawmakers’ occupational backgrounds influence their agenda-setting activities, we focused on state legislators who had previously worked in the insurance industry. Why insurance? For one reason, the insurance industry is large and important. The US has the largest private insurance industry in the world, and its annual revenues usually exceed $1.2 trillion. Over 2 million Americans are employed in insurance, and insurance makes up about 40% of the US finance sector (Millard 2015).
The insurance industry has long sought to influence public policy, and the industry was the first to collect data on the occupational backgrounds of US politicians in the hopes of doing so. In that sense, it is a good starting point for research on occupation and, in fact, a crucial case for our argument. If any occupational background influences legislative agenda setting, it should be a background in insurance.

Do lawmakers who worked in insurance themselves differ in how they attempt to influence the legislative agenda? Do they attempt to make the insurance industry’s agenda the government’s agenda? In this paper, we focus on state legislatures. States are ideal for our purposes for several reasons. State agendas are 50 times more numerous than the federal agenda, and far more varied. The occupational makeups of state legislatures also vary far more than the makeup of federal offices (e.g., Carnes 2013). Unlike county and local governments, states have significant agenda-setting powers, and their agendas can be studied far more readily. And—perhaps most importantly—state governments make many of the most important policy decisions pertaining to the insurance industry. States license insurance companies and individual insurance producers (also known as insurance agents or brokers). They also regulate insurance products (often setting caps on premiums and defining crucial concepts like what constitutes “reasonable and fair” information or which policies contain gaps that might be misunderstood by consumers), insurance company finances, and insurance markets. States have remained the primary drivers of insurance regulation even after the drastic changes made to insurance markets under the Affordable Care Act.² Often, individuals and organizations must purchase insurance policies

---

² In the 2012 Supreme Court decision National Federation of Independent Business v. Sebelius, the Court declined to subject health insurance markets to Congressional regulation under the
from in-state providers who conform their policies to meet state requirements. If a legislator’s occupation matters for any issue, it should be insurance—and if an insurance background matters in any jurisdiction, it should matter in state legislatures.

Unfortunately, the Insurance Information Institute no longer publicly shares its data on the aggregate occupational makeup of state legislatures (and has never shared its data on the occupations of individual lawmakers). To determine whether legislators from insurance backgrounds were more likely to promote insurance’s agenda in the legislature, we relied on data from a larger project that aims to develop over-time measures of the occupational makeup of each state’s legislature over the span of several decades. This program of research uses state legislative websites, online historical databases, published legislative manuals, and state directories to develop measures of the occupational backgrounds and personal characteristics of lawmakers in the 30 states that publish occupational data on lawmakers in an easy-to-access online format. These occupational data captured the main occupations that each legislator held.

Interstate Commerce Clause, as the Obama Administration had argued to justify the constitutionality of the ACA.

Previous efforts to collect data on legislators’ occupations (e.g., Maddox 2004, Battista 2012) have relied on a database of state conflict of interest disclosure forms collected by the Center for Public Integrity for a subset of states during the 1999-2000 legislative term. Although these data are more detailed (they include information about every source of income for each legislator), they do not cover the years we use for this analysis.

The 30 included states are Alaska, Arizona, California, Colorado, Connecticut, Florida, Georgia, Iowa, Idaho, Illinois, Indiana, Kansas, Kentucky, Massachusetts, Maryland, Michigan, Minnesota, North Carolina, North Dakota, Nebraska, New Jersey, New York, Nevada,
outside of office, both while they were serving (for state lawmakers who hold outside jobs) and before (for all lawmakers).

Of course, any analysis of agenda-setting on insurance must be sensitive to both negative and positive forms of agenda setting. Insurers benefit from some regulations (like the requirement that drivers purchase auto insurance) and shoulder burdens from others (like fines levied to brokers who fail to meet continuing education requirements). On balance, insurers probably favor fewer new regulations overall. But insurers also regularly advocate reforms, changes to licensing requirements, and many other interventions. Against this backdrop, a simple measure of total legislative effort would miss important features of the way the legislative agenda helps and harms insurance companies. As such, we sought to measure both legislative effort and legislative content.

