

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

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## **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 state legislatures with more former insurers 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 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 makeup 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 one of the most pressing weaknesses in the emerging literature on politicians' occupational backgrounds is that most studies have focused on the associations between a legislator's former occupation and how he or she casts *roll-call votes*. This is a logical place for researchers to begin; 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.<sup>1</sup> 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.

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<sup>1</sup> 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.

Drawing on data from three recent legislative sessions (2007-08, 2009-10, and 2011-12), we study the 30 states for which we could obtain both information about legislators' 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 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 U.S. 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 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, 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-Rensburg 2013; Kraus and Callaghan 2014; Witko and Friedman 2008). This is an understandable choice; 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 members of Congress introduce and the numbers of cosponsors they recruit 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; Baumgartner et al. 2009; 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 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, the insurance industry is large and important. The U.S. has the largest private insurance industry in the world, and its annual revenues usually exceed \$1.2 trillion. Over

two million Americans are employed in insurance, and insurance makes up about 40% of the financial 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 U.S. politicians in the hopes of doing so. In that sense, it is a good starting point for research on occupational backgrounds and agenda setting 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 differ in how they attempt to shape the legislative agenda? Do they try 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 (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 markets, insurance company finances, and 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). States have remained the primary drivers of insurance regulation even after the significant changes made to insurance

markets under the Affordable Care Act.<sup>2</sup> Often, individuals and organizations must purchase insurance policies 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.<sup>3</sup> 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

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<sup>2</sup> 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 Interstate Commerce Clause, as the Obama Administration had argued to justify the constitutionality of the ACA.

<sup>3</sup> 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.

online format.<sup>4</sup> These occupational data captured the main occupations that each legislator held 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

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<sup>4</sup> The 30 included states are AK, AZ, CA, CO, CT, FL, GA, IA, ID, IL, IN, KS, KY, MA, MD, MI, MN, NC, NE, NJ, NY, NV, OK, PA, SC, TN, TX, WI, and WY. 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.

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<sup>5</sup> that addressed insurance-related topics in each state legislature in 2007, 2009, and 2011. We chose these years based on the availability of concurrent occupation and bill count data.

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 insurance and in other occupations, we still 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*. *The Book of the States*, on the other hand, counted each numbered bill only once. Even so, we considered this a reasonable way to control for state-to-state differences in the total size of the legislative agenda.)

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<sup>5</sup> 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).



insurance industry in each state using Gray and Lowery's 2007 data on the number of interest groups lobbying on insurance issues (Lowery et al. 2012).

Figure 1 plots the basic relationship between the number of insurance-related bills and amendments introduced in each state (on the vertical axis) and the share of state lawmakers with professional experience in the insurance industry (on the horizontal axis). 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 Republicans hold more seats, or where insurers lobby legislators more vigorously. To check for these kinds of confounding variables, we estimated three negative binomial regression models reported in Table 1, one without controls, one with controls for the year and the total number of bills introduced in each state legislature, and one with all of the various controls described above.

Like Figure 1, the models related the number of insurance bills and amendments introduced in each state legislature to the percentage of lawmakers who had worked in insurance. The first model simply regressed the size of the insurance agenda in each state on the share of legislators from insurance backgrounds. As in Figure 1, the relationship was negative and statistically significant; compared to a state with no insurers in its legislature, a state legislature with five percent insurers considered roughly 270 fewer insurance bills and amendments.

In the second model, we added the total number of bills introduced in each legislature (as an offset variable) to account for the fact that some states consider more bills in general. We also included year fixed effects, and we clustered standard errors to account for repeated observations

of states over time. With these changes, the estimated association between occupations and agendas was still negative and statistically significant. According to model 2, states with no insurers in their legislatures considered 54 bills and amendments related to insurance *per every 100 bills*, but state legislatures with one percent insurers among their members considered just 24 insurance bills and amendments per 100 bills, states with two percent insurers considered 11 insurance bills/amendments per 100 bills, and states with five percent insurers in their legislatures considered just 1 insurance bill or amendment per 100 bills.