Using our occupational data, we conducted three related studies to measure (1) the aggregate-level relationship between the number of lawmakers from insurance backgrounds and the amount of legislative effort devoted to insurance issues in the state legislature, (2) whether individual lawmakers from insurance backgrounds were disproportionately likely to introduce or

---

Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Wisconsin, and Wyoming. These 30 states came from every region of the country, and there are no obvious differences between these 30 states and the other 20 in terms of population, social diversity, party control of government, state finances, or other potentially relevant variables. In future iterations of this project, we hope to add additional data on other states, but for now, we are comfortable assuming that the 20 states that do not publish easy-to-use occupational information about lawmakers are essentially missing at random.
influence the drafting of insurance legislation, and (3) whether the insurance bills introduced by lawmakers from insurance backgrounds were more likely to be favorable to the industry.

On balance, we expected to find a negative relationship between the presence of lawmakers from insurance backgrounds and the total volume of legislative effort devoted to insurance. Government regulation is often a burden to the industries being regulated, and we expected to find evidence that lawmakers from insurance backgrounds would exercise some negative agenda control. The more lawmakers from insurance who became state legislators, we reasoned, the less the state legislative agenda would focus on regulating the insurance industry.

Beneath this larger pattern, however, we expected to find evidence of positive agenda control as well. When insurance bills are introduced, we expected former insurers to be heavily involved and we expected them to be disproportionately favorable to the industry. When lawmakers from insurance backgrounds introduced insurance bills, we expected those bills to be more favorable to insurers (relative to the insurance bills introduced by other members). Large, complex industries have incentives to block some regulations and promote others. If lawmakers’ occupational backgrounds influence their work at the agenda-setting stage, we should expect legislators from the insurance industry to generally work to keep regulation off the agenda—but also to champion the proposals that insurers want.

**Study 1: Do State Legislatures with More Insurers Consider Fewer Insurance Bills?**

We first examined the aggregate-level relationship between the share of insurers in a state’s legislature and the volume of new legislation that focused on the insurance industry. Following Gray et al. (2005), we used Lexis-Nexis subject term searches to count the number of
bills and bill amendments introduced in each state legislature in 2007\(^5\) that addressed insurance-related topics. We chose 2007 based on the availability of concurrent state-level lobbying data, which we describe in further detail below.

Using our individual-level legislator occupation data, we first created a simple measure of the proportion of lawmakers in each state who had previously or currently worked in the insurance industry. If a legislator reported working in more than one industry, we counted him/her as having a professional background in insurance.

We also collected data on several control variables. Because the number of bills introduced can vary drastically from state to state, we collected data on the total number of bills introduced in each state from *The Book of the States*. Importantly, when we counted the number of bills introduced on each issue using Lexis-Nexis, our search results counted both bills and amendments to bills as legislation. *The Book of the States*, on the other hand, counted each numbered bill only once, but we considered this a reasonable way to control for state-to-state differences in the total size of the legislative agenda.

\(^5\) For most state legislatures, a two-year term begins in an odd year and contains two sessions lasting one year each. Most often, the legislature meets for more days and considers more legislation in the first session of the term, then use the shorter second session only to address the most pressing issues and pass a budget in advance of an election. Several states have only one session per term. Thus, we only observe agendas in the first session of each term in order to preserve comparability of agendas. For states that begin terms on even years (e.g. New Jersey), we used data from the first session of the term in the year prior to the year of observation (e.g. 2006 data observed for 2007).
State lawmakers might introduce more legislation related to a certain industry when the industry has a greater economic presence in the state. For example, Iowa is likely to consider more agriculture legislation in a given year than Connecticut. As such, we controlled for the size of the insurance industry in each state by collecting Census data on the total number of citizens employed by insurers. We also recorded the proportion of the chambers in each legislature that Democrats controlled. Finally, legislators might consider more or less legislation on a given topic depending on the size of lobbying efforts in a state. We control for lobbying capacity using Gray and Lowery’s data on the number of interest groups lobbying on insurance issues in each of the 50 states for the year 2007 (Lowery et al. 2012).

Figure 1 plots the basic relationship between the count of insurance-related bills and amendments (on the vertical axis) and the share of state lawmakers with professional experience in the insurance industry (on the horizontal axis). Viewed this way, it seems likely that the aggregate occupational makeup of a legislature is indeed associated with the agenda that it pursues. Consistent with our expectations, in states with more insurers in their legislatures, insurance made up a significantly smaller share of the legislative agenda.

Of course, the occupational makeup of government could be associated with a wide range of other factors that might drive the legislative agenda. Maybe states with lots of insurers in their legislatures are also states where insurance is a major industry, where Democrats maintain a strong majority, or where more insurance lobbyists work. To check for these kinds of

---

6 We followed Battista (2013) in using the American Community Survey’s finance and insurance industry category to measure insurance employment statistics.

7 Our results were the same when we used Berry et al’s (1998) measure of government ideology.
confounding variables, we estimated two ordinary least squares regression models reported in Table 1, one without controls and one with the controls described above.

Like Figure 1, the models related the number of insurance bills and amendments introduced in each state in 2007 to the percentage of lawmakers who had worked in insurance. The first model shows only the bivariate regression results between the independent and dependent variable. In it, a one percentage point increase in the share of insurance professionals in the legislature was associated with a decrease of about 100 insurance-related bills or amendments introduced in the legislature. (Also, the $R^2$ and adjusted $R^2$ values are notably high for a model with just a single demographic control.) By itself, the share of insurance
professionals serving in a state’s legislature predicts substantial decreases in the volume of new legislation affecting the insurance industry.

This association, moreover, was essentially the same when we controlled for the partisan makeup of the legislature (whether the legislature was controlled by Democrats), lobbying on
behalf of the insurance industry (the number of registered groups lobbying on insurance matters in the state), potential pressures from citizens employed in the insurance industry (the percentage of the states’ citizens who were employed in insurance), and the total size of the legislative agenda in each state (the number of bills the legislature considered that year). Even with these controls, Model 2 in Table 1 found a negative, statistically significant association between the numerical representation of insurance professionals in a state’s legislature and the amount of attention it focuses on insurance regulation. (The model fit increases substantially in the second model, primarily due to the inclusion of a control for the total number of bills introduced in the legislature.)

Among the control variables, the total number of bill sponsorships was unsurprisingly associated with a greater number of actions on insurance regulation, reflecting differences in legislative capacity. Both greater industry presence in the state and Republican control of the legislature were associated with reduced attention to insurance regulation, but in both cases we were unable to rule out a null relationship with the dependent variable. Finally, the results in the second model indicate that for every additional interest group registered to lobby on insurance-related matters in the state, we would expect a few additional insurance bills or amendments to be introduced, possibly evidence of positive agenda control on specific bills.

To check the robustness of these findings, we estimated several auxiliary models. First, to check that the results of this analysis generalized beyond the 30 states for which we have occupational data, we supplemented our data collection effort with information on the percentage of lawmakers from the insurance industry collected by the National Conference of State Legislatures (model 3 in Table 1). Their data are less precise—the NCSL focuses on each legislator’s main occupation (a coding system that will miss some former insurers who re-
classified their main job as “legislator” after they took office), whereas we focus on whether a legislator has ever worked in the insurance industry. Regardless, supplementing our data with NCSL’s did not change our results in any meaningful way.

Because our dependent variable here was a count of the bills and amendments considered by each state, we also estimated the models in Table 1 using negative binomial regression. The estimates are reported in Table A1 in the Appendix. All coefficient estimates calculated from the negative binomial models match the direction and significance of those using OLS. We also estimated the results using a log-transformed dependent variable in order to more closely approximate a normal distribution assumed by OLS regression. The results from these models are reported in Table A2 of the Appendix. They also show a negative association between the numerical representation of insurance professionals and attention paid to insurance regulation, but we are unable to rule out a null association specifying the model this way.

Even with a small sample and a very blunt measure of the state legislative agenda, our data suggested that legislatures with more former insurers tend to spend substantially less time considering matters of insurance regulation. Consistent with the idea that former insurers exercise negative agenda control, when insurers hold more seats, institutions pay less attention to insurance regulation.