As model 3 in Table 1 illustrates, this association 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), and potential pressures from citizens employed in the

**Table 1: Negative Binomial Regression Models Relating the Volume of Insurance Legislation to the Share of State Lawmakers from Insurance Backgrounds**

	(1)	(2)	(3)
Percent of lawmakers from insurance	-0.11* (0.05)	-0.77* (0.27)	-0.85* (0.24)
Percent of population employed in insurance			-0.52 (0.36)
Democratic control of state legislature (ind.)			-3.47* (1.22)
Number of insurance lobbying groups			-0.08* (0.01)
Year fixed effects	No	Yes	Yes
Total # of bills (offset)	No	Yes	Yes
Intercept	6.50* (0.14)	-0.53 (0.90)	6.05* (2.43)
<i>N</i>	89	89	86
<i>BIC</i>	1281.48	1829.99	1774.48

*Source:* Authors' data collection.

*Notes:* Models 2 and 3 use robust standard errors clustered by state. Nebraska is excluded in Model 3 because party control cannot be measured in its nonpartisan legislature.

+  $p < 0.10$ , \*  $p < 0.05$ , two tailed

insurance industry (the percentage of the states' citizens who were employed in insurance).<sup>8</sup> If anything, adding these controls only strengthened our basic finding.

To check that the results of this analysis generalized beyond the 30 states for which we have occupational data, we also re-ran model 3 using data from the National Conference of State Legislatures, which collected aggregate-level data on the percentage of lawmakers from the

insurance industry in each state's legislature in 2007 (see Table A1 in the Appendix).<sup>9</sup> Also, to ensure that our findings were not simply a fluke of the way we modeled count data, we also re-estimated model 3 in Table 1 using ordinary least squares and Poisson regression (Table A2 in the Appendix). Nothing in these auxiliary analyses changed our basic findings; all of our follow-up models found negative associations between insurers and insurance regulations, and only the ordinary least squares model fell short of conventional thresholds for statistical significance ( $p < 0.186$ ).

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 insurance regulations. Consistent with the idea that former insurers exercise negative agenda control, when insurers hold more seats, legislatures spend less time regulating insurance.

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

When it comes to bills that insurers *want*, however, do lawmakers from the insurance industry exert *positive* agenda control? One way to find out is to focus on who influences 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

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<sup>9</sup> 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. Likewise, our findings were less precise, but still suggested that insurers exercise negative agenda control.

overall decline in the number of insurance laws introduced), but also that they would play an outsized 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 run by the Sunlight Foundation.<sup>10</sup> 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 the 30 states for which we have occupational data, this time focusing on the 2011-2012 legislative term (for which Open States has the most complete data on the bills introduced in each state).<sup>11</sup>

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.<sup>12</sup> We then downloaded information about each bill, including its state and chamber of

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<sup>10</sup> Available online from <http://www.openstates.org> (accessed on June 28, 2017).

<sup>11</sup> Unfortunately, Open States has only partial data for the terms before and after (2009-10 and 2013-14), and it does not currently have any data for other terms.

<sup>12</sup> We used the stem for the word in order to identify bills that combine the stem with various affixes, 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, and a simple comparison of the tagged and searched bills suggested that the state-created tags missed many relevant bills.

**Table 2:** Are Insurer-Legislators More Involved in Insurance Bills?

Insurance professional was...	No. of Bills	% of Bills
Primary sponsor	234	6.31%
Cosponsor	153	4.13%
Chair of sponsoring committee	54	1.46%
Member of sponsoring committee	45	1.21%
<b>Total</b>	<b>486</b>	<b>13.11%</b>
<b>Avg. Pct. of Insurers in Legislature</b>		<b>2.46%</b>

*Source:* Authors' data collection. Rows are treated as mutually exclusive in descending order. That is, if insurers were among the primary sponsors and co-sponsors on a bill, it would be counted among the bills that had insurers as their primary sponsors.

origin, bill number, title, full-text URL, and its sponsors and cosponsors. We then matched each bill's sponsors and cosponsors to our list of insurance professionals, and we coded 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 the different ways that insurance professional might have been involved in introducing insurance legislation. Consistent with our expectations, former insurers seemed to play a disproportionate role in the insurance legislation that made it onto state legislatures' agendas. Of the more than 3,700 insurance bills that were introduced in the 30

states, 234 (6.3%) were sponsored by an insurance professional, 153 were cosponsored by an insurer (4.1%), and another 99 (2.7%) were sponsored by committees that were either chaired by insurers or had insurers among their members. Whereas insurers made up just over 2% of the typical legislature in these 30 states, insurer-influenced bills made up more than 13% of the insurance legislation introduced during this time period. That is, insurers were more than five times as likely to be involved in crafting insurance bills as we would expect based on their numerical representation. Even looking solely at primary sponsors, insurers are more than twice as likely to write an insurance bill as we would expect by random chance.