**Study 2: When Insurance Bills are Proposed, Do Insurers Play an Oversized Role?**

When it comes to bills that insurers want, do lawmakers from the insurance industry exert positive agenda control? One way to find out is to focus on the insurance bills that are introduced. If insurers use their positions in legislatures to exert positive agenda control, we would expect that they would discourage many bills (contributing to an overall decline in the
number of insurance laws introduced), but also that they would play an oversized role in the insurance bills that *are* introduced.

To find out if this was the case, we turned to more fine-grained data from Open States, an independent, open-source data collection project previously operating under the auspices of the Sunlight Foundation. Open States aggregates data on state legislative bills, legislators, and actions directly from state legislative websites and makes the data available for bulk downloads using their API. Using Open States’ data, we searched for all legislation concerning the insurance industry introduced in 30 states for which we have occupational data, this time focusing on the 2011-2012 legislative term (the term for which Open States has the most complete legislative data).

Using the search term “insur-” in the API’s search parameter, we first identified the 3,706 bills related to insurance regulation introduced in our 30 states during the 2011-2012 legislative term. We then downloaded data on each bill, including its state and chamber of origin, number, title, a URL linking to the full bill text, and the list of sponsors and cosponsors. Finally, we matched the sponsors and cosponsors of each bill to our list of insurance professionals and coded

8 http://www.openstates.org

9 Full data were not available for all states for the preceding (2009-10) or following (2013-14) terms, and data is not available for other legislative terms.

10 We used the stem for the term in order to identify bills that various conjugations of the word, such as “insurance,” “insurer” and “insurable.” Open States also tags insurance bills, but we opted to use our own search term. The tags are borrowed from varying state definitions of what constitutes an insurance-related bill. Moreover, a comparison of the tagged and searched bills revealed that the tags excluded many relevant bills.
Table 2: Insurance Professional Involvement in Insurance Regulation Bills

<table>
<thead>
<tr>
<th>Insurance Professional was…</th>
<th>No. of Bills</th>
<th>% of Bills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Sponsor</td>
<td>231</td>
<td>6.23%</td>
</tr>
<tr>
<td>Cosponsor</td>
<td>142</td>
<td>3.83%</td>
</tr>
<tr>
<td>Member of Sponsoring Committee</td>
<td>87</td>
<td>2.35%</td>
</tr>
<tr>
<td>Chair of Sponsoring Committee</td>
<td>54</td>
<td>1.46%</td>
</tr>
<tr>
<td>Total</td>
<td>452</td>
<td>12.20%</td>
</tr>
<tr>
<td>Average Percentage of Insurers in Legislature</td>
<td>2.46%</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Authors’ data collection. Rows do not sum to the total due to sponsoring committees including insurance professionals as both chairs and members.*

Each bill for whether insurance professionals were involved in its introduction. For bills introduced by committees (not individual legislators), we coded whether an insurance professional was a member or chair of the committee.

Table 2 breaks down insurance professional involvement in each bill’s introduction across different types of action. Overall, these data suggest that insurance professionals play a disproportionate role in the insurance legislation that makes it onto the state legislature’s agenda. Of the more than 3,700 insurance bills that were introduced in the 30 states, 373 (10%) were sponsored or co-sponsored by an insurance professional. Another 141 (4%) were introduced by a committee that had an insurance professional as a member or chair.
Altogether, these insurer-backed bills made up more than 12% of all insurance bills. In contrast, insurers made up just 2.5% of the typical legislature in these 30 states—that is, insurers were almost five times as likely to be involved in crafting insurance bills as we would expect by chance alone. Of course, the majority of bills that affect the insurance industry are introduced by lawmakers who do not have backgrounds in the insurance industry. In that sense, concerns about complete industry capture of government are probably unfounded. But the occupational background of a legislator seems to matter in this instance. Insurers seem to exercise positive agenda control by playing an oversized role in the insurance bills that are introduced in state legislatures.

**Study 3: Do Legislators from Insurance Backgrounds Sponsor Industry-Friendly Bills?**

Simply knowing that insurance professionals are disproportionately involved in insurance regulation in state legislatures may not suggest anything about their policy preferences for insurance regulation. What kinds of insurance bills do former insurers actually introduce?

To find out, we used a combination of human coding and automated text analysis to parse the textual content of the insurance regulation bills from Open States analyzed in Study 2. We collected URLs linked to the full text of all 3,706 bills from 30 states in the 2011-12 legislative term identified in the previous section, then used a web scraping software package to download the full text from the URLs. Unfortunately, technological barriers reduced the size of our textual data to 2,225 bills in 19 states; outdated links and incompatible file formats for our web scraper prevented us from collecting the remaining bill texts. (We hope to collect the remaining bill text in a future iteration.)
If legislators’ occupations influence how they behave at the agenda-setting stage, we would expect insurance professionals to sponsor more legislation that moves insurance policy in an industry-friendly direction than other members, and less legislation that moves policy away from industry preferences. Of course, insurance regulation is complex and spans many types of insurance. A bill may contain many different provisions, some favored by the industry and others opposed. In general, however, most insurance bills tend to change government involvement in insurance markets in ways that are either favorable or unfavorable to insurers.

Due to the inherent complexity of legislative text, we did not expect an unsupervised text classification program to be able to distinguish between pro-industry and anti-industry bills. Instead, we used a supervised classifier that relied in part on human coding. Of the 2,225 bills, we randomly sampled 500 to code ourselves. Our overarching principle for determining whether a bill was pro- or anti-industry was how the bill affected insurance companies’ bottom line. Pro-industry bills included those that used government funds to help individuals purchase insurance, bills that increased government sanctions for consumer insurance fraud, and bills that decreased insurance companies’ liability limits. Anti-industry bills included those that required insurers to offer policies covering certain types of medical procedures or services, bills that increased insurers’ burden for documenting compliance with regulations, or bills prohibiting business practices deemed unfair by consumer protection advocates. When possible, we searched for media accounts that mentioned the support or opposition of industry groups. While these accounts were relatively rare, they informed the coding of some bills in our set, particularly for insurance bills that diffused across several states in our sample.

After coding 500 bills ourselves, we prepared the text of the bills in our sample for analysis by removing punctuation, stemming words, and excluding stopwords (e.g., “the”, “of”).
We then categorized bills using a naïve Bayes classifier. To assess the sensitivity of our model to capturing distinctions between bills, we split our sample into a training set with 400 (80%) observations and a test set with 100 (20%) observations. We built a model based on the language in the 400 training set observations and used it to predict the class (pro- or anti-industry) of the bills in the test set. The model built from the training set correctly predicted the class of 63% of the test observations. Precision was 0.68 and recall was 0.72, yielding an F-score of 0.70.

We used the model built on all 500 human coded bills to predict the class of the remaining 1,775. While the classifier was by no means perfect, the model fit is acceptable following conventional standards in the field (particularly for complicated texts like insurance regulation bills) and adequate for our purposes. In any case, a higher misclassification rate will decrease efficiency in our analyses and provide a harder test of the expectation that insurance professionals sponsor more insurance-friendly bills.\(^{11}\)

Having coded the bills for the direction they move policy in, we simply tabulated the bills by the involvement of an insurance professional in the sponsorship of the bill. Insurance professionals are considered to be involved in a bill’s introduction if they were a primary sponsor, a cosponsor, or a member of the sponsoring committee.

The results are presented in Figure 3. The results show that about one third of bills that legislators without professional experience in the insurance industry introduce are helpful to the insurance industry (690 of the 2,007 bills they introduced). The remaining two-thirds of bills that non-insurers introduce provide for greater government regulation at the expense of the industry (1,317 of the 2,007 bills). However, when insurance professionals introduce bills, more than half (114 of the 218 bills they introduced) are helpful to the insurance industry, while the remaining

\(^{11}\) If bills were misclassified in a biased manner, the analysis may not pose a harder test. However, we have no reason to suspect that misclassification did not occur at random, making our challenge one of efficiency rather than bias.
Figure 3: Direction of Introduced Bills by Legislators’ Professional Background

![Bar chart showing the direction of introduced bills by legislators' professional background.](image)

Source: Authors’ data collection.

are not. A simple difference of means test suggested that the average percentage of pro-industry bills that insurance professionals introduced was statistically different from the average percentage produced by other legislators ($t = 5.26, p < 0.001$).