Of course, the vast majority of bills that affect the insurance industry—87%—are introduced by lawmakers who do not have backgrounds in the insurance industry. In that sense, concerns about industry *capture* of government are probably overstated. But the occupational background of a legislator still seems to matter in this instance. Insurers may not have absolute control over state-level insurance legislation, but they have an outsized role in the insurance bills that are introduced in state legislatures, consistent with the idea that they exert some positive control over the state insurance agenda.

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

Of course, simply knowing that insurance professionals are disproportionately involved in insurance regulation doesn't necessarily mean that they are steering the regulatory agenda towards outcomes that the industry favors. What kinds of insurance bills do former insurers actually introduce?

To find out, we analyzed the content of the insurance bills identified in Study 2 using a combination of human coding and automated text analysis. We first collected URLs for the full

text of all 3,706 of the insurance bills introduced in the 2011-12 legislative in the 30 states for which we have individual-level data on whether lawmakers worked in insurance. We then used a web scraping software package to download the full text of each bill. Broken links and incompatible file formats prevented us from collecting every piece of legislation (and cost us two states entirely, Massachusetts and Oklahoma), but we were ultimately able to gather the text of 3,169 bills (86% of the sample) from 28 states.

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, and less legislation that moves policy away from industry preferences. But 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—one that codes texts in a completely automated fashion—to effectively distinguish between pro-industry and anti-industry bills. Instead we used a supervised classifier, a program that relies in part on human coding. Of the 3,169 bills, we randomly sampled 500 to code ourselves.<sup>13</sup> Our overarching principle for determining whether a bill was pro- or anti-

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<sup>13</sup> A research assistant coded all 500 bills, then a second coder read a random sample of 10% of those bills to assess inter-coder reliability. The two coders agreed 70% of the time, and Cohen's kappa was 0.52, which suggested that the coding was fairly reliable—and better than expected considering the complexity of the bills in question.

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. When bills were not obviously pro-industry or anti-industry, or did not seem to us to be pertinent to private insurance regulation (e.g., state unemployment insurance bills), we simply coded them as *Unknown*.

After coding these 500 bills, we then categorized them using multinomial LASSO regression (Tibshirani 1996) to predict whether each bill was pro-industry, anti-industry, or unknown.<sup>14</sup> That is, we ran a text-classification model that used the language in 400 of our coded bills to identify phrases that distinguished between pro- and anti-industry bills (and unknown bills), then tested the model by using the text of the remaining 100 coded bills to generate text-based predictions of whether the bills were pro- or anti-industry. The model accurately predicted

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<sup>14</sup> We prepared the bill text for analysis by removing punctuation and numerals, stemming words, and excluding stopwords (e.g., "the", "of"). We excluded the resulting features (or words) that appeared in fewer in 5% of the documents and weighted features using frequency-inverse document frequency (TF-IDF) weights, which give greater weight in the model to features that better distinguish one class of texts from another.

the direction of the bill 70% of the time,<sup>15</sup> an acceptable rate by conventional text classification standards, particularly for complicated texts like insurance regulation bills.<sup>16</sup> We then used our trained model to code the remaining 2,669 bills in our sample.<sup>17</sup>

Using these data, we then asked whether insurers were more likely to sponsor or cosponsor bills that were favorable to the insurance industry, and whether insurers were less likely to sponsor bills that were unfavorable to the industry. The results are presented in Table 3.

Several patterns immediately stand out. First, consistent with our idea that new insurance legislation is more often unfavorable to industry, a majority of the coded insurance bills in our sample—57%—were unfavorable to insurance companies. Legislators attempting to protect the insurance industry’s interests have good cause to try to reduce the overall volume of new insurance legislation (as we saw in Study 1).

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<sup>15</sup> To ensure that bills were not misclassified in some systematic way, we reread the 30 misclassified bills in our test set. We could not detect any meaningful patterns; based on our reading, we suspect that misclassification simply occurred at random.

<sup>16</sup> Precision with respect to pro-industry bills was 0.66 and recall was 0.71, yielding an F-score of 0.68. Precision with respect to anti-industry bills was 0.72 and recall was 0.85, yielding an F-score of 0.78.

<sup>17</sup> Moreover, misclassification will only reduce the efficiency of our analyses—and thereby reduce the chances that we will find that insurance professionals sponsor more insurance-friendly portfolios of bills.

Consistent with our expectations, insurers were in fact more likely than their colleagues to introduce bills that were favorable to the insurance industry. Setting aside bills coded as *Unknown* (which made up 8.3% of former insurers bills and 9.0% of non-insurers' bills), the

**Table 3: Do Insurers Introduce More Pro-Industry Bills?**

	Bills Backed by Insurers	Other Bills	Total
Pro-industry	189 (47.6%)	1,044 (41.9%)	1,233 (42.7%)
Anti-industry	208 (52.4%)	1,447 (58.1%)	1,655 (57.3%)
Total	397	2,491	2,888

*Source:* Author's data collection. Cells report counts (with column percentages in parentheses). In a *t*-test, the difference between insurers' bills and other bills was statistically significant at  $p < 0.033$ .

insurance bills for which insurers were sponsors, cosponsors, or chairs/members of sponsoring committees were about five percentage points more likely to be pro-industry than the insurance bills introduced by non-insurers (47.6% vs 41.9%; diff.=5.7%;  $p < 0.033$ ). This gap, moreover, probably slightly understated the true differences between insurers and other legislators. In our 500 human-coded bills, for instance, insurer-backed bills were seven percentage points more likely to be favorable to industry (54.2% vs. 45.2%; diff. = 9.0%;  $p < 0.20$ ).<sup>18</sup>

<sup>18</sup> Table A3 in the Appendix presents complete results for the human-coded sample.

Of course, there are many factors besides a legislator's occupational background that might influence the kinds of insurance bills he or she introduces. Could the results above be driven by some other characteristic common to legislators from insurance backgrounds? To find out, we estimated two logistic regression models. The first simply regressed whether a coded bill was pro- or anti-industry (excluding those coded as *Unknown*) on an indicator for whether an insurance professional was involved in its drafting (as a sponsor or cosponsor or chair/member of a sponsoring committee).

The second added controls that captured the characteristics of the sponsors of each insurance bill. Many bills had multiple sponsors and cosponsors, of course; as a simple test, we collected data on each bill's primary sponsor<sup>19</sup> (an approach we felt was more defensible than averaging the characteristics of sponsors and cosponsors). Our analysis included controls for the personal characteristics of each bill's main sponsor: party affiliation, gender, race/ethnicity (measured simply as whether the member was white and non-Hispanic), and years in office. We also controlled for the characteristics of sponsors' districts that might be relevant to insurance regulation as well, including district per capita income (in \$10,000s), the percent of the district population employed in the finance or insurance industries, and the percent of the district without health insurance.<sup>20</sup> Of course, some of these controls may themselves be driven by our

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<sup>19</sup> For bills with multiple primary sponsors, we collected data only on the first-listed primary sponsor. For bills sponsored by committees, we collected data on the committee chair.

<sup>20</sup> District characteristics are collected from 5-year estimates of the American Community Survey, aggregated to state legislative districts by the private firm Social Explorer.

explanatory variable—e.g., insurers may tend to partner with (or be) Republicans more often because of the party’s pro-industry stance on insurance. In that sense, this approach represents a *conservative* estimate of the difference between insurer-backed bills and other legislation.

Our findings are reported in Table 4. With or without controls, bills backed by insurers tended to be more favorable to the industry on average: in our first model (without controls) insurer-backed bills were about six percentage points more likely to be pro-industry, and in our

**Table 4: Results Controlling for the Sponsor Characteristics**

	(1)	(2)
Insurer-backed bill	0.23* (0.11)	0.11 (0.11)
<i>Sponsor characteristics</i>		
Republican		0.28* (0.08)
District per capita income (in \$10,000s)		-0.07 (0.05)
% constituents employed in insurance or finance		-0.03+ (0.02)
% constituents without health insurance		-0.01 (0.01)
Female legislator		-0.08 (0.10)
White legislator		0.19 (0.12)
Years in office		-0.00 (0.00)
Intercept	-0.33* (0.04)	0.01 (0.24)
<i>N</i>	2,888	2,840
<i>BIC</i>	3953.16	3898.74

*Source:* Authors' data collection and American Community Survey.

+  $p < 0.10$ , \*  $p < 0.05$ , two tailed

second model (*with* controls) insurer-backed bills were three percentage points more likely to be pro-industry. Obviously, controlling for the characteristics of bill's primary sponsors in the second model reduced the magnitude of the association, and the average difference between

insurer-backed bills and others was no longer statistically significant in this more conservative specification. But in general, our findings were consistent with the idea that insurers use positive agenda control not just to play an outsized role in insurance legislation, but also to occasionally push for legislation that favors the industry.

Of course, the differences between insurer-backed insurance bills and other insurance bills were never as large as a full-blown industry capture model might predict. Many of the bills insurers supported imposed new burdens on the industry, and many of the bills put forth by non-insurers served to help insurance companies. When it comes to agenda-setting, it appears that occupation isn't destiny.

But it seems to be an important part of agenda-setting behavior. In legislatures with more insurers, insurance bills get on the agenda less often, and the mix of insurance bills that are introduced is more favorable to the industry. As industry organizations have long suspected, having your own people in office can help steer the legislative agenda in your favor.

### **State Legislative Agendas and the Occupational Makeup of Government**

Taken together, the evidence from these three studies suggests 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 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-

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 three terms worth of legislative agendas, and we only have data from 30 states. The controls in Study 3 cover only primary sponsors, not all legislators involved in each bill's introduction. 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—as industry organizations have long suspected.

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## Appendix

**Table A1:** Negative Binomial Regression Models Relating the Volume of Insurance Legislation to the Share of State Lawmakers from Insurance Backgrounds for 2007

	(1)	(2)
Percent of lawmakers from insurance	-0.85* (0.24)	-0.75** (0.23)
Percent of population employed in insurance	-0.52 (0.36)	1.11** (0.30)
Democratic control of state legislature (ind.)	-3.47* (1.22)	-2.40* (0.95)
Number of insurance lobbying groups	-0.08* (0.01)	-0.09** (0.01)
Year fixed effects	Yes	n/a
Total # of bills (offset)	Yes	Yes
Intercept	6.05* (2.43)	-2.32+ (1.35)
Data Source	Authors	NCSL
Years	'07, '09, '11	'07
<i>N</i>	86	49
<i>BIC</i>	1774.48	996.02

*Source:* Authors' data collection and NCSL.

*Notes:* Standard errors in parentheses. Nebraska is excluded in both models because party control cannot be measured in its nonpartisan legislature.

+  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , two tailed.

**Table A2: Models Replicating Model 3 in Table Using Alternatives to Negative Binomial Regression**

	Negative Binomial	Ordinary Least Squares	Poisson
Percent of lawmakers from insurance	-0.85* (0.24)	-32.97 (24.33)	-1.64** (0.39)
Percent of population employed in insurance	-0.52 (0.36)	-16.14 (25.40)	14.90** (4.27)
Democratic control of state legislature (ind.)	-3.47* (1.22)	-72.52 (110.21)	-36.48 (44.86)
Number of insurance lobbying groups	-0.08* (0.01)	3.71** (1.12)	-1.39* (0.62)
Year fixed effects	Yes	Yes	Yes
Total # of bills	Offset	Control	Offset
Intercept	6.05* (2.43)	6.05* (2.43)	-64.33* (32.15)
<i>N</i>	86	86	86
<i>BIC</i>	1774.48		5087197
<i>R</i> -squared		0.6512	

*Source:* Authors' data collection.

*Notes:* Models use robust standard errors clustered by state. Nebraska is excluded because party control cannot be measured in its nonpartisan legislature.

+  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , two tailed

**Table A3:** Direction of Introduced Bills by Sponsors' Professional Backgrounds in Human Coded Data

	Insurance Professional	No Insurance Professional
Pro-industry	32 (54.2%)	165 (45.2%)
Anti-industry	27 (45.8%)	200 (54.8%)
Unknown	15 (20.3%)	61 (14.3%)
Total	74	426

Source: Author's data collection. Column percentages reported under bill counts.  $\chi^2 = 3.31$ ,  $p = 0.19$ .