Breaking down the direction of the bill by the type of introduction produces roughly similar results. Tables A3 through A5 in the appendix provide the tabulations of the direction of each bill when insurers are primary sponsors, cosponsors, or committee sponsors respectively. The results match those presented in Figure 3. Across all forms of introduction, insurance professionals introduce insurance-friendly bills about half the time. However, legislators without insurance experience sponsor insurance-friendly bills only about one third of the time.
Naturally, these tests do not control for potential confounding factors such as the party affiliation of the legislator or the state they serve in office.\textsuperscript{12} Future data collection and tests may determine whether insurance professionals are more likely to sponsor pro-industry bills \textit{precisely because} they have experience in the industry or because they tend to have other common characteristics influencing their propensity to sponsor pro-industry bills. However, the data here provide an initial test that insurance professionals serving in legislators do tend to sponsor more industry-friendly bills than their colleagues on average.

\textbf{State Legislative Agendas and the Occupational Makeup of Government}

Taken together, the evidence from these three studies suggest that lawmakers who worked in insurance may in fact alter the legislative agenda in ways that promote what insurers want. State legislatures with more insurance professionals in them tend to spend less time considering new insurance regulations. When states consider insurance bills, however, they are disproportionately introduced by lawmakers from insurance backgrounds. And the insurance bills that former insurers introduce are substantially more likely to be favorable to the industry.

These findings have several important implications. First, they represent the most concrete evidence to date that the occupational makeup of government can affect not just roll-

\textsuperscript{12} Of the 100 insurance professionals included in our data in 2011-12, about 67\% affiliate with the Republican Party, compared with about 55\% of all state legislators serving in these 30 states. Though insurers are not perfectly representative of the partisan composition of their bodies, the fact that both insurers and all state legislators in this term are \textit{majority} Republican leads us to believe that the differences in policy direction between insurance professionals and their colleagues cannot be chalked up to partisanship alone.
call votes, but the legislative agenda itself. And they illustrate how a shift from simply studying legislative effort to studying both legislative effort and legislative content can help to shed light on both positive and negative forms of agenda setting.

Indeed, when it comes to occupations and agenda-setting, negative and positive agenda-setting may go hand in hand. For most sectors of the economy, government regulation is often burdensome, and negative agenda control is often the goal. But favorable legislation is always attractive to every industry. To the extent that a legislator’s occupation or industry affects his or her agenda-setting behaviors, we might expect to see both negative and positive forms of agenda control, as lawmakers reflecting their industry’s perspective simultaneously seek to minimize regulation while pushing for a few plum proposals.

More broadly, these findings underscore the importance of legislators’ occupational backgrounds. Political scientists have written a great deal about the difference women make in office, and the difference racial and ethnic minorities make. Lawmakers from different occupational backgrounds seem to make a difference, too. Our analysis of state legislative agendas suggests that there are indeed important aggregate-level relationships between the numerical or descriptive representation of different professions and the legislative agendas in American states. The occupational makeup of the people the voters elect may shape one of the most important aspects of the legislative process: the problems and policies that make it onto the agenda.

Of course, this study has a number of important limitations. We only have data on two terms’ worth of legislative agendas, and we only have data from 30 states. Studies 2 and 3 need controls. And we have focused on just one industry—more replications are needed to see whether these findings generalize to lawmakers from other occupational backgrounds.
Even so, the results reported here are broadly consistent with past research, and point clearly to the conclusion that occupations matter. Just as the number of women or minorities in public office affects whether gender and racial issues make it onto the agenda, the number of people from different occupations may affect whose voice is heard in our political institutions—just as industry organizations have long suspected.
Bibliography


## Appendix

### Table A1: Negative Binomial Regression Model

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% lawmakers</td>
<td>-0.16*</td>
<td>-0.11+</td>
</tr>
<tr>
<td></td>
<td>(0.08)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>total bills</td>
<td></td>
<td>0.01*</td>
</tr>
<tr>
<td>(in hundreds)</td>
<td></td>
<td>(0.00)</td>
</tr>
<tr>
<td>% population</td>
<td>-0.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td></td>
</tr>
<tr>
<td>Democratic control</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.30)</td>
<td></td>
</tr>
<tr>
<td>insurance</td>
<td>0.01*</td>
<td></td>
</tr>
<tr>
<td>lobbyists</td>
<td></td>
<td>(0.00)</td>
</tr>
<tr>
<td>intercept</td>
<td>6.67*</td>
<td>6.10*</td>
</tr>
<tr>
<td></td>
<td>(0.23)</td>
<td>(0.46)</td>
</tr>
<tr>
<td>N</td>
<td>30</td>
<td>29</td>
</tr>
</tbody>
</table>

*Source*: Authors’ data collection.

*Notes*: Standard errors in parentheses

+ p < 0.10, * p < 0.05, two tailed
Table A2: OLS Regression Model using a Log-transformed Dependent Variable

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% lawmakers</td>
<td>-0.12</td>
<td>-0.07</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td>(0.07)</td>
</tr>
<tr>
<td>total bills</td>
<td></td>
<td>0.01*</td>
</tr>
<tr>
<td>(in hundreds)</td>
<td></td>
<td>(0.00)</td>
</tr>
<tr>
<td>% population</td>
<td></td>
<td>-0.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.11)</td>
</tr>
<tr>
<td>Democratic control</td>
<td></td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.34)</td>
</tr>
<tr>
<td>insurance lobbyists</td>
<td></td>
<td>0.01*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.00)</td>
</tr>
<tr>
<td>intercept</td>
<td>6.30*</td>
<td>5.53*</td>
</tr>
<tr>
<td></td>
<td>(0.28)</td>
<td>(4953)</td>
</tr>
<tr>
<td>N</td>
<td>30</td>
<td>29</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.06</td>
<td>0.61</td>
</tr>
<tr>
<td>Adj. $R^2$</td>
<td>0.02</td>
<td>0.53</td>
</tr>
</tbody>
</table>

*Source: Authors’ data collection.*

*Notes: Standard errors in parentheses
  + p < 0.10, * p < 0.05, two tailed*
Table A3: Direction of Bills by Professional Background of the Primary Sponsor

<table>
<thead>
<tr>
<th></th>
<th>Insurance Professional Sponsor</th>
<th>No Insurance Professional Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-industry</td>
<td>43 (44.8%)</td>
<td>761 (35.7%)</td>
</tr>
<tr>
<td>Anti-industry</td>
<td>53 (55.2%)</td>
<td>1368 (65.6%)</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
<td>2129</td>
</tr>
</tbody>
</table>

Source: Author’s data collection. Column percentages reported under bill counts. $\chi^2 = 3.26$, $p = 0.07$. 
Table A4: Direction of Bills by Professional Background of Bill Cosponsors

<table>
<thead>
<tr>
<th></th>
<th>Insurance Professional Cosponsor</th>
<th>No Insurance Professional Cosponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-industry</td>
<td>52 (69.3%)</td>
<td>752 (35.0%)</td>
</tr>
<tr>
<td>Anti-industry</td>
<td>23 (30.7%)</td>
<td>1398 (65.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>2150</td>
</tr>
</tbody>
</table>

Source: Author’s data collection. Column percentages reported under bill counts. $\chi^2 = 37.07$, $p = 0.00$. 


Table A5: Direction of Bills by Professional Background of Sponsoring Committee’s Members

<table>
<thead>
<tr>
<th></th>
<th>Insurance Professional on Committee</th>
<th>No Insurance Professional on Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-industry</td>
<td>25 (47.2%)</td>
<td>779 (35.9%)</td>
</tr>
<tr>
<td>Anti-industry</td>
<td>28 (52.8%)</td>
<td>1393 (64.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>2172</td>
</tr>
</tbody>
</table>

Source: Author’s data collection. Column percentages reported under bill counts. $\chi^2 = 2.86$, p = 0.09